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SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF LOS ANGELES
(UNLIMITED JURISDICTION)

ROCKLIN UNIFIED SCHOOL DISTRICT,

Case No. **23STCV15691**

Plaintiff,

COMPLAINT

v.

META PLATFORMS, INC., FACEBOOK
HOLDINGS, LLC, FACEBOOK OPERATIONS,
LLC, META PAYMENTS INC., META
PLATFORMS TECHNOLOGIES, LLC,
INSTAGRAM, LLC, SICULUS, INC., SNAP
INC., TIKTOK INC., BYTEDANCE INC.,
ALPHABET INC., GOOGLE LLC, XXVI
HOLDINGS INC., and YOUTUBE, LLC,

Defendants.

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I. INTRODUCTION

1. Meta Platforms, Inc., Facebook Holdings, LLC, Facebook Operations, LLC, Meta Payments Inc., Meta Platform Technologies, LLC, Instagram, LLC, Siculus, Inc., Snap Inc., TikTok Inc., ByteDance Inc., Alphabet Inc., Google LLC, XXVI Holdings Inc., and YouTube, LLC (collectively, “**Defendants**”) design, market, promote, and operate social media platforms. Over the past decade, each has grown their respective platforms exponentially, from millions to billions of users. And Defendants have grown not just their user bases, but the frequency with which users use their platforms and the time each user spends on their platforms. Defendants’ growth is a product of choices they made to design and operate their platforms in ways that exploit the psychology and neurophysiology of their users into spending more and more time on their platforms. These techniques are both particularly effective and particularly harmful to the youth audience Defendants have intentionally cultivated. The result—entirely foreseeable—is that today’s children and teenagers spend excessive amounts of time on Defendants’ platforms at great cost to their mental health. Defendants have created a mental health crisis among America’s youth.

2. Defendants have done so for profit. Their business models are based on advertisements. The more time users spend on their platforms, the more ads Defendants can sell.

3. Youth are central to Defendants’ business models. Youth are more likely to have a phone, to use social media, and to have downtime to spend on Defendants’ social media platforms. Plus, youth influence the behavior of their parents and younger siblings. As one Defendant put it, “los[ing] the teen foothold in the U.S.[.]” would mean “los[ing] the pipeline” for growth.¹

4. Defendants have maximized the time users—particularly youth—spend on their platforms by purposely designing, refining, and operating them to exploit the neurophysiology of the brain’s reward systems to keep users coming back, coming back frequently, and staying on the respective platforms for as long as possible.

¹ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y. Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

1 5. Youth are particularly susceptible to Defendants’ manipulative conduct because
2 their brains are not fully developed, and they consequently lack the emotional maturity, impulse
3 control, and psychological resiliency that other, more mature users generally possess.

4 6. Defendants have successfully exploited the vulnerable brains of youth, hooking
5 tens of millions of students across the country into positive feedback loops of excessive and
6 problematic use of Defendants’ social media platforms. Worse, the content Defendants curate
7 and direct to youth is too often harmful and exploitive (e.g., promoting a “corpse bride” diet,
8 eating 300 calories a day, or encouraging self-harm).

9 7. Defendants’ misconduct has been a substantial factor in causing a youth mental
10 health crisis, which has been marked by higher and higher proportions of youth struggling with
11 anxiety, depression, thoughts of self-harm, and suicidal ideation. The rates at which children
12 have struggled with mental health issues have climbed steadily since 2010 and, by 2018, made
13 suicide the second leading cause of death for youth. The pandemic and the corresponding
14 increase in time youth spend on Defendants’ platforms has only intensified this crisis.

15 8. The state of children’s mental health led the American Academy of Pediatrics, the
16 American Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association
17 to jointly declare a national emergency, and the U.S. Surgeon General to issue an advisory “to
18 highlight the urgent need to address the nation’s youth mental health crisis.”²

19 9. Continuing the Department of Health and Human Services’ ongoing efforts to
20 support President Joe Biden’s strategy to transform mental health care, the Surgeon General
21 released an advisory in early May 2023 on the country’s “[e]pidemic of [l]oneliness and
22 [i]solation,” where he outlined the profound health consequences of social disconnection and laid
23

24 ² AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental
25 Health, Am. Acad. Pediatrics (Oct. 19, 2021), <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>; U.S. Surgeon General Issues Advisory on Youth Mental
26 Health Crisis Further Exposed by COVID-19 Pandemic, U.S. Dep’t Health & Hum. Servs.
27 (Dec. 7, 2021), <https://public3.pagefreezer.com/browse/HHS.gov/30-12-2021T15:27/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html>
28 [<https://perma.cc/G8AY-PCGA>].

1 out six pillars to improve connection across the country, one being the need to “[r]eform [d]igital
2 [e]nvironments.”³ Within its recommendations to reform social media environments for youth,
3 the advisory encourages companies to introduce “age-appropriate protections and identity
4 assurance mechanisms, to ensure safe digital environments that enable positive social
5 connection, particularly for minors.”⁴

6 10. Later that month, on May 23, 2023, the Surgeon General issued a second
7 advisory, calling for urgent action by policymakers, technology companies, researchers, families,
8 and young people to gain a better understanding of the impact of social media platforms, and
9 create “safer, healthier online environments to protect children.”⁵

10 11. In his 2022 State of the Union Address, President Joe Biden also called attention
11 to the harm social media has wrought on youth and implored all to “hold social media platforms
12 accountable for the national experiment they’re conducting on our children for profit.”⁶

13 12. Plaintiff Rocklin Unified School District (“**Plaintiff**” or “**Rocklin**”) brings this
14 action to do just that. Youth in Plaintiff’s community are experiencing the same mental health
15 crisis observed nationally.

16 13. Students experiencing anxiety, depression, and other mental health issues perform
17 worse in school, are less likely to attend school, are more likely to engage in substance use, and
18 are more likely to act out, all of which directly affects Rocklin’s ability to fulfill its educational
19 mission.

20 14. That is why Plaintiff, like 96 percent of other school districts in the United States,
21 provides mental health services to its students. For example, Plaintiff has mental health

23 ³ *Our Epidemic of Loneliness and Isolation: The U.S. Surgeon General’s Advisory on the*
24 *Healing Effects of Social Connection and Community* at 51, U.S. Dep’t Health & Hum. Servs.
(2023), <https://www.hhs.gov/sites/default/files/surgeon-general-social-connection-advisory.pdf>
25 [<https://perma.cc/574S-4VJD>].

26 ⁴ *Id.* at 63.

27 ⁵ *Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental*
Health, U.S. Dep’t Health & Hum. Servs. (May 23, 2023),
28 [https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-](https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html)
[effects-social-media-use-has-youth-mental-health.html](https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html) [<https://perma.cc/FU9W-ZG2E>].

⁶ President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at
<https://www.whitehouse.gov/state-of-the-union-2022/> [<https://perma.cc/A9EH-DV4Q>]).

1 specialists, behavior specialists, and counselors that screen, evaluate, and offer services to
2 students struggling with mental health, it has partnered with behavioral health agencies to offer
3 services to students with greater needs, and it trains its teachers and staff to screen students for
4 mental health symptoms and refer them to services offered by these clinics or other providers.
5 But Plaintiff needs a comprehensive, long-term plan and funding to drive a sustained reduction
6 in the record rates of anxiety, depression, suicidal ideation, and other tragic indices of the mental
7 health crisis its youth are experiencing at Defendants' hands.

8 15. As recognized by California Superintendent of Public Instruction Tony
9 Thurmond, there is a dire need to hire and staff mental health professionals in schools across
10 California because "school leaders and staff are seeing an increase in the number of students
11 experiencing depression, suicidal feelings, or other mental health challenges."⁷ Plaintiff, like
12 many school districts across the state and country, is at a breaking point. Meanwhile, Defendants
13 profit tremendously from their wrongful conduct. To remedy this wrong and hold Defendants
14 accountable, Plaintiff brings this action.

15 II. JURISDICTION AND VENUE

16 16. This Court has original jurisdiction over this action pursuant to Article VI,
17 Section 10 of the California Constitution.

18 17. This Court has general personal jurisdiction over Defendants because each are
19 headquartered and/or have their principal places of business in the State of California and have
20 continuous and systematic operations within the State of California.

21 18. The Court also has specific personal jurisdiction over Defendants because they
22 actively conduct substantial business in Los Angeles County and the State of California.
23 Defendants have purposefully availed themselves of the privilege of conducting business in this
24 State through the design, development, programming, promotion, marketing, operations, and
25 distribution of their platforms at issue in this lawsuit and have purposed directed their activities
26 toward the State of California. Defendants have sufficient minimum contacts with the State of

27 ⁷ Kayla Jiminez, *California Leaders Rush to Improve Student Mental Health Care*, Mercury
28 News (Mar. 3, 2022), <https://www.mercurynews.com/2022/03/03/california-leaders-rush-to-improve-student-mental-health-care/>.

California to render the exercise of jurisdiction by this Court permissible under California law and the United States Constitution.

19. Venue is proper in this judicial district pursuant to California Code of Civil Procedure Sections 395 and 395.5 because at least some Defendants reside in this County, their principal places of business are in this County, and a substantial part of the events or omissions giving rise to the claims at issue in this Complaint arose in this County.

III. PARTIES

A. Plaintiff

20. Plaintiff Rocklin Unified School District is a public school district northeast of Sacramento in Placer County, California. Rocklin serves over 11,400 students in grades pre-kindergarten through 12th grade. Rocklin operates eighteen different schools, including twelve elementary schools, two middle schools, two high schools, one alternative high school, and one independent study school.

B. Facebook and Instagram Defendants

21. Defendant Meta Platforms, Inc. (“**Meta**”), formerly known as Facebook, Inc., is a Delaware corporation with its principal place of business in Menlo Park, California.

22. Defendant Meta develops and maintains social media platforms, communication platforms, and electronic devices that are widely available to users throughout the United States. The platforms developed and maintained by Meta include Facebook (including its self-titled app, Marketplace, and Workplace), Messenger (including Messenger Kids), Instagram, and a line of electronic virtual reality devices and services called Meta Quest (collectively, “**Meta platforms**”).

23. Meta transacts or has transacted business in this District and throughout the United States. At all times material to this Complaint, acting alone or in concert with its subsidiaries (identified below), Meta has advertised, marketed, and distributed the Meta platforms to consumers throughout the United States. At all times material to this Complaint, Meta formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

1 24. Defendant Meta’s subsidiaries include Facebook Holdings, LLC; Facebook
2 Operations, LLC; Meta Payments Inc.; Meta Platforms Technologies, LLC; Instagram, LLC; and
3 Siculus, Inc.

4 25. Defendant Facebook Holdings, LLC (“**Facebook Holdings**”) was organized
5 under the laws of the state of Delaware on March 11, 2020, and is a wholly owned subsidiary of
6 Meta Platforms, Inc. Facebook Holdings is primarily a holding company for entities involved in
7 Meta’s supporting and international endeavors, and its principal place of business is in Menlo
8 Park, California. Defendant Meta is the sole member of Facebook Holdings.

9 26. Defendant Facebook Operations, LLC (“**Facebook Operations**”) was organized
10 under the laws of the state of Delaware on January 8, 2012, and is a wholly owned subsidiary of
11 Meta Platforms, Inc. The principal place of business of Facebook Operations is in Menlo Park,
12 California. Defendant Meta is the sole member of Facebook Operations.

13 27. Defendant Meta Payments Inc. (“**Meta Payments**”) was incorporated in Florida
14 on December 10, 2010, as Facebook Payments Inc. In July 2022, the entity’s name was amended
15 to Meta Payments Inc. Meta Payments is a wholly owned subsidiary of Meta Platforms, Inc.
16 Meta Payments manages, secures, and processes payments made through Meta, among other
17 activities, and its principal place of business is in Menlo Park, California.

18 28. Defendant Meta Platforms Technologies, LLC (“**Meta Technologies**”) was
19 organized under the laws of the state of Delaware as “Oculus VR, LLC” on March 21, 2014, and
20 acquired by Meta on March 25, 2014. In November 2018, the entity’s name was amended to
21 Facebook Technologies, LLC. In June 2022, the entity’s name was amended again, this time to
22 Meta Platforms Technologies, LLC. Meta Technologies develops Meta’s virtual and augmented
23 reality technology, such as the Meta Quest line of services, among other technologies related to
24 Meta’s platforms, and its principal place of business is in Menlo Park, California. Defendant
25 Meta is the sole member of Meta Technologies.

26 29. Defendant Instagram, LLC (“**Instagram**”) was founded by Kevin Systrom and
27 Mike Krieger in October 2010 and is a social media platform designed for photo and video
28 sharing. In April 2012, Meta purchased the company for approximately \$1 billion. Meta

1 reformed the limited liability company under the laws of the state of Delaware on April 7, 2012,
2 and the company's principal place of business is in Menlo Park, California. Defendant Meta is
3 the sole member of Instagram.

4 30. Defendant Siculus, Inc. ("**Siculus**") was incorporated in Delaware on October 19,
5 2011. Siculus is a wholly owned subsidiary of Meta, which supports Meta platforms by
6 constructing data facilities and other projects. Siculus's principal place of business is in
7 Menlo Park, California.

8 **C. Snap Defendant**

9 31. Defendant Snap Inc. ("**Snap**") is a Delaware corporation with its principal place
10 of business in Santa Monica, California. Snap transacts or has transacted business in this District
11 and throughout the United States. At all times material to this Complaint, acting alone or in
12 concert with others, Snap has advertised, marketed, and distributed the Snapchat social media
13 platform to consumers throughout the United States. At all times material to this Complaint,
14 Snap formulated, directed, controlled, had the authority to control, or participated in the acts and
15 practices set forth in this Complaint.

16 **D. TikTok Defendants**

17 32. Defendant TikTok Inc. was incorporated in California on April 30, 2015, with its
18 principal place of business in Culver City, California. TikTok Inc. transacts or has transacted
19 business in this District and throughout the United States. At all times material to this Complaint,
20 acting alone or in concert with others, TikTok Inc. has advertised, marketed, and distributed the
21 TikTok social media platform to consumers throughout the United States. At all times material to
22 this Complaint, acting alone or in concert with ByteDance Inc., TikTok Inc. formulated, directed,
23 controlled, had the authority to control, or participated in the acts and practices set forth in this
24 Complaint.

25 33. Defendant ByteDance Inc. ("**ByteDance**") is a Delaware corporation with its
26 principal place of business in Mountain View, California. ByteDance transacts or has transacted
27 business in this District and throughout the United States. At all times material to this Complaint,
28 acting alone or in concert with others, ByteDance has advertised, marketed, and distributed the

1 TikTok social media platform to consumers throughout the United States. At all times material to
2 this Complaint, acting alone or in concert with TikTok Inc., ByteDance formulated, directed,
3 controlled, had the authority to control, or participated in the acts and practices set forth in this
4 Complaint.

5 **E. YouTube Defendants**

6 34. Defendant Alphabet Inc. is a Delaware corporation with its principal place of
7 business in Mountain View, California. Alphabet Inc. is the sole stockholder of XXVI Holdings
8 Inc.

9 35. Defendant XXVI Holdings Inc. is a Delaware corporation with its principal place
10 of business in Mountain View, California. XXVI Holdings, Inc. is a wholly owned subsidiary of
11 Alphabet Inc. and the managing member of Google LLC (“Google”).

12 36. Defendant Google is a limited liability company organized under the laws of the
13 state of Delaware, and its principal place of business is in Mountain View, California. Google
14 LLC is a wholly owned subsidiary of XXVI Holdings Inc., and the managing member of
15 YouTube, LLC. Google LLC transacts or has transacted business in this District and throughout
16 the United States. At all times material to this Complaint, acting alone or in concert with others,
17 Google LLC has advertised, marketed, and distributed its YouTube video sharing platform to
18 consumers throughout the United States. At all times material to this Complaint, acting alone or
19 in concert with YouTube, LLC, Google LLC formulated, directed, controlled, had the authority
20 to control, or participated in the acts and practices set forth in this Complaint.

21 37. Defendant YouTube, LLC is a limited liability company organized under the laws
22 of the state of Delaware, and its principal place of business is in San Bruno, California.
23 YouTube, LLC is a wholly owned subsidiary of Google LLC. YouTube, LLC transacts or has
24 transacted business in this District and throughout the United States. At all times material to this
25 Complaint, acting alone or in concert with Defendant Google LLC, YouTube, LLC has
26 advertised, marketed, and distributed its YouTube social media platform to consumers
27 throughout the United States. At all times material to this Complaint, acting alone or in concert
28 with Google LLC, YouTube, LLC formulated, directed, controlled, had the authority to control,

or participated in the acts and practices set forth in this Complaint.

IV. FACTUAL ALLEGATIONS

A. Millions of Youth Have Become Excessive and Problematic Users of Social Media

38. Researchers studying the effect social media⁸ has on the brain have shown that social media exploits “the same neural circuitry” as “gambling and recreational drugs to keep consumers using their products as much as possible.”⁹

39. As described below, each Defendant designed and marketed its exploitive social media platform(s) to be extremely popular with youth. And they have been successful. Ninety percent of children ages 13–17 use social media.¹⁰ Even younger children also regularly use social media. One study reported that 38 percent of children ages 8–12 used social media in 2021.¹¹ Other studies reveal numbers as high as 49 percent for children ages 10–12 and 32 percent for children ages 7–9.¹²

40. The most popular of these platforms among youth is YouTube. Ninety-five percent of children ages 13-17 have used YouTube.¹³

41. TikTok has skyrocketed in popularity with teenagers since its merger with Musical.ly in 2018. As of July 2020, “TikTok classified more than a third of its 49 million *daily* users in the United States as being 14 years old or younger[,]” and that likely underestimates

⁸ The term “social media” is commonly used to refer to text, photos, videos, and ideas that are exchanged among virtual communities. The interactive technologies that allow for the virtual exchange of these media among networks of users are known as social media platforms.

⁹ *Social Media Addiction*, Addiction Ctr, <https://www.addictioncenter.com/drugs/social-media-addiction/#:~:text=Due%20to%20the%20effect%20that,when%20taking%20an%20addictive%20substance> (last visited June 26, 2023).

¹⁰ *Social Media and Teens*, Am. Acad. Child & Adolescent Psychiatry (Mar. 2018), https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx.

¹¹ Victoria Rideout et al., *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 5, Common Sense Media (2022), https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

¹² *Sharing Too Soon? Children and Social Media Apps*, C.S. Mott Child.’s Hosp. Univ. Mich. Health (Oct. 18, 2021), https://mottpoll.org/sites/default/files/documents/101821_SocialMedia.pdf.

¹³ Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

those under 14 and older teenagers (i.e., those between 15 and 18 years old) because TikTok claims not to know how old a third of its daily users are.¹⁴ TikTok is now the second most popular social media platform among youth, with over 67 percent of children ages 13–17 having used the app.¹⁵

42. Instagram’s numbers are comparable to TikTok, with 62 percent of children ages 13–17 reporting they have used the app.¹⁶

43. Snapchat also remains popular with youth, with 59 percent of children ages 13–17 reporting they have used the app.¹⁷

44. Facebook rounds out the five most popular social media platforms, with 32 percent of children ages 13–17 reporting they have used Facebook’s app or website.¹⁸

45. Teenagers who use these social media platforms are also likely to use them every day. One study estimates that 62 percent of children ages 13–18 use social media every day.¹⁹ An increasing number of younger children also use social media daily with 18 percent of children ages 8–12 reporting using a social media site at least once a day.²⁰

46. Daily use for many teenagers does not consist of logging onto a platform just once. Rather, many teenage users check social media repeatedly throughout the day. In one study, teenage users reported checking Snapchat thirty times a day on average.²¹

¹⁴ Raymond Zhong & Sheera Frenkel, *A Third of TikTok’s U.S. Users May Be 14 or Under, Raising Safety Questions*, N.Y. Times (Sept. 17, 2020), <https://www.nytimes.com/2020/08/14/technology/tiktok-underage-users-ftc.html>.

¹⁵ Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

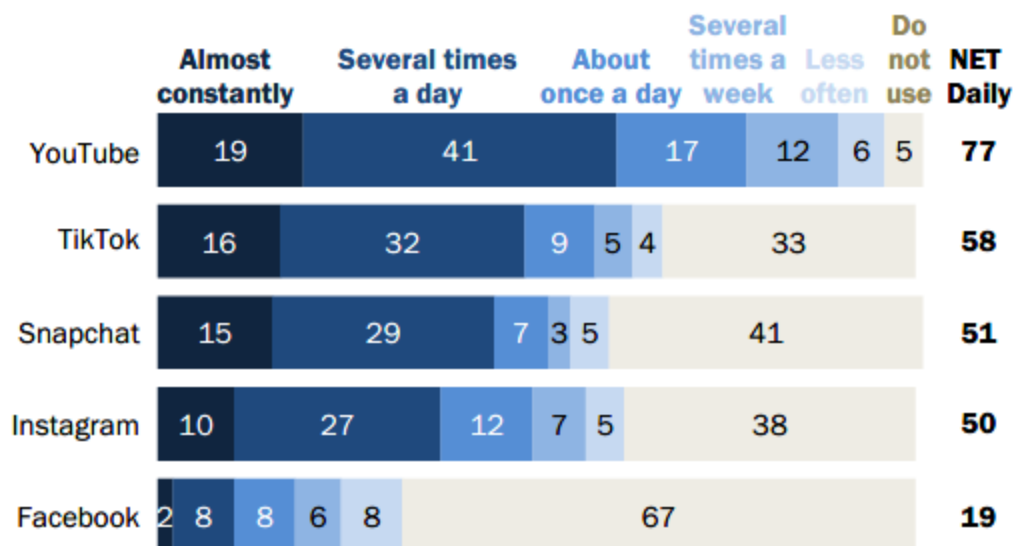
¹⁹ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 4, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

²⁰ *Id.* at 5.

²¹ Erinn Murphy *et al.*, *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021), tinyurl.com/89ct4p88.

47. Even more alarming, some teenagers never stop looking at social media.²²

48. As shown in the chart below, nearly 20 percent of teens report using YouTube almost constantly.²³ TikTok and Snapchat are close behind, with near constant use rates among teens at 16 percent and 15 percent respectively.²⁴ Meanwhile, 10 percent of teens use Instagram almost constantly.²⁵ And two percent of teens report using Facebook almost constantly.²⁶



Note: Teens refer to those ages 13 to 17. Those who did not give an answer are not shown.

Figures may not add up to the NET values due to rounding.

Source: Survey conducted April 14-May 4, 2022.

"Teens, Social Media and Technology 2022"

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49. Teenagers are aware of the grip social media has on their lives yet still cannot stop using it. Thirty-six percent of teenagers admit they spend too much time on social media.²⁷ And over half of teens say that giving up social media would be somewhat hard, with nearly one-in-five teens saying giving up social media would be very hard.²⁸ And of the subgroup of teenagers who use at least one platform "almost constantly," 71 percent said giving up social

²² Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

media would be hard, with 32 percent saying giving up social media would be very hard.²⁹

50. The more that teenagers use social media, the harder they find it to give up. Teenagers who say they spend too much time on social media are almost twice as likely to say that giving up social media would be hard as teens who see their social media usage as about right.³⁰

51. Another study shows that among teenagers who regularly use social media, 32 percent “wouldn’t want to live without” YouTube.³¹ Twenty percent of teenagers said the same about Snapchat; 13 percent said the same about both TikTok and Instagram; and 6 percent said the same about Facebook.³²

52. Despite using social media frequently, most youth do not enjoy it. Only 27 percent of boys and 42 percent of girls ages 8–18 reported enjoying social media “a lot” in 2021.³³

B. Research Has Confirmed the Harmful Effects of Social Media on Youth

53. Social media use—especially excessive use—has severe and wide-ranging effects on youth mental health. Social media use is linked to increases in mental, emotional, developmental, and behavior disorders. Independent research and internal data from these social media platforms show social media has a direct negative impact on teenagers’ mental health on various fronts.

54. In general, moderate or high rates of any electronic screen use are associated with lower psychological well-being for children and adolescents.³⁴ Those with high screen time (7+ hours/day) are twice as likely to receive diagnoses of depression, anxiety, or need treatment for

²⁹ *Id.*

³⁰ *Id.*

³¹ Victoria Rideout *et al.*, *Common Sense Census: Media use by tweens and teens, 2021* at 31, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

³² *Id.*

³³ *Id.* at 34.

³⁴ Jean M. Twenge & W. Keith Campbell, *Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study*, 12 *Prev. Med. Rep.* 271–83 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/>.

1 mental or behavior health conditions compared to low-screen-time users (1 hour/day).³⁵

2 55. Researchers have found that high-volume social media use is associated with
3 increased levels of depression and anxiety for adults.³⁶ Social media has particularly detrimental
4 effects on the mental health of adolescents. Depressive symptoms, suicide-related outcomes, and
5 suicide rates among adolescents increased between 2010 and 2015, at the same time that youth
6 use of social media increased.³⁷ Researchers examining the link between these increases found
7 that adolescents who spent more time on screen activities were significantly more likely to have
8 high depressive symptoms or have at least one suicide-related outcome, and that the highest
9 levels of depressive symptoms were reported by adolescents with high social media use and
10 fewer in-person social interactions.³⁸

11 56. One of the primary reasons the use of social media is associated with depressive
12 symptoms among adolescents is because it encourages unhealthy social comparison and
13 feedback-seeking behaviors.³⁹ Because adolescents spend a majority of their time on social
14 media looking at other users' profiles and photos, rather than updating their own profiles, they
15 are likely to engage in negative comparisons with their peers.⁴⁰ Specifically, adolescents are
16 likely to engage in harmful upward comparisons with others they perceive to be more popular.⁴¹

17 57. Clinicians have also observed a clear relationship between youth social media use
18

19 ³⁵ *Id.*

20 ³⁶ Ariel Shensa *et al.*, *Social Media Use and Depression and Anxiety Symptoms: A Cluster*
Analysis, 42(2) *Am. J. Health Behav.* 116–28 (2018),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5904786/>.

21 ³⁷ Jean M. Twenge *et al.*, *Increases in Depressive Symptoms, Suicide-Related Outcomes, and*
Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen
Time, 6 *Clinical Psych. Sci.* 3–17 (2017), <https://doi.org/10.1177/2167702617723376>.

22 ³⁸ *Id.*

23 ³⁹ Jacqueline Nesi & Mitchell J Prinstein, *Using Social Media for Social Comparison and*
Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms,
43 *J. Abnormal Child Psych.* 1427–38 (2015),
25 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/>.

26 ⁴⁰ *Id.*; see also Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a*
moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion
at 3, *BMC Psych.* 10, 279 (2022), <https://doi.org/10.1186/s40359-022-00990-7> (explaining that
27 youth are particularly vulnerable because they “use social networking sites for construing their
28 identity, developing a sense of belonging, and for comparison with others”).

⁴¹ *Id.*

1 and disordered eating behavior.⁴² One study found that the more social media accounts an
2 adolescent has, the higher their scores on evaluations of disordered eating behaviors and
3 cognitions.⁴³ Additionally, the study found that, for girls, greater daily time spent using
4 Instagram and Snapchat was associated with significantly higher scores on evaluations of
5 disordered eating behaviors.⁴⁴

6 58. Social media use also contributes to sleep deprivation. Young adults who spend a
7 lot of time on social media during the day or check it frequently throughout the week are more
8 likely to suffer sleep disturbances than their peers who use social media infrequently.⁴⁵ In turn,
9 disturbed and insufficient sleep is associated with poor health outcomes.⁴⁶ One study found that
10 young children are losing approximately one night's worth of sleep every week, staying up to use
11 social media or even waking themselves up in the middle of the night to check notifications,
12 driven by fear of missing out.⁴⁷

13 59. Defendants exacerbate the disruption of sleep by sending push notifications and
14 emails either at night when children should be sleeping or during school hours when they should
15 be studying, thereby prompting children to re-engage with Defendants' platforms at times when
16 using them is harmful to their health and well-being.

17 60. Further, children are especially vulnerable to developing harmful behaviors
18 because the prefrontal cortex is not fully developed in children and teens.⁴⁸ Consequently, they
19

20 ⁴² Simon M. Wilksch *et al.*, *The relationship between social media use and disordered eating in*
21 *young adolescents*, 53 *Int'l J. Eating Disorders* 96–106 (2020),
<https://pubmed.ncbi.nlm.nih.gov/31797420/>.

22 ⁴³ *Id.*

23 ⁴⁴ *Id.*

24 ⁴⁵ Jessica C. Levenson *et al.*, *The Association Between Social Media Use and Sleep Disturbance*
Among Young Adults, 85 *Preventive Med.* 36–41 (Apr. 2016),
<https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>.

25 ⁴⁶ *Id.*

26 ⁴⁷ *See, e.g.*, Beatrice Nolan, *Kids are waking up in the night to check their notifications and are*
losing about 1 night's worth of sleep a week, study suggests, *Bus. Insider* (Sept. 19, 2022),
27 <https://www.businessinsider.com/social-media-costing-children-one-night-sleep-study-2022-9>
(approximately 12.5% of children report waking up to check social media notifications).

28 ⁴⁸ Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated*
mediation model of problematic Facebook use, age, neuroticism, and extraversion at 3, *BMC*
Psych. 10, 279 (2022), <https://doi.org/10.1186/s40359-022-00990-7>.

1 find it particularly difficult to exercise the self-control required to regulate their own use of
2 Defendants’ platforms. In this regard, self-regulation allows people to delay gratification,
3 postponing an immediate reward for a better reward later. Adolescents’ low capacity for self-
4 regulation means they are particularly vulnerable to the immediately pleasurable, but ultimately
5 harmful, effects of the repeated dopamine spikes caused by an external stimulus, such as “likes”
6 that activate the reward system in the brain.⁴⁹

7 61. As discussed in further detail *infra* Section IV.D, these reward-based learning
8 systems “contribute to the maintenance of excessive usage patterns.”⁵⁰ Researchers investigating
9 the “directionality between social networking [platforms] and problematic use,” have found that
10 “increases in the intensity of use . . . predict[] problematic use.”⁵¹ And empirical studies have
11 found that problematic use is associated with “insomnia, stress, relationship dissatisfaction,
12 anxiety, social anxiety, and depressive symptoms.”⁵²

13 62. In this regard, adolescents are especially vulnerable to long-term harm from
14 Defendants’ platforms because excessive and problematic use can disrupt their brains’
15 development at a critical stage.

16 **C. As a Result, America’s Youth Are Facing a Mental Health Crisis**

17 63. The number of youth using Defendants’ social media platforms and the intensity
18 of such use have both increased significantly since 2008, which has contributed to a wide range
19 of negative effects on youth mental health. Over that same time the number of youth
20 experiencing depression, contemplating suicide, seeking emergency room help for mental health
21 issues and—tragically—committing suicide has skyrocketed.

22 64. These issues led the United States Surgeon General to issue an advisory on youth
23 the mental health crisis in December 2021.⁵³ In issuing the advisory, the Surgeon General noted,

25 ⁴⁹ *Id.*

26 ⁵⁰ *Id.*

27 ⁵¹ *Id.*

28 ⁵² *Id.* (collecting sources).

⁵³ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory*, U.S. Dep’t Health &
Hum. Servs. (Dec. 7, 2021), [https://www.hhs.gov/sites/default/files/surgeon-general-youth-
mental-health-advisory.pdf](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf).

1 “[m]ental health challenges in children, adolescents, and young adults are real and widespread.
2 Even before the pandemic, an alarming number of young people struggled with feelings of
3 helplessness, depression, and thoughts of suicide—and rates have increased over the past
4 decade.”⁵⁴

5 65. While the report highlights ways in which the COVID-19 pandemic has
6 exacerbated mental health issues for American youth, it also highlights the mental health
7 challenges youth faced before the pandemic. Specifically, the report notes that before the
8 pandemic, “mental health challenges were the leading cause of disability and poor life outcomes
9 in young people.”⁵⁵

10 66. In fact, before the pandemic, one in five children ages 3–17 in the United States
11 had a mental, emotional, developmental, or behavior disorder.⁵⁶

12 67. From 2009 to 2019, the rate of high school students who reported persistent
13 feelings of sadness or hopelessness increased by 40 percent (to one out of every three kids).⁵⁷
14 The proportion of kids seriously considering attempting suicide increased by 36 percent and the
15 proportion creating a suicide plan increased by 44 percent.⁵⁸

16 68. From 2007 to 2019, suicide rates among youth ages 10–24 in the United States
17 increased by 57 percent.⁵⁹ By 2018, suicide was the second leading cause of death for youth ages
18 10–24.⁶⁰

19 ⁵⁴ *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by*
20 *COVID-19 Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 7, 2021),
21 [https://public3.pagefreezer.com/browse/HHS.gov/30-12-](https://public3.pagefreezer.com/browse/HHS.gov/30-12-2021T15:27/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html)
22 [2021T15:27/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-](https://public3.pagefreezer.com/browse/HHS.gov/30-12-2021T15:27/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html)
23 [on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html](https://public3.pagefreezer.com/browse/HHS.gov/30-12-2021T15:27/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html)
24 [<https://perma.cc/G8AY-PCGA>].

25 ⁵⁵ *Id.*

26 ⁵⁶ *Id.*

27 ⁵⁷ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory* at 8, U.S. Dep’t Health
28 & Hum. Servs. (Dec. 7, 2021), [https://www.hhs.gov/sites/default/files/surgeon-general-youth-](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf)
[mental-health-advisory.pdf](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf).

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental*
Health, Am. Acad. Pediatrics (Oct. 19, 2021), [https://www.aap.org/en/advocacy/child-and-](https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/)
[adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-](https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/)
[in-child-and-adolescent-mental-health/](https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/).

69. From 2007 to 2016, emergency room visits for youth ages 5–17 rose 117 percent for anxiety disorders, 44 percent for mood disorders, and 40 percent for attention disorders.⁶¹

70. This and other data led the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association to join the Surgeon General in declaring a national emergency in child and adolescent mental health in December 2021.⁶²

71. President Biden highlighted the Defendants’ role in the youth mental health crisis in his 2022 state of the union address⁶³ and again in 2023, demanding to “finally hold social media companies accountable for [the] experimenting they’re doing – running [on] children for profit.”⁶⁴

72. The national youth mental health crisis continues to worsen. In May 2023, the Surgeon General issued a new advisory about the effects of social media on youth mental health based on the most recent research.⁶⁵

73. For example, the Surgeon General cites research that indicates that youth who spend more than three hours per day on social media platforms face twice the risk of experiencing poor mental health outcomes, such as symptoms of depression and anxiety.⁶⁶ And the most recent data, as the Surgeon General notes, indicates social media use by young people is

⁶¹ Matt Richtel, *A Teen’s Journey Into the Internet’s Darkness and Back Again*, N.Y. Times (Aug. 22, 2022), <https://www.nytimes.com/2022/08/22/health/adolescents-mental-health-technology.html>.

⁶² AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health, Am. Acad. Pediatrics (Oct. 19, 2021), <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>.

⁶³ President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2022/> [<https://perma.cc/A9EH-DV4Q>]).

⁶⁴ President Biden, State of the Union Address (Feb. 7, 2023) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2023/> [<https://perma.cc/H4P7-NY8P>]).

⁶⁵ *Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental Health*, U.S. Dep’t Health & Hum. Servs. (May 23, 2023), <https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html>.

⁶⁶ *Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory* at 6, U.S. Dep’t Health & Hum. Servs. (2023), <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf>.

1 “nearly universal,” with up to 95% of youth ages 13–17 using social media platforms and more
2 than 33% of youth saying they use social media “almost constantly.”⁶⁷ On average, the data
3 reveals that 8th and 10th graders now spend 3.5 hours per day on social media.⁶⁸

4 74. The Surgeon General’s advisory highlights two primary ways in which social
5 media platforms can harm youth. First, “[e]xtreme, inappropriate, and harmful content continues
6 to be easily and widely accessible by children and adolescents,” which the advisory notes “can
7 be spread through direct pushes, unwanted context exchanges, and algorithmic designs.”⁶⁹
8 Second, “[e]xcessive and problematic use of social media can harm children and adolescents by
9 disrupting important healthy behaviors.”⁷⁰ As the advisory explains, “[s]ocial media platforms
10 are often designed to maximize user engagement, which has the potential to encourage excessive
11 use and behavioral dysregulation.”⁷¹ Moreover, the advisory cites research indicating that “social
12 media exposure can overstimulate the reward center in the brain and, when the stimulation
13 becomes excessive, can trigger pathways comparable to addiction.”⁷² Youth are more vulnerable
14 to these risks because their brains are still developing, and many self-identify as having
15 “addictions” to social media.⁷³ A study published in 2023 on the gender-specific impacts of
16 social media found that more than one-third of girls aged 11–15 say they feel “addicted” to
17 certain social media platforms.⁷⁴

18 75. “Our children,” as the Surgeon General explained in his advisory, “have become
19 unknowing participants in a decades-long experiment.”⁷⁵ The risk of harm to an entire generation
20 is too great to wait, especially in the face of what the Surgeon General described as “*ample*
21 indicators that social media can [] have a profound risk of harm to the mental health and well-
22

23 ⁶⁷ *Id.* at 4.

24 ⁶⁸ *Id.* at 7 (citation omitted).

25 ⁶⁹ *Id.* at 8.

26 ⁷⁰ *Id.* at 9.

27 ⁷¹ *Id.*

28 ⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory* at 11, U.S. Dep’t Health & Hum. Servs. (2023), <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf>.

1 being of children and adolescents.”⁷⁶ Therefore, the Surgeon General issued a call in his 2023
2 advisory to “urgently take action to create safe and healthy digital environments that minimize
3 harm and safeguard children’s and adolescents’ mental health and well-being during critical
4 stages of development.”⁷⁷

5 76. The White House echoed these concerns, announcing in May 2023 that the
6 “United States is experiencing an unprecedented youth mental health crisis” and “there is now
7 *undeniable* evidence that social media and other online platforms have contributed to [this] youth
8 mental health crisis.”⁷⁸ The White House explained that “online platforms often use manipulative
9 design techniques embedded in their products to promote addictive and compulsive use by young
10 people to generate more revenue.”⁷⁹ The White House also specifically recognized the impact on
11 school districts, noting that “[s]ocial media use in schools is affecting students’ mental health
12 and disrupting learning.”⁸⁰

13 77. Given the totality of these findings, the Surgeon General urged social media
14 companies to take responsibility in creating safe online environments by changing their practices
15 and adopting specific policies to, for example:

- 16 a. “Prioritize and leverage expertise in developmental psychology and user mental
17 health and well-being in product teams to minimize risks of harm to children and
18 adolescents[;]”⁸¹
19 b. Design platforms and algorithms to prioritize health and safety as the first principle;⁸²
20 c. “[A]void design features that attempt to maximize time, attention, and
21 engagement[;]”⁸³

22 ⁷⁶ *Id.* at 4 (emphasis added).

23 ⁷⁷ *Id.*

24 ⁷⁸ *Fact Sheet: Biden-Harris Administration Announces Actions to Protect Youth Mental Health,*
25 *Safety & Privacy Online*, The White House (May 23, 2023),
26 [https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/23/fact-sheet-biden-](https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/23/fact-sheet-biden-harris-administration-announces-actions-to-protect-youth-mental-health-safety-privacy-online/)
27 [harris-administration-announces-actions-to-protect-youth-mental-health-safety-privacy-online/](https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/23/fact-sheet-biden-harris-administration-announces-actions-to-protect-youth-mental-health-safety-privacy-online/)
(emphasis added).

28 ⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Social Media and Youth Mental Health Advisory*, *supra* note 66.

⁸² *Id.*

⁸³ *Id.*

- d. “Create effective and timely systems and processes to adjudicate requests and complaints” from youth, families, and educators “to address online abuse, harmful content and interactions, and other threats to children’s health and safety[;]”⁸⁴
- e. “Share data relevant to the health impact of platforms and strategies” with the public and independent researchers;⁸⁵
- f. “Conduct and facilitate transparent and independent assessments of the impact of social media products and services on children and adolescents[;]”⁸⁶
- g. Minimize risk of harm by creating default settings for children that are set to the highest safety and priority standards, written in easy-to-read and highly visible formats;⁸⁷ and
- h. “Adhere to and enforce age minimums...that respect the privacy of youth users.”⁸⁸

D. Defendants Intentionally Target Youth Users with the Marketing, Design, and Operation of Their Social Media Platforms

78. This mental health crisis is no accident. It is the result of the Defendants’ deliberate choices and affirmative actions to design and market their social media platforms to attract youth.

79. Defendants each run and operate social media platforms. The interactive features Defendants provide on their platforms are similar in many respects. For example, Facebook, Instagram, Snap, TikTok, and YouTube all offer tailored “feeds” of content curated by complex algorithms intended to learn users’ interests; ways to publicly express affirmation for such curated content through “likes,” comments, and sharing or reposting the content; and, in fact, each is known to copy the designs and features of one another.⁸⁹ The salient features of Defendants’ social media platforms are described in more detail below.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ See, e.g., Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of Flattery*, Gizmodo (Aug. 16, 2022), <https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419>.

1 80. Defendants make money from their social media platforms by using them as
2 advertising platforms. Defendants collect data on their users’ viewing habits and behaviors—
3 highly valuable information from an advertiser’s perspective—and use that data to offer
4 advertisers the opportunity to target advertising to the platforms’ users. Advertisers pay a
5 premium to target advertisements to specific categories of users, including youth.

6 81. Defendants view their population of adolescent and even pre-adolescent users as
7 one of their most valuable commodities. Young users are central to Defendants’ business model
8 and advertising revenue as an audience for advertisements because children are more likely than
9 adults to use social media. Today, 95 percent of children ages 13–17 have cellphones,⁹⁰ 90
10 percent use social media,⁹¹ and 28 percent buy products and services through social media.⁹²

11 82. To profit from these young users, Defendants intentionally market their platforms
12 to children and adolescents. For children under age thirteen, the Children’s Online Privacy
13 Protection Act (“**COPPA**”)⁹³ regulates the conditions under which platforms like Defendants’
14 can collect and use their information.

15 83. COPPA requires platforms that either target children under age thirteen or have
16 actual knowledge of users under age thirteen to obtain “verifiable parental consent” prior to
17 collecting and using information about children under age thirteen.⁹⁴ Defendants have blatantly
18 violated COPPA or turned a blind eye to younger users on their platforms by leaving users to
19 self-report their age.

20 84. Seeking to capture even younger audiences, Defendants have each offered “kid
21 versions” of their platforms, which, while not collecting users’ information, are reportedly
22

23 ⁹⁰ Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
24 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

25 ⁹¹ *Social Media and Teens*, Am. Acad. Child & Adolescent Psychiatry (Mar. 2018),
26 https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx.

27 ⁹² Erinn Murphy *et al.*, *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021),
tinyurl.com/89ct4p88.

28 ⁹³ See 15 U.S.C. §§ 6501-6506.

⁹⁴ *Id.*

1 “designed to fuel [kids’] interest in the grown-up version.”⁹⁵

2 85. To maximize revenue, Defendants have intentionally designed and operated their
3 platforms to maximize users’ screen time. Defendants have built features intended to exploit
4 human psychology and designed algorithms driven by advanced artificial intelligence and
5 machine-learning systems, progressively modifying their platforms in ways that promote
6 excessive and problematic use—despite knowing these practices are harming young users.

7 86. One way Defendants maximize the time users spend on their platforms involves
8 the design of feeds—whether of photos, videos, or sponsored or promoted content. Each
9 Defendant uses algorithms to serve users personalized content for them to consume ad nauseum.
10 Google’s former design ethicist, Tristan Harris, explained that this never-ending stream is
11 designed to “keep [users] scrolling, and purposely eliminate any reason for [them] to pause,
12 reconsider or leave.”⁹⁶ Defendants’ feeds take “an experience that was bounded and finite, and
13 turn it into a bottomless flow that keeps going.”⁹⁷ This “flow state,” as psychologists describe it,
14 “fully immerse[s]” users, distorts their perception of time, and “has been shown to be associated
15 with problematic use of social networking sites.”⁹⁸

16 87. A second way social media platforms manipulate users is through social
17 reciprocity. “Reciprocity,” from a psychology perspective, refers to the powerful social
18 phenomenon of how people respond to positive or, conversely, hostile actions. Reciprocity
19 means that in response to friendly actions, people respond in a friendly manner and vice versa.⁹⁹
20 Sociologist Phillip Kunz best illustrated the automatic nature of reciprocity through his

21
22 ⁹⁵ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022),
<https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->

23 ⁹⁶ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
<https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

24 ⁹⁷ *Id.*

25 ⁹⁸ Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated*
26 *mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, BMC
Psych. 10, 279 (2022), <https://doi.org/10.1186/s40359-022-00990-7>.

27 ⁹⁹ Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3)
28 J. Econ. Persps. 159–81 (2000), https://www.researchgate.net/profile/Ernst-Fehr-2/publication/23756527_Fairness_and_Retaliation_The_Economics_of_Reciprocity/links/5eb024e945851592d6b87d3b/Fairness-and-Retaliation-The-Economics-of-Reciprocity.pdf.

1 Christmas card experiment in the 1970s. In the experiment, Mr. Kunz sent a group of complete
2 strangers holiday cards with pictures of his family and included a brief note.¹⁰⁰ Those people,
3 whom he had never met or communicated with before, reciprocated, flooding him with holiday
4 cards.¹⁰¹ The majority of the responses did not even ask Mr. Kunz who he was.¹⁰² They simply
5 responded to his initial gesture with a reciprocal action.

6 88. Reciprocity is why Facebook and Snapchat automatically tell a “sender when you
7 ‘saw’ their message, instead of letting you avoid disclosing whether you read it. As a
8 consequence, you feel more obligated to respond[.]” immediately.¹⁰³ Through these alerts and
9 other push notifications, users feel psychologically compelled to return to the platform.

10 89. A third way Defendants manipulate users to keep using or coming back to their
11 platforms is through the use of intermittent variable rewards (“**IVR**”). Also referred to as random
12 rewards or random reinforcement, IVR is another principle of behavioral psychology that has
13 been recognized and studied for decades. The rewards are variable because the behavior is not
14 rewarded every time. Slot machines are the classic example of how IVR works.¹⁰⁴ With each pull
15 of the lever on the slot machine, the user may or may not win a prize. Slot machine winnings are
16 intermittent and vary in value. As casinos owners know, IVR creates behaviors that are very hard
17 to stop, even when the rewards are no longer given out.

18 90. The neurobiology behind the effectiveness of IVR is well understood. IVR works
19 by spacing out dopamine-triggering stimuli with dopamine gaps—allowing for anticipation and
20 craving to develop, which strengthens the desire to engage in the activity with each release of
21 dopamine.

22 ¹⁰⁰ Phillip R. Kunz & Michael Woolcott, *Season’s Greetings: From my status to yours*, 5(3) Soc.
23 Sci. Rsch. 269–78 (Sept. 1976),
24 <https://www.sciencedirect.com/science/article/abs/pii/0049089X7690003X?via%3Dihub>
[[https://doi.org/10.1016/0049-089X\(76\)90003-X](https://doi.org/10.1016/0049-089X(76)90003-X)].

25 ¹⁰¹ *Id.*

26 ¹⁰² *Id.*

27 ¹⁰³ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
<https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

28 ¹⁰⁴ See, e.g., Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17,
2017), <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

1 91. Defendants integrate IVR into the design and operations of their respective
2 platforms by “link[ing] a user’s action (like pulling a lever) with a variable reward.”¹⁰⁵ For
3 example, when “we swipe down our finger to scroll the Instagram feed, we’re playing a slot
4 machine to see what photo comes next.”¹⁰⁶ Meta also delays the time it takes to load the feed.
5 “This is because without that three-second delay, Instagram wouldn’t feel variable.”¹⁰⁷ Without
6 that delay, there would be no time for users’ anticipation to build. In slot machine terms, there
7 would be “no sense of *will I win?* because you’d know instantly. So the delay isn’t the app
8 loading. It’s the cogs spinning on the slot machine.”¹⁰⁸ Each of the Defendants’ platforms
9 exploits this biochemical reaction among its users, typically using “likes,” “hearts,” or other
10 indications of social approval that serve as the reward. *See infra* Section IV.D.1–4.

11 92. “Everyone innately responds to social approval, but some demographics, in
12 particular teenagers, are more vulnerable to it than others.”¹⁰⁹

13 93. Youth are especially vulnerable to the ways in which Defendants manipulate
14 users to maximize their “watch time,” and to the resulting harms. Children’s brains undergo a
15 fundamental shift around age ten that makes “preteens extra sensitive to attention and admiration
16 from others.”¹¹⁰ Consequently, for young users of social media, Defendants’ use of IVR,
17 reciprocity, and other “rewards” taps into this heightened sensitivity at a critical time in their
18 development.

19 94. Adolescence is a period of rapid growth and development in the human brain,
20 second only to infancy in that regard. As a result of many of these changes during adolescence,
21 preteens and teens are highly sensitive to both positive and negative social stimuli. the structures

22 ¹⁰⁵ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
23 <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

24 ¹⁰⁶ *Id.*

25 ¹⁰⁷ Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),
<https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

26 ¹⁰⁸ *Id.*

27 ¹⁰⁹ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
<https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

28 ¹¹⁰ Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n
(Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

of the brain “closely tied” to social media activity and that drive instinctual behavior begin to change.¹¹¹ The ventral striatum is one of those structures. It receives a rush of dopamine and oxytocin, known as the “happy hormones[,]” whenever we experience social rewards.¹¹² Between the ages of 10 and 12, the receptors for those happy hormones begin to multiply in this region of the brain, which makes compliments on a new hairstyle, laughter from a classmate, or other social rewards “start to feel a lot more satisfying.”¹¹³

95. These biological changes incentivize kids and teens to develop healthy social skills and connections. “But arriving at school in a new pair of designer jeans, hoping your crush will smile at you in the hallway, is worlds away from posting a video on TikTok that may get thousands of views and likes,” according to Mitch Prinstein, Chief Science Officer for the American Psychology Association.¹¹⁴

96. Part of what makes interactions on social media so different is that they are often permanent and public in nature. There is no public ledger tracking the number of consecutive days you have spoken to someone, like there is for Snap “streaks.” Similarly, “[a]fter you walk away from a regular conversation, you don’t know if the other person liked it, or if anyone else liked it[.]”¹¹⁵ Conversely, on Defendants’ platforms, kids, their friends, and even complete strangers can publicly deliver or withhold social rewards in the form of likes, comments, views, and follows.¹¹⁶

97. These social rewards release dopamine and oxytocin in the brains of youth and adults alike but there are two key differences, as Chief Science Officer Prinstein explained: “First, adults tend to have a fixed sense of self that relies less on feedback from peers. Second, adults have a more mature prefrontal cortex, an area that can help regulate emotional responses to social rewards.”¹¹⁷

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

1 98. Adolescents, by contrast, are in a “period of personal and social identity
2 formation,” much of which “is now reliant on social media.”¹¹⁸ “Due to their limited capacity for
3 self-regulation and their vulnerability to peer pressure,” adolescents “are at greater risk of
4 developing mental disorder.”¹¹⁹

5 99. Together, Meta, Snap, TikTok, and Google have designed, refined, marketed, and
6 operated their social media platforms to maximize the number of youth who use their platforms
7 and the time they spend on those platforms. Despite knowing that social media inflicts harms on
8 youth, Defendants have continued to create more sophisticated versions of their platforms with
9 features designed to keep users engaged and maximize the amount of time they spend using
10 social media. Defendants’ conduct in designing and marketing exploitive and manipulative
11 platforms, youth spend excessive amounts of time on Defendants’ platforms.

12 100. Defendants’ efforts worked. The majority of teenagers use the same five social
13 media platforms: YouTube, TikTok, Instagram, Snapchat, and Facebook.¹²⁰ Each of these
14 platforms individually boasts high numbers of teenage users.

15 **1. Meta Intentionally Marketed to and Designed Their Social Media Platforms**
16 **for Youth Users, Substantially Contributing to the Mental Health Crisis**

17 **a. Meta Platforms**

18 101. Meta platforms, including Facebook and Instagram, are among the most popular
19 social networking platforms in the world, with more than 3.6 billion users worldwide.¹²¹

21 ¹¹⁸ Betul Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety*
22 *and psychological distress in adolescents*, Int’l J. Adolescence & Youth (202) 25:1, 79–93
(Mar. 3, 2019),
23 [https://www.researchgate.net/publication/331947590_A_systematic_review_the_influence_of](https://www.researchgate.net/publication/331947590_A_systematic_review_the_influence_of_social_media_on_depression_anxiety_and_psychological_distress_in_adolescents/fulltext/5c94432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-anxiety-and-psychological-distress-in-adolescents.pdf)
24 [social_media_on_depression_anxiety_and_psychological_distress_in_adolescents/fulltext/5c94](https://www.researchgate.net/publication/331947590_A_systematic_review_the_influence_of_social_media_on_depression_anxiety_and_psychological_distress_in_adolescents/fulltext/5c94432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-anxiety-and-psychological-distress-in-adolescents.pdf)
25 [432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-](https://www.researchgate.net/publication/331947590_A_systematic_review_the_influence_of_social_media_on_depression_anxiety_and_psychological_distress_in_adolescents/fulltext/5c94432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-anxiety-and-psychological-distress-in-adolescents.pdf)
[anxiety-and-psychological-distress-in-adolescents.pdf](https://www.researchgate.net/publication/331947590_A_systematic_review_the_influence_of_social_media_on_depression_anxiety_and_psychological_distress_in_adolescents/fulltext/5c94432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-anxiety-and-psychological-distress-in-adolescents.pdf)
[<https://doi.org/10.1080/02673843.2019.1590851>].

26 ¹¹⁹ *Id.*

27 ¹²⁰ Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
2022), [https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/)
[2022/](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/).

28 ¹²¹ Felix Richter, *Meta Reaches 3.6 Billion People Each Month*, Statista (Oct. 29, 2021),
<https://www.statista.com/chart/2183/facebook-mobile-users/>.

(i) The Facebook Platform

102. Facebook is a social networking platform that is one of Meta's platforms.

103. Facebook was founded in 2004 and has become the largest social network in the world. As of October 2021, Facebook had approximately 2.9 billion monthly active users, approximately 2 billion of whom use Facebook every day.¹²²

104. When Facebook was founded in 2004, only students at certain colleges and universities could use the social media platform, and verification of college enrollment was required to access Facebook.

105. In 2005, Facebook expanded and became accessible to students at more universities around the world, after which Meta launched a high school version of Facebook that also required an invitation to join.

106. Meta later expanded eligibility for Facebook to employees of several companies, including Apple and Microsoft, and added more universities to its network.

107. In September 2006, Facebook became available to all internet users. At the time, Meta claimed that it was open only to persons aged 13 and older with a valid email address; however, on information and belief, Meta did not require verification of a user's age or identity and did not actually verify users' email addresses, such that underage users could easily register an account with and access Facebook.

108. Facebook then underwent a series of changes aimed at increasing user engagement and platform growth, without regard to user safety, including the following:

- In 2009, Facebook launched the "like" button;
- In 2011, Facebook launched Messenger, its direct messaging service, and started allowing people to subscribe to accounts outside of their "friends";
- In 2012, Facebook started showing advertisements in its news feed and launched a real-time bidding system through which advertisers could bid on users based on their visits to third-party websites;

¹²² See *id.*; S. Dixon, *Number of Daily Active Facebook Users Worldwide as of 3rd Quarter 2022 (in Millions)*, Statista (Oct. 27, 2022), <https://www.statista.com/statistics/346167/facebook-global-dau/>.

- In 2014, Facebook’s facial recognition algorithm (DeepFace) reached near-human accuracy in identifying faces;
- In 2015, Facebook made significant changes to its news feed algorithm to determine what content to show users and launched its live-streaming service;
- In 2016, Facebook launched games for its social media platform, so that users could play games without having to install new apps; and
- In 2017, Facebook launched Facebook Creator, an app for mobile video posts that assists with content creation.

(ii) The Instagram Platform

109. Instagram is a social media platform that launched in 2010, which Meta acquired for \$1 billion in April 2012.

110. Instagram enables users to share photos and videos with other users and to view other users’ photos and videos. These photos and videos appear on users’ Instagram “feeds,” which are virtually bottomless, scrollable lists of content.

111. After being acquired by Meta, Instagram experienced exponential user growth, expanding from approximately 10 million monthly active users in September 2012 to more than one billion monthly active users worldwide today, including approximately 160 million users in the United States.¹²³

112. Instagram’s user growth was driven by design and development changes to the Instagram platform that increased engagement at the expense of the health and well-being of Instagram’s users—especially the children using the platform.

113. For example, in August 2020, Instagram began hosting and recommending short videos to users, called Reels.¹²⁴ Like TikTok, Instagram allows users to view an endless feed of Reels that are recommended and curated to users by Instagram’s algorithm.

114. Instagram has become the most popular photo sharing social media platform

¹²³ S. Dixon, *Number of Instagram Users Worldwide from 2020 to 2025 (in Billions)*, Statista (May 23, 2022), <https://www.statista.com/statistics/183585/instagram-number-of-global-users/>.

¹²⁴ *Introducing Instagram Reels*, Instagram (Aug. 5, 2020), <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement>.

1 among children in the United States—approximately 72 percent of children aged 13–17 in the
2 United States use Instagram.¹²⁵

3 **b. Meta Markets Its Platforms to Youth**

4 115. To maximize the revenue generated from relationships with advertisers, Meta has
5 expended significant effort to attract youth, to its platforms, including designing features that
6 appeal to a teen and preteen audience. Meta explicitly targets teenagers for multiple reasons. In
7 part, Meta views teenagers as a way to attract other potential users, such as by using teenagers to
8 recruit parents who want to participate in their children’s lives as well as younger siblings who
9 look to older siblings as models for which social media platforms to use and how to use them.¹²⁶

10 116. Most importantly, Meta recognizes that teenagers are the “pipeline” for the
11 continued growth of the company. As an internal Instagram strategy memo warned in 2020, “If
12 we lose the teen foothold in the U.S. we lose the pipeline.”¹²⁷ A 2018 marketing presentation
13 declared the loss of teenage users to other social media platforms an “existential threat.”¹²⁸ In
14 response, starting in 2018, Instagram devoted almost all of its annual marketing budget to
15 attracting teenagers—hundreds of millions of dollars annually.¹²⁹

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¹²⁵ Katherine Schaeffer, *7 Facts About Americans and Instagram*, Pew Rsch. Ctr. (Oct. 7, 2021),
25 <https://www.pewresearch.org/fact-tank/2021/10/07/7-facts-about-americans-and-instagram/>.

26 ¹²⁶ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*,
27 N.Y. Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

28 ¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

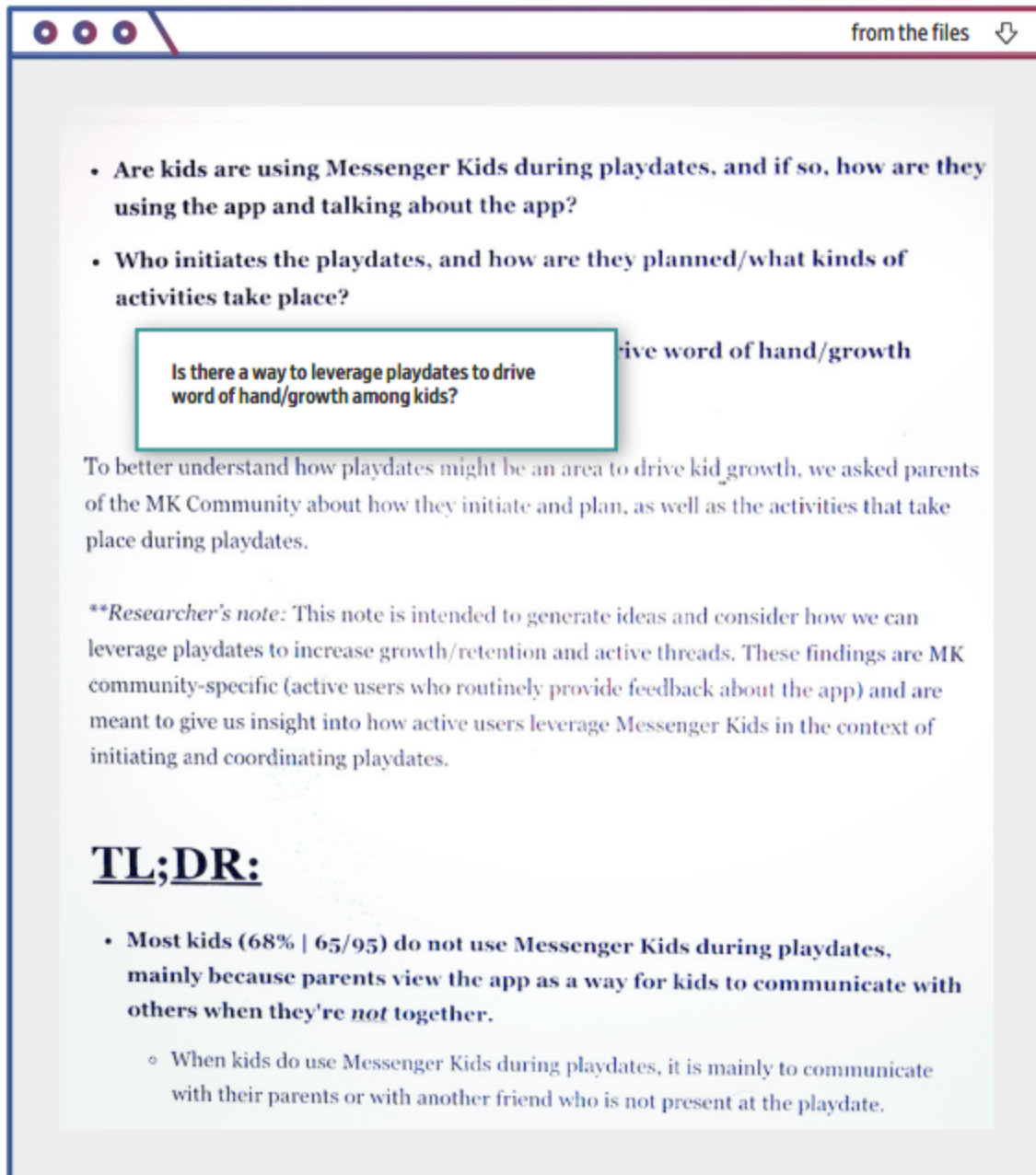
Why do we care about tweens?

They are a valuable but untapped audience

- Our ultimate goal is messaging primacy with US Tweens (TAM = 12M), which may also lead to winning with Teens (TAM 36M).
- MK begins to lose PMF as kids age. Our primacy declines at 10 and 82% of users are 10 or younger.

"I don't think I would use it...that's just me. I would have to get [my mom's] permission to [connect with my friends] and everyone would make fun of me..."

10 yo boy, Detroit



117. Meta also views preteens or “tweens” as a “valuable but untapped audience,” even contemplating “exploring playdates as a growth lever.”¹³⁰ Meta formed a team to study preteens, endeavored to create more products designed for them, and commissioned strategy papers regarding the “business opportunities” created.¹³¹

118. For these reasons, the Meta platforms are designed to be used by children and are

¹³⁰ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It has investigated how to engage young users in response*

1 actively marketed to children throughout the United States. Meta advertises to children through
2 its own efforts as well as through advertisers that create and target advertisements to children.
3 Internal Meta documents establish that Meta spends hundreds of millions of dollars researching,
4 analyzing, and marketing to children and teens to find ways to make its platforms more
5 appealing to these age groups and to maximize the time they spend on its platforms, as these age
6 groups are seen as essential to Meta’s long-term profitability and market dominance.¹³² For
7 instance, after Instagram’s founders left Meta in September 2018, “Facebook went all out to turn
8 Instagram into a main attraction for young audiences,” and “began concentrating on the ‘teen
9 time spent’ data point,” in order to “drive up the amount of time that teenagers were on the app
10 with features including Instagram Live, a broadcasting tool, and Instagram TV, where people
11 upload videos that run as long as an hour.”¹³³

12 119. In fact, Meta’s acquisition of Instagram in 2012 was primarily motivated by its
13 desire to make up for declines in the use of Facebook by youth, and Meta views Instagram as
14 central to its ability to attract and retain young audiences. A Meta presentation from 2019
15 indicated that “Instagram is well positioned to resonate and win with young people,” and “[t]here
16 is a path to growth if Instagram can continue their trajectory.”¹³⁴

17 120. Although Meta’s policy is that children younger than thirteen cannot register an
18 account, it lacks effective age-verification protocols—an issue long known to Meta. Since at
19 least 2011, Meta has known that its age-verification protocols are largely inadequate, estimating
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22 *to competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever*, Wall St. J.
23 (Sept. 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>.

24 ¹³¹ *Id.*

25 ¹³² *Id.*

26 ¹³³ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*,
27 N.Y. Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

28 ¹³⁴ Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show; Its own in-depth research shows a significant teen mental-health issue that Facebook plays down in public*, Wall St. J. (Sept. 14, 2021), <https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>.

1 at that time that it removed 20,000 children under age thirteen from Facebook every day.¹³⁵ A
2 decade later, in 2021, an Instagram executive acknowledged that users under thirteen can still
3 “lie about [their] age now” to register an account.¹³⁶

4 121. Meta has yet to implement protocols to verify a user’s age. Meta also has
5 agreements with cell phone manufacturers and/or providers and/or retailers, who often pre-install
6 its platforms on mobile devices prior to sale and without regard to the age of the intended user of
7 each such device. That is, even though Meta is prohibited from providing the Meta platforms to
8 users under the age of thirteen, Meta actively promotes and provides underage users access to its
9 platforms by encouraging and allowing cell phone manufacturers to pre-install the platforms on
10 mobile devices indiscriminately. Consequently, approximately 11 percent of United States
11 children between the ages of 9 and 11 used Instagram in 2020,¹³⁷ despite Meta claiming to
12 remove approximately 600,000 underage users per quarter.¹³⁸

13 122. Ultimately, as discussed above, Meta’s efforts to attract young users have been
14 successful.

15 **c. Meta Intentionally Maximizes the Time Users Spend on its Platforms**

16 123. Once users begin using its platforms, Meta employs a variety of strategies to keep
17 them there, using features that exploit the natural human desire for social interaction and the
18 neurophysiology of the brain’s reward systems to keep users endlessly scrolling, posting,
19 “liking,” commenting, and counting the number of “likes” and comments to their own posts. As

20 ¹³⁵ Austin Carr, *Facebook Booting “20,000” Underage Users Per Day: Reaction to Growing*
21 *Privacy Concerns?*, Fast Co. (Mar. 22, 2011),
22 <https://www.fastcompany.com/1741875/facebook-booting-20000-underage-users-day-reaction-growing-privacy-concerns>.

23 ¹³⁶ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*
24 *Kids, Documents Show; It has investigated how to engage young users in response to*
25 *competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever*, Wall St. J. (Sept.
26 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>.

27 ¹³⁷ Brooke Auxier et al., *Parenting Children in the Age of Screens*, Pew Rsch. Ctr. (July 28,
28 2020), <https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/>.

¹³⁸ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*
Kids, Documents Show; It has investigated how to engage young users in response to
competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever, Wall St. J. (Sept.
28 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>.

discussed above, the rapidly developing adolescent brain, highly attuned to social rewards, is particularly vulnerable to such exploitation.

124. Many of the features Meta has designed utilize the well-established principle of intermittent variable rewards or IVR, discussed above, including one of its most defining features: the “Like” button. Meta knows “Likes” are a source of social comparison harm for many users, as detailed below. Several Meta employees involved in creating the Like button have since left Meta and have spoken publicly about the manipulative nature of Meta’s platforms and the harm they cause users.¹³⁹

125. Another way in which Meta employs IVR is through its push notifications and emails. These notifications alert users to activity related to their account, such as when someone else has “Liked” a post or when the user has been tagged in someone else’s post. Meta spaces out notifications of likes and comments into multiple bursts rather than notifying users in real time, which activates the brain’s reward circuitry and then creates dopamine gaps that leave users craving in anticipation for more. In this regard, Meta’s push notifications and emails are specifically designed to manipulate users to reengage with Meta’s platforms to increase user engagement regardless of a user’s health or wellbeing.

126. Other features of Meta’s platforms based on IVR principles include posts, comments, tagging, and the “pull to refresh” feature (which, as noted above, has the same effect on the brain as pulling the lever on a slot machine).

127. Still other design decisions utilize the principle of reciprocity, such as the use of visual cues to reflect that someone is currently writing a message (a feature designed to keep a user on the platform until they receive the message), and alerting users when a recipient has read their message (which encourages the recipient to respond and return to the platform to check for a response).

128. The Meta platforms are designed to encourage users to post content and to like,

¹³⁹ See, e.g., Paul Lewis, *‘Our minds can be hijacked’: the tech insiders who fear a smartphone dystopia*, Guardian (Oct. 6, 2017), <https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-dystopia>.

comment, and interact with other users' posts. Each new post that appears on a user's feed can function as a dopamine-producing social interaction in the user's brain. Similarly, likes, comments, and other interactions with the user's own posts function as an even stronger dopamine-producing stimulus than does seeing new posts from other users. This in turn drives users to post more content they expect will generate even more likes and comments. In this regard, Meta has designed its platforms to effectively trap users—especially youth—in endless cycles of what Facebook whistleblower Frances Haugen called “little dopamine loops.”¹⁴⁰

d. Meta's Algorithms Are Manipulative and Harmful

129. Meta also employs advanced computer algorithms and artificial intelligence to make its platforms as engaging and habit-forming as possible for users. For example, the Meta platforms display curated content and employ recommendations that are customized to each user by using sophisticated algorithms. The proprietary services developed through such algorithms include News Feed (a newsfeed of stories and posts published on the platform, some of which are posted by connections and others that are suggested by Meta's algorithms), People You May Know (algorithm-based suggestions of persons with common connections or background), Suggested for You, Groups You Should Join, and Discover (algorithm-based recommendations of groups). Such algorithm-based content and recommendations are pushed to each user in a steady stream as the user navigates the platform, as well as through notifications sent to the user's smartphone and email addresses when the user is disengaged with the platform.

130. Meta's algorithms are not based exclusively on user requests or even user inputs. Meta's algorithms combine information entered or posted by the user on the platform with the user's demographics and other data points collected and synthesized by Meta, make assumptions about that user's interests and preferences, make predictions about what else might appeal to the user, and then make very specific recommendations of posts and pages to view and groups to visit and join based on rankings that will optimize Meta's key performance indicators. In this regard, Meta's design dictates the way content is presented, such as its ranking and

¹⁴⁰ Allison Slater Tate, *Facebook whistleblower Frances Haugen says parents make 1 big mistake with social media*, Today (Feb. 7, 2022), <https://www.today.com/parents/teens/facebook-whistleblower-frances-haugen-rcna15256>.

1 prioritization.¹⁴¹

2 131. Meta’s current use of algorithms in its platforms is driven and designed to
3 maximize user engagement. Over time, Meta has gradually transitioned away from chronological
4 ranking, which organized the interface according to when content was posted or sent, to
5 prioritize what Meta calls “Meaningful Social Interactions” (“**MSI**”), which emphasizes users’
6 connections and interactions such as likes and comments and gives greater significance to the
7 interactions of connections that appeared to be the closest to users. In order to do this, Meta
8 developed and employed an “amplification algorithm” to execute engagement-based ranking,
9 which considers a post’s likes, shares, and comments, as well as a respective user’s past
10 interactions with similar content, and exhibits the post in the user’s newsfeed if it otherwise
11 meets certain benchmarks.

12 132. Although Meta claims that the goal of this engagement-based ranking is “helping
13 you have more meaningful social interactions,”¹⁴² Meta’s algorithms covertly operate on the
14 principle that intense reactions invariably compel attention. Because these algorithms measure
15 reactions and contemporaneously immerse users in the most reactive content, these algorithms
16 effectively work to steer users toward the most negative content, because negative content
17 routinely elicits passionate reactions. In other words, the algorithm is designed to prioritize the
18 number of interactions rather than the quality of interactions.

19 133. As set forth in greater detail below, Meta was well aware of the harmful content
20 that it was promoting but failed to change its algorithms because the inflammatory content that
21 its algorithms were feeding to users fueled their return to the platforms and led to more
22 engagement—which in turn helped Meta sell more advertisements that generate most of its
23 revenue.

24 134. Meta’s shift from chronological ranking to algorithm-driven content and
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26 ¹⁴¹ See, e.g., Adam Mosseri, *Shedding More Light on How Instagram Works*, Instagram (June 8,
27 2021), [https://about.instagram.com/blog/announcements/shedding-more-light-on-how-](https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works)
[instagram-works](https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works).

28 ¹⁴² Mark Zuckerberg, Facebook (Jan. 11, 2018, 4:28 PM),
<https://www.facebook.com/zuck/posts/10104413015393571?pnref=story>
[<https://perma.cc/F8VD-U6JU>].

1 recommendations has changed the Meta platforms in ways that are profoundly dangerous and
2 harmful to children. Meta’s algorithms exploit vulnerabilities that are heightened in preteens and
3 teens due to the their social and psychological development—and Meta designs its platforms
4 with these specific vulnerabilities in mind.

5 **e. Meta’s Harmful “Feeds”**

6 135. Both Facebook and Instagram show each user an algorithm-generated “feed” that
7 consists of a series of photos and videos posted by accounts that the user follows, along with
8 advertising and content specifically selected and promoted by Meta.

9 136. These feeds are virtually bottomless lists of content that enable users to scroll
10 endlessly without any natural end points that would otherwise encourage them to move on to
11 other activities. In this regard, “[u]nlike a magazine, television show, or video game,” the Meta
12 platforms only rarely prompt their users to take a break by using “stopping cues.”¹⁴³ Meta’s
13 “bottomless scrolling” feature is designed to encourages users to use its platforms for unlimited
14 periods of time.

15 137. Meta also exerts control over a user’s feed through certain ranking mechanisms,
16 escalation loops, and promotion of advertising and content specifically selected and promoted by
17 Meta based on, among other things, its ongoing planning, assessment, and prioritization of the
18 types of information most likely to increase user engagement.

19 138. As Senator Richard Blumenthal, Chair of the Subcommittee on Consumer
20 Protection, Product Safety, and Data Security, explained during one of a series of Senate
21 hearings in 2021 on “Protecting Kids Online,” Meta utilizes private information of its child users
22 to “precisely target [them] with content and recommendations, assessing what will provoke a
23 reaction,” including encouragement of “destructive and dangerous behaviors,” which is how
24 Meta “can push teens into darker and darker places.”¹⁴⁴ Whistleblower Frances Haugen testified
25

26 ¹⁴³ See Zara Abrams, *How Can We Minimize Instagram’s Harmful Effects?*, Am. Psych. Ass’n
(Dec. 2, 2021), <https://www.apa.org/monitor/2022/03/feature-minimize-instagram-effects>.

27 ¹⁴⁴ See *Facebook Whistleblower Frances Haugen Testifies on Children & Social Media Use: Full Senate Hearing Transcript* at 09:02, Rev (Oct. 5, 2021),
28 <https://www.rev.com/blog/transcripts/facebook-whistleblower-frances-haugen-testifies-on-children-social-media-use-full-senate-hearing-transcript>.

1 that Meta’s “amplification algorithms, things like engagement based ranking . . . can lead
2 children . . . all the way from just something innocent like healthy recipes to anorexia promoting
3 content over a very short period of time.”¹⁴⁵ Meta thus specifically selects and pushes this
4 harmful content on its platforms, for which it is then paid, and does so both for direct profit and
5 also to increase user engagement, resulting in additional profits down the road.

6 139. As part of the Senate Subcommittee’s investigation into social media companies,
7 Senators Richard Blumenthal, Marsha Blackburn and Mike Lee tested and confirmed the fact
8 that Meta’s platforms’ recommendation-based feeds and features promote harmful content by
9 opening test accounts purporting to be teenage girls. Senator Blumenthal stated that, “[w]ithin an
10 hour all our recommendations promoted pro-anorexia and eating disorder content.”¹⁴⁶ Likewise,
11 Senator Lee found that an account for a fake 13-year-old girl was quickly “flooded with content
12 about diets, plastic surgery and other damaging material for an adolescent girl.”¹⁴⁷

13 140. Meta’s Instagram platform features a feed of “Stories,” which are short-lived
14 photo or video posts that are accessible only for 24 hours. This feature encourages constant,
15 repeated, and compulsive use of Instagram, so that users do not miss out on content before it
16 disappears. As with other feeds, the presentation of content in a user’s Stories feed is generated
17 by an algorithm designed by Meta to maximize the amount of time a user spends on the app.

18 141. Instagram also features a feed called “Explore,” which displays content posted by
19 users not previously “followed.” The content in “Explore” is selected and presented by an
20 algorithm designed by Meta to maximize the amount of time a user spends on the app. As with
21 other feeds, the Explore feature may be scrolled endlessly, and its algorithm will continually
22 generate new recommendations, encouraging users to use the app for unlimited periods of time.

23 142. Instagram also features a feed called “Reels,” which presents short video posts by
24 users not previously followed. These videos play automatically, without input from the user,

25 ¹⁴⁵ *Id.* at 37:34.

26 ¹⁴⁶ Vanessa Romo, *4 Takeaways from Senators' Grilling of Instagram's CEO About Kids and*
27 *Safety*, NPR (Dec. 8, 2021, 10:13 PM),
28 [https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-](https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-brush-aside-his-promises-to-self-poli)
[brush-aside-his-promises-to-self-poli](https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-brush-aside-his-promises-to-self-poli).

¹⁴⁷ *Id.*

1 encouraging the user to stay on the app for indefinite periods of time. As with other feeds, Reels
2 content is selected and presented by an algorithm designed by Meta to maximize the amount of
3 time a user spends on the app.

4 **f. For Years, Meta Has Been Aware That Its Platforms Harm Children**

5 143. In an internal slide presentation in 2019, Meta’s own researchers, studying
6 Instagram’s effects on children, concluded, “**We make body image issues worse for one in**
7 **three teen girls[.]**”¹⁴⁸ This presentation was one of many documents leaked by former Meta
8 employee Frances Haugen to journalists at the *Wall Street Journal* and federal regulators in
9 2021.¹⁴⁹ The *Wall Street Journal*’s reporting on the documents began in September 2021 and
10 caused a national and international uproar.

11 144. The leaked documents confirmed what social scientists have long suspected, that
12 social media platforms like Meta’s—and Instagram in particular—can cause serious harm to the
13 mental and physical health of children. Moreover, this capacity for harm is by design—what
14 makes the Meta platforms profitable is precisely what harms its young users.

15 145. Upon information and belief, at least as far back as 2019, Meta initiated a
16 Proactive Incident Response experiment, which began researching the effect of Meta on the
17 mental health of today’s children.¹⁵⁰ Meta’s own in-depth analyses show significant mental-
18 health issues stemming from the use of Instagram among teenage girls, many of whom linked
19

20
21 ¹⁴⁸ Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company*
22 *Documents Show; Its own in-depth research shows a significant teen mental-health issue that*
23 *Facebook plays down in public*, Wall St. J. (Sept. 14, 2021),
[https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739)
[documents-show-11631620739](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739) (emphasis added).

24 ¹⁴⁹ The *Wall Street Journal* and *Digital Wellbeing* published several of these documents in
25 November 2021. See Paul Marsden, *The ‘Facebook Files’ on Instagram Harms—All Leaked*
26 *Slides on a Single Page*, Digit. Wellbeing (Oct. 20, 2021), [https://digitalwellbeing.org/the-](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/)
27 [facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/). Gizmodo also started
publishing these documents in November 2021. See Dell Cameron *et al.*, *Read the Facebook*
Papers for Yourself, Gizmodo (Apr. 18, 2022), [https://gizmodo.com/facebook-papers-how-to-](https://gizmodo.com/facebook-papers-how-to-read-1848702919)
[read-1848702919](https://gizmodo.com/facebook-papers-how-to-read-1848702919).

28 ¹⁵⁰ See *Facebook Whistleblower Testifies on Protecting Children Online*, C-SPAN (Oct. 5,
2021), [https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook)
[regulate-facebook](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook).

1 suicidal thoughts and eating disorders to their experiences on the app.¹⁵¹ In this regard, Meta’s
2 researchers have repeatedly found that Instagram is harmful for a sizable percentage of teens that
3 use the platform.¹⁵²

4 146. In particular, the researchers found that “[s]ocial comparison,” or individuals’
5 assessment of their own value relative to that of others, is “worse on Instagram” for teens than on
6 other social media platforms.¹⁵³ One in five teens reported that Instagram “makes them feel
7 worse about themselves.”¹⁵⁴ Roughly two in five teen users reported feeling “unattractive,” while
8 one in 10 teen users reporting suicidal thoughts traced them to Instagram.¹⁵⁵ Teens “consistently”
9 and without prompting blamed Instagram “for increases in the rate of anxiety and depression.”¹⁵⁶
10 And although teenagers identify Instagram as a source of psychological harm, they often lack the
11 self-control to use Instagram less. Also, according to Meta’s own researchers, young users are
12 not capable of controlling their Instagram use to protect their own health.¹⁵⁷ Such users “often
13 feel ‘addicted’ and know that what they’re seeing is bad for their mental health but feel unable to
14 stop themselves.”¹⁵⁸

15 147. Similarly, in a March 2020 presentation posted to Meta’s internal message board,
16 researchers found that “[t]hirty-two percent of teen girls said that when they felt bad about their
17 bodies, Instagram made them feel worse.”¹⁵⁹ Sixty-six percent of teen girls and 40 percent of

18 ¹⁵¹ See Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company*
19 *Documents Show*, Wall St. J. (Sept. 14, 2021, 7:59 AM),
20 [https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline)
[documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline).

21 ¹⁵² *Id.*

22 ¹⁵³ *Id.*

23 ¹⁵⁴ *Id.*

24 ¹⁵⁵ *Id.*

25 ¹⁵⁶ *Id.*

26 ¹⁵⁷ *Id.*

27 ¹⁵⁸ *Id.*

28 ¹⁵⁹ *Id.*; *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.*, Wall St. J. (Sept. 29, 2021), <https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf>; see also *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019), <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf>; Paul Marsden, *The ‘Facebook Files’ on Instagram arms – all leaked slides on a single page* at slide 14, Dig. Wellbeing (Oct. 20, 2021) <https://digitalwellbeing.org/the->

1 teen boys have experienced negative social comparison harms on Instagram.¹⁶⁰ Further,
2 approximately 13 percent of teen-girl Instagram users say the platform makes thoughts of
3 “suicide and self-harm” worse, and 17 percent of teen-girl Instagram users say the platform
4 makes “[e]ating issues” worse.¹⁶¹ Meta’s researchers also acknowledged that “[m]ental health
5 outcomes” related to the use of Instagram “can be severe,” including “Body Dissatisfaction,”
6 “Body Dysmorphia,” “Eating Disorders,” “Loneliness,” and “Depression.”¹⁶²

7 148. Not only is Meta aware of the harmful nature of the Meta platforms, the leaked
8 documents reveal that Meta is aware of the specific design features that lead to excessive use and
9 harm to children. For instance, Meta knows that Instagram’s Explore, Feed, and Stories features
10 contribute to social comparison harms “in different ways.”¹⁶³ Moreover, specific “[a]spects of
11 Instagram exacerbate each other to create a perfect storm” of harm to users, and that the “social
12 comparison sweet spot”—a place of considerable harm to users, particularly teenagers and teen
13 girls—lies at the center of Meta’s model and platforms’ features.¹⁶⁴ In this regard, Meta’s
14 researchers wrote that “[s]ocial comparison and perfectionism are nothing new, but young people
15 are dealing with this on an unprecedented scale,” and “[c]onstant comparison on Instagram is
16 ‘the reason’ why there are higher levels of anxiety and depression in young people.”¹⁶⁵

17
18 [facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page](#) (hard life moment –
19 mental health deep dive).

20 ¹⁶⁰ *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the*
21 *U.S.* at 9, Wall St. J. (Sept. 29, 2021), [https://digitalwellbeing.org/wp-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)
22 [content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)
23 [Instagram.pdf](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf).

24 ¹⁶¹ *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019),
25 [https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-](https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf)
26 [1.pdf](https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf); Paul Marsden, *The Facebook Files’ on Instagram arms – all leaked slides on a single*
27 *page* at slide 14, Dig. Wellbeing (Oct. 20, 2021), [https://digitalwellbeing.org/the-facebook-](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page)
28 [files-on-instagram-harms-all-leaked-slides-on-a-single-page](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page).

¹⁶² *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the*
U.S. at 34, Wall St. J. (Sept. 29, 2021), [https://digitalwellbeing.org/wp-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)
[content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)
[Instagram.pdf](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf).

¹⁶³ *Id.* at 31.

¹⁶⁴ *Id.* at 33.

¹⁶⁵ *See Hard Life Moments-Mental Health Deep Dive* at 53, Facebook (Nov. 2019),
[https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-](https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf)
[1.pdf](https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf).

1 **2. Snapchat Intentionally Marketed to and Designed Its Social Media Platform**
2 **for Youth Users, Substantially Contributing to the Mental Health Crisis**

3 **a. The Snapchat Platform**

4 149. Snapchat was created in 2011 by Stanford University students Evan Spiegel and
5 Bobby Murphy, who serve as Snap Inc.’s CEO and CTO, respectively.¹⁶⁶

6 150. Snapchat started as a photo-sharing platform that allows users to form groups and
7 share photos, known as “snaps,” that disappear after being viewed by the recipients. Snapchat
8 became well known for this self-destructing content feature. But Snapchat quickly evolved
9 beyond a simple photo-sharing app, as Snap made design changes and rapidly developed new
10 features aimed at and ultimately increasing Snapchat’s popularity among teenage users.

11 151. In 2012, Snap added video sharing capabilities, pushing the number of “snaps” to
12 50 million per day.¹⁶⁷ A year later, Snap added the “Stories” function, which allows users to
13 upload a rolling compilation of snaps that the user’s friends can view for 24 hours.¹⁶⁸ The
14 following year, Snap added a feature that enabled users to communicate with one another in real
15 time via text or video.¹⁶⁹ It also added the “Our Story” feature, expanding on the original stories
16 function by allowing users in the same location to add their photos and videos to a single
17 publicly viewable content stream.¹⁷⁰ At the same time, Snap gave users the capability to add
18 filters and graphic stickers onto photos indicating a user’s location, through a feature it refers to
19 as “Geofilters.”¹⁷¹

21 ¹⁶⁶ Katie Benner, *How Snapchat is Shaping Social Media*, N.Y. Times (Nov. 30, 2016),
22 <https://www.nytimes.com/2016/11/30/technology/how-snapchat-works.html>.

23 ¹⁶⁷ J.J. Colao, *Snapchat Adds Video, Now Seeing 50 Million Photos A Day*, Forbes (Dec. 14,
24 2012), [https://www.forbes.com/sites/jjcolao/2012/12/14/snapchat-adds-video-now-seeing-50-](https://www.forbes.com/sites/jjcolao/2012/12/14/snapchat-adds-video-now-seeing-50-million-photos-a-day/?sh=55425197631b)
25 [million-photos-a-day/?sh=55425197631b](https://www.forbes.com/sites/jjcolao/2012/12/14/snapchat-adds-video-now-seeing-50-million-photos-a-day/?sh=55425197631b).

26 ¹⁶⁸ Ellis Hamburger, *Snapchat’s Next Big Thing: ‘Stories’ That Don’t Just Disappear*, Verge
27 (Oct. 3, 2013), [https://www.theverge.com/2013/10/3/4791934/snapchats-next-big-thing-stories-](https://www.theverge.com/2013/10/3/4791934/snapchats-next-big-thing-stories-that-dont-just-disappear)
28 [that-dont-just-disappear](https://www.theverge.com/2013/10/3/4791934/snapchats-next-big-thing-stories-that-dont-just-disappear).

¹⁶⁹ Romain Dillet, *Snapchat Adds Ephemeral Text Chat and Video Calls*, TechCrunch (May 1,
2014), <https://techcrunch.com/2014/05/01/snapchat-adds-text-chat-and-video-calls/>.

¹⁷⁰ Laura Stampler, *Snapchat Just Unveiled a New Feature*, Time (June 17, 2014),
<https://time.com/2890073/snapchat-new-feature/>.

¹⁷¹ Angela Moscaritolo, *Snapchat Adds ‘Geofilters’ in LA, New York*, PC Mag. (July 15, 2014),
<https://www.pcmag.com/news/snapchat-adds-geofilters-in-la-new-york>.

1 152. In 2015, Snap added a “Discover” feature that promotes videos from news outlets
2 and other content creators.¹⁷² Users can watch that content by scrolling through the Discover
3 feed. After the selected video ends, Snapchat automatically plays other video content in a
4 continuous stream, which does not cease until a user manually exits the stream.

5 153. In 2020, Snap added the “Spotlight” feature, through which it serves users “an
6 endless feed of user-generated content” that Snap curates from the 300 million daily Snapchat
7 users.¹⁷³

8 154. Today, Snapchat is one of the largest social media platforms in the world. By its
9 own estimates, Snapchat has 363 million daily users, including 100 million daily users in North
10 America.¹⁷⁴ Snapchat reaches 90 percent of people ages 13–24 in over twenty countries and
11 reaches nearly half of all smartphone users in the United States.¹⁷⁵

12 **b. Snap Markets Its Platform to Youth**

13 155. Snapchat’s commercial success is due to its advertising. In 2014, Snap began
14 running advertisements on Snapchat.¹⁷⁶ Since then, Snapchat’s business model has revolved
15 around its advertising revenue, which has boomed. Snap now expects to generate \$4.86 billion in
16 Snapchat advertising revenue for 2022.¹⁷⁷

17 156. Snap specifically markets Snapchat to children ages 13–17 because they are a key
18 demographic for Snap’s advertising business. Internal documents describe users between the
19 ages of 13–34 as “critical” to Snap’s advertising success because of the common milestones
20

21 ¹⁷² Steven Tweedie, *How to Use Snapchat’s New ‘Discover’ Feature*, Bus. Insider (Jan. 27,
22 2015), <https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1>.

23 ¹⁷³ Salvador Rodriguez, *Snap is launching a competitor to TikTok and Instagram Reels*, CNBC
(Nov. 23, 2020), [https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-](https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html)
24 [and-instagram-reels.html](https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html).

25 ¹⁷⁴ *October 2022 Investor Presentation at 5*, Snap Inc. (Oct. 20, 2022),
<https://investor.snap.com/events-and-presentations/presentations/default.aspx>.

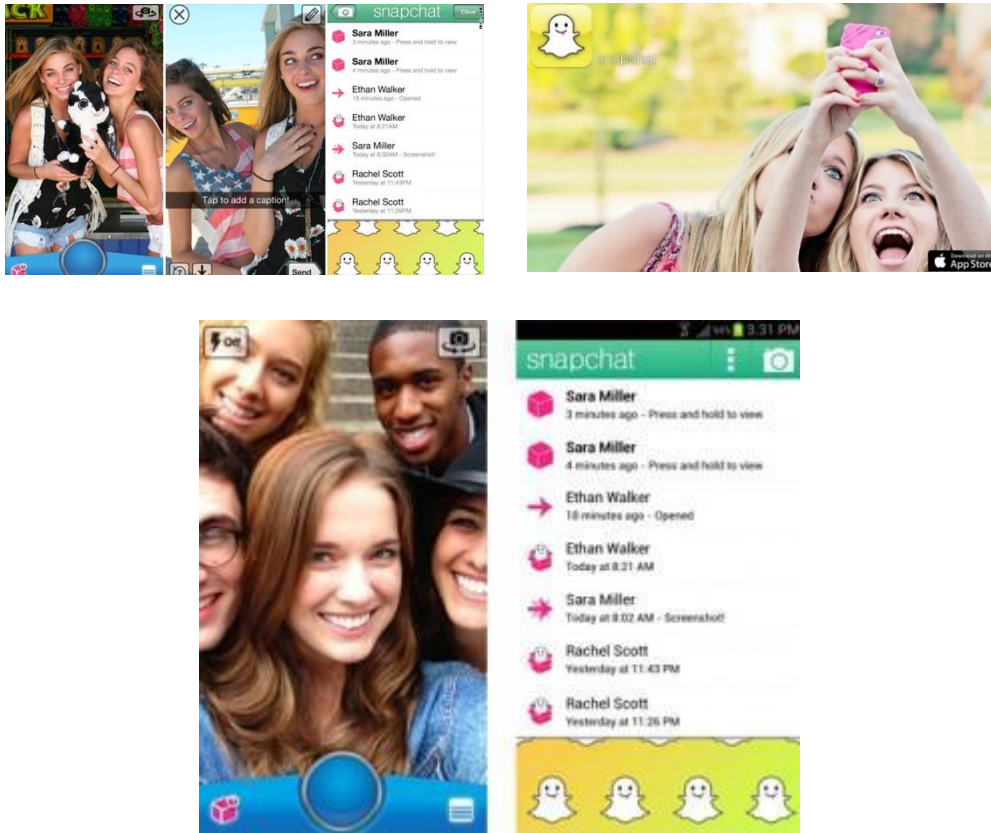
26 ¹⁷⁵ *Id.* at 6–7.

27 ¹⁷⁶ Sara Fischer, *A timeline of Snap’s advertising, from launch to IPO*, Axios (Feb. 3, 2017),
[https://www.axios.com/2017/12/15/a-timeline-of-snaps-advertising-from-launch-to-ipo-](https://www.axios.com/2017/12/15/a-timeline-of-snaps-advertising-from-launch-to-ipo-1513300279)
28 [1513300279](https://www.axios.com/2017/12/15/a-timeline-of-snaps-advertising-from-launch-to-ipo-1513300279).

¹⁷⁷ Bhanvi Staija, *TikTok’s ad revenue to surpass Twitter and Snapchat combined in 2022*,
Reuters (Apr. 11, 2022), [https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-](https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/)
[twitter-snapchat-combined-2022-report-2022-04-11/](https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/).

1 achieved within that age range.¹⁷⁸

2 157. While Snap lumps teenagers in with younger adults in its investor materials, Snap
3 marketing materials featuring young models reveal its priority market:



17 158. In addition to its marketing, Snap has targeted a younger audience by designing
18 Snapchat in a manner that older individuals find hard to use.¹⁷⁹ The effect of this design is that
19 Snapchat is a platform where its young users are insulated from older users including their
20 parents. As Snap's CEO explained, "[w]e've made it very hard for parents to embarrass their
21 children[.]"¹⁸⁰

22 159. Snap also designed Snapchat as a haven for young users to hide content from their
23 parents by ensuring that photos, videos, and chat messages quickly disappear. This design further
24

25 ¹⁷⁸ October 2022 Investor Presentation at 27, Snap Inc. (Oct. 20, 2022),
26 <https://investor.snap.com/events-and-presentations/presentations/default.aspx>.

27 ¹⁷⁹ See Hannah Kuchler & Tim Bradshaw, *Snapchat's Youth Appeal Puts Pressure on Facebook*,
28 *Fin. Times* (Aug. 21, 2017), <https://www.ft.com/content/07e4dc9e-86c4-11e7-bf50-e1c239b45787>.

¹⁸⁰ Max Chafkin & Sarah Frier, *How Snapchat Built a Business by Confusing Olds*, *Bloomberg*
(Mar. 3, 2016), <https://www.bloomberg.com/features/2016-how-snapchat-built-a-business/>.

1 insulates children from adult oversight.

2 160. Moreover, Snap added as a feature the ability for users to create cartoon avatars
3 modeled after themselves.¹⁸¹ By using an artform generally associated with and directed at
4 younger audiences, Snap further designed Snapchat to entice teenagers and younger children.

5 161. In 2013, Snap also marketed Snapchat specifically to kids under 13 through a
6 feature it branded “SnapKidz.”¹⁸² This feature—part of the Snapchat platform—allowed children
7 under 13 to take photos, draw on them, and save them locally on the device.¹⁸³ Kids could also
8 send these images to others or upload them to other social media sites.¹⁸⁴

9 162. While SnapKidz feature was later discontinued and Snap purports to now prohibit
10 users under the age of 13, its executives have admitted that its age verification “is effectively
11 useless in stopping underage users from signing up to the Snapchat app.”¹⁸⁵

12 163. Snap’s efforts to attract young users have been successful. *See supra*
13 Section IV.A. Teenagers consistently name Snapchat as a favorite social media platform. The
14 latest figures show 13 percent of children ages 8–12 used Snapchat in 2021,¹⁸⁶ and almost 60
15 percent of children ages 13–17 use Snapchat.¹⁸⁷

16 **c. Snap Intentionally Maximizes the Time Users Spend on its Platform**

17 164. Snap promotes excessive use of its platform through design features and
18

19 ¹⁸¹ Kif Leswing, *Snapchat just introduced a feature it paid more than \$100 million for*, Bus.
20 Insider (July 19, 2016), <https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-than-100-million-for-2016-7>.

21 ¹⁸² Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, Forbes (June 23,
22 2013), <https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a>.

23 ¹⁸³ *Id.*

24 ¹⁸⁴ *Id.*

25 ¹⁸⁵ Isobel Asher Hamilton, *Snapchat admits its age verification safeguards are effectively*
26 *useless*, Bus. Insider (Mar. 19, 2019), <https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3>.

27 ¹⁸⁶ Victoria Rideout *et al.*, *Common Sense Census: Media use by tweens and teens, 2021* at 5,
28 Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

¹⁸⁷ Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,
2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

manipulative algorithms intended to maximize users' screen time.

165. Snap has implemented inherently and intentionally exploitive features into Snapchat, including "Snapstreaks," various trophies and reward systems, quickly disappearing ("ephemeral") messages, and filters. Snap designed these features, along with others, to maximize the amount of time users spend on Snapchat.

166. Snaps are intended to manipulate users by activating the rule of reciprocation.¹⁸⁸ Whenever a user gets a snap, they feel obligated to send a snap back. And Snapchat tells users each time they receive a snap by pushing a notification to the recipient's cellphone. These notifications are designed to prompt users to open Snapchat and view content, increasing the amount of time users spend on Snapchat. Further, because snaps disappear within ten seconds of being viewed, users feel compelled to reply immediately. This disappearing nature of snaps is a defining characteristic of Snapchat and intended keep users on the platform.

167. Snap also keeps users coming back to the Snapchat platform through the "Snapstreaks" feature.¹⁸⁹ A "streak" is a counter within Snapchat that tracks how many consecutive days two users have sent each other snaps. If a user fails to snap the other user within 24 hours, the streak ends. Snap adds extra urgency by putting an hourglass emoji next to a friend's name if a Snapchat streak is about to end.¹⁹⁰ This design implements a system where a user must "check constantly or risk missing out."¹⁹¹ And this feature is particularly effective on teenage users. "For teens in particular, streaks are a vital part of using the app, and of their social

¹⁸⁸ Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 14, 2015), <https://www.nirandfar.com/psychology-of-snapchat/>.

¹⁸⁹ See Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in and get you 'addicted'*, Bus. Insider (Feb. 17 2018), <https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13>; see generally Virginia Smart & Tyana Grundig, *'We're designing minds': Industry insider reveals secrets of addictive app trade*, CBC (Nov. 3, 2017), <https://www.cbc.ca/news/science/marketplace-phones-1.4384876>; Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

¹⁹⁰ Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017), <https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker>.

¹⁹¹ *Id.*

lives as a whole.”¹⁹² Some children become so obsessed with maintaining a Snapstreak that they give their friends access to their accounts when they may be away from their phone for a day or more, such as on vacation.¹⁹³

168. Snap also designed features that operate on IVR principles to maximize the time users are on its platform. The “rewards” come in the form of a user’s “Snapscore,” and other signals of recognition similar to “likes” used in other platforms. For example, a Snapscore increases with each snap a user sends and receives. The increase in score and other trophies and charms users can earn by using the app operate on variable reward patterns. Like Snapstreaks, these features are designed to incentivize sending snaps and increase the amount of time users spend on Snapchat.

169. Snap also designs photo and video filters and lenses, which are central to Snapchat’s function as a photo and video sharing social media platform. Snap designed its filters and lenses in a way to further maximize the amount of time users spend on Snapchat. One way Snap uses its filters to hook young users is by creating temporary filters that impose a sense of urgency to use them before they disappear. Another way Snap designed its filters to increase screen use is by gamification. Many filters include games,¹⁹⁴ creating competition between users by sending each other snaps with scores. Further, Snap tracks data on the most commonly used filters and develops new filters based on this data.¹⁹⁵ And Snap personalizes filters to further

¹⁹² Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in and get you ‘addicted’*, Bus. Insider (Feb. 17 2018), <https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13>; see generally Cathy Becker, *Experts warn parents how Snapchat can hook in teens with streaks*, ABC News (July 27, 2017), <https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296>.

¹⁹³ Caroline Knorr, *How to resist technology addiction*, CNN (Nov. 9, 2017), <https://www.cnn.com/2017/11/09/health/science-of-tech-obsession-partner/index.html>; Jon Brooks, *7 Specific Tactics Social Media Companies Use to Keep You Hooked*, KQED (June 9, 2017), <https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked>.

¹⁹⁴ Josh Constine, *Now Snapchat Has ‘Filter Games’*, TechCrunch (Dec. 23, 2016), <https://techcrunch.com/2016/12/23/snapchat-games/>.

¹⁹⁵ *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> (last visited June 26, 2023).

entice individuals to use Snapchat more.¹⁹⁶ Snap designs and modifies these filters to maximize the amount of time users spend on Snapchat.

d. Snapchat's Algorithms Are Manipulative and Harmful

170. Snap also uses complex algorithms to suggest friends to users and recommend content in order to keep users using Snapchat.

171. Snap notifies users based on an equation Snap uses to determine whether someone should add someone else as a friend on Snapchat. This is known as "Quick Add." By using an algorithm to suggest friends to users, Snapchat increases the odds users will add additional friends, send additional snaps, and spend more time on the app.

172. Snapchat also contains "Discover" and "Spotlight" features that use algorithms to recommend content to users. The Discover feature includes content from news and other media outlets.¹⁹⁷ A user's Discover page is populated by an algorithm and constantly changes depending on how a user interacts with the content.¹⁹⁸ Similarly, the Spotlight feature promotes popular videos from other Snapchat users and is based on an algorithm that determines whether a user has positively or negatively engaged with similar content.¹⁹⁹ Snap programs its algorithms to push content to users that will keep them engaged on Snapchat and, thereby, increase the amount of time users spend on Snapchat, worsening their mental health.

e. Snap's Conduct in Designing and Operating Its Platform Has Harmed Youth Mental Health

173. The way in which Snap has designed and operated Snapchat has caused youth to suffer increased anxiety, depression, disordered eating, and sleep deprivation.

174. Snap knows Snapchat is harming youth because, as alleged above, Snap intentionally designed Snapchat to maximize engagement by preying on the psychology of

¹⁹⁶ *Id.*

¹⁹⁷ Steven Tweedie, *How to Use Snapchat's New 'Discover' Feature*, Bus. Insider (Jan. 27, 2015), <https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1>.

¹⁹⁸ *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> (last visited June 26, 2023).

¹⁹⁹ Sara Fischer, *Snapchat launches Spotlight, a TikTok competitor*, Axios (Nov. 23, 2020), <https://www.axios.com/2020/11/23/snapchat-launches-spotlight-tiktok-competitor>; <https://snap.com/en-US/privacy/your-information>.

children through its use of algorithms and other features including Snapstreaks, various trophies and reward systems, quickly disappearing messages, filters, and games.

175. Snap should know that its conduct has negatively affected youth. Snap’s conduct has been the subject of inquiries by the United States Senate regarding Snapchat’s use “to promote bullying, worsen eating disorders, and help teenagers buy dangerous drugs or engage in reckless behavior.”²⁰⁰ Further, Senators from across the ideological spectrum have introduced bills that would ban many of the features Snapchat uses, including badges and other awards recognizing a user’s level of engagement with the platform.²⁰¹ Despite these calls for oversight from Congress, Snap has failed to curtail its use of streaks, badges, and other awards that recognize users’ level of engagement with Snapchat.

176. Snap also knows or should know of Snapchat’s other negative effects on youth because of published research findings. For instance, researchers coined the phrase “Snapchat dysmorphia” after the pernicious effect Snapchat has had on how young people view themselves.²⁰² The researchers and doctors use the phrase to describe people, usually young women, seeking plastic surgery to make themselves look like the way they do through Snapchat filters.²⁰³ The cause of this trend appears to be Snapchat’s and other social media platforms’ beauty filters, which create a “sense of unattainable perfection” that is alienating and damaging to a person’s self-esteem.²⁰⁴ One social psychologist summed the effect as “the pressure to

²⁰⁰ Bobby Allyn, *4 Takeaways from the Senate child safety hearing with YouTube, Snapchat and TikTok*, Nat’l Pub. Radio (Oct. 26, 2021), <https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing>.

²⁰¹ See Abigail Clukey, *Lawmaker Aims To Curb Social Media Addiction With New Bill*, Nat’l Pub. Radio (Aug. 3, 2019), <https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill>; *Social Media Addiction Reduction Technology Act*, S. 2314, 116th Cong. (2019); *Kids Internet Design and Safety Act*, S. 2918, 117th Cong. (2021).

²⁰² ‘Snapchat Dysmorphia’: When People Get Plastic Surgery To Look Like A Social Media Filter, WBUR (Aug 29, 2018), <https://www.wbur.org/hereandnow/2018/08/29/snapchat-dysmorphia-plastic-surgery>.

²⁰³ *Id.*

²⁰⁴ Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty through filters*, ABC News (May 1, 2021), <https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989>.

present a certain filtered image on social media can certainly play into [depression and anxiety] for younger people who are just developing their identities.”²⁰⁵

177. Despite knowing Snapchat harms its young users, Snap continues to update and add features intentionally designed to maximize the amount of time users spend on Snapchat. Snap continues its harmful conduct because its advertising revenue relies on Snapchat’s users consuming large volumes of content on its platform.

3. TikTok Intentionally Marketed to and Designed Its Social Media Platform for Youth Users, Substantially Contributing to the Mental Health Crisis

a. TikTok’s Platform

178. TikTok is a social media platform that describes itself as “the leading destination for short-form mobile video.”²⁰⁶ According to TikTok, it is primarily a platform where users “create and watch short-form videos.”²⁰⁷

179. TikTok’s predecessor, Musical.ly, launched in 2014 as a place where people could create and share 15-second videos of themselves lip-syncing or dancing to their favorite music.²⁰⁸

180. In 2017, ByteDance launched an international version of a similar platform that also enabled users to create and share short lip-syncing videos that it called TikTok.²⁰⁹

181. That same year, ByteDance acquired Musical.ly to leverage its young user base in the United States, of almost 60 million monthly active users.²¹⁰

²⁰⁵ *Id.*

²⁰⁶ *About: Our Mission*, TikTok, <https://www.tiktok.com/about> (last visited June 26, 2023).

²⁰⁷ *Protecting Kids Online: Snapchat, TikTok, and YouTube: Hearing Before the Subcomm. On Consumer Protection, Product Safety, and Data Security*, 117 Cong. (2021) (statement of Michael Beckerman, VP and Head of Public Policy, Americas, TikTok).

²⁰⁸ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve probably never heard of*, Bus. Insider (May 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5>.

²⁰⁹ Paresh Dave, *China’s ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018), <https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW>.

²¹⁰ Liza Lin & Rolfe Winkler, *Social-Media App Musical.ly Is Acquired for as Much as \$1 Billion; With 60 million monthly users, startup sells to Chinese maker of news app Toutiao*, Wall St. J. (Nov. 10, 2017), <https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-acquired-for-as-much-as-1-billion-1510278123>.

182. Months later, the apps were merged under the TikTok brand.²¹¹

183. Since then, TikTok has expanded the length of time for videos from 15-seconds to up to 10 minutes;²¹² created a fund that was expected to grow to over \$1 billion within three years to incentivize users to create videos that even more people will watch;²¹³ and had users debut their own songs, share comedy skits,²¹⁴ and “challenge” others to perform an activity.²¹⁵

184. The videos users create on TikTok are only one part of the equation.

185. “[O]ne of the defining features of the TikTok platform,” is its “For You” feed.²¹⁶ There, users are served with an unending stream of videos TikTok curates for them based on complex, machine-learning algorithms intended to keep users on its platform. TikTok itself describes the feed as “central to the TikTok experience and where most of our users spend their time.”²¹⁷ The *New York Times* described it this way:

It’s an algorithmic feed based on videos you’ve interacted with, or even just watched. It never runs out of material. It is not, unless you train it to be, full of people you know, or things you’ve explicitly told it you want to see. It’s full of things that you seem to have demonstrated you want to watch, no matter what you actually say you want to watch.²¹⁸

186. The “For You” feed has quickly garnered TikTok hundreds of millions of users. Since 2018, TikTok has grown from 271 million global users to more than 1 billion global

²¹¹ Paresh Dave, *China’s ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018), <https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW>.

²¹² Andrew Hutchinson, *TikTok Confirms that 10 Minute Video Uploads are Coming to All Users*, SocialMediaToday (Feb. 28, 2022), <https://www.socialmediatoday.com/news/tiktok-confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/>.

²¹³ Vanessa Pappas, *Introducing the \$200M TikTok Creator Fund*, TikTok (July 29, 2021), <https://newsroom.tiktok.com/en-us/introducing-the-200-million-tiktok-creator-fund>.

²¹⁴ Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June 2, 2016), <https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html>.

²¹⁵ John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html>.

²¹⁶ *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

²¹⁷ *Id.*

²¹⁸ John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html>.

1 monthly users as of September 2021.²¹⁹

2 **b. TikTok Markets Its Platform to Youth**

3 187. TikTok, like the other Defendants' platforms, has built its business plan around
4 advertising revenue, which has boomed. In 2022, TikTok is projected to receive \$11 billion in
5 advertising revenue, over half of which (i.e., \$6 billion) is expected to come from the United
6 States.²²⁰

7 188. TikTok, since its inception as Musical.ly, has been designed and developed with
8 youth in mind.

9 189. Alex Zhu and Louis Yang, the other co-founder of Musical.ly, raised \$250,000 to
10 build an app that experts could use to create short three- to five-minute videos explaining a
11 subject.²²¹ The day they released the app, Zhu said they knew "[i]t was doomed to be a failure,"
12 because "[i]t wasn't entertaining, and it didn't attract teens."²²²

13 190. According to Zhu, he stumbled upon the idea that would become known as
14 TikTok while observing teens on a train, half of whom were listening to music while the other
15 half took selfies or videos and shared the results with friends.²²³ "That's when Zhu realized he
16 could combine music, videos, and a social network to attract the early-teen demographic."²²⁴

17 191. Zhu and Yang thereafter developed the short-form video app that is now known
18 as TikTok, which commentators have observed "encourages a youthful audience in subtle and
19 obvious ways."²²⁵

21 ²¹⁹ Jessica Bursztynsky, *TikTok says 1 billion people use the app each month*, CNBC (Sept. 27,
22 2021), <https://www.cnn.com/2021/09/27/tiktok-reaches-1-billion-monthly-users.html>.

23 ²²⁰ Bhanvi Staija, *TikTok's ad revenue to surpass Twitter and Snapchat combined in 2022*,
Reuters (Apr. 11, 2022), [https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-
twitter-snapchat-combined-2022-report-2022-04-11/](https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/).

24 ²²¹ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app
25 you've probably never heard of*, Bus. Insider (May 28, 2016),
<https://www.businessinsider.com/what-is-musically-2016-5>.

26 ²²² *Id.*

27 ²²³ *Id.*

28 ²²⁴ *Id.*

²²⁵ John Herrman, *Who's Too Young for an App? Musical.ly Tests the Limits*, N.Y. Times (Sept.
16, 2016), [https://www.nytimes.com/2016/09/17/business/media/a-social-network-frequented-
by-children-tests-the-limits-of-online-regulation.html](https://www.nytimes.com/2016/09/17/business/media/a-social-network-frequented-by-children-tests-the-limits-of-online-regulation.html).

1 192. Among the more subtle ways the app was marketed to youth, are its design and
2 content. For example, the Federal Trade Commission (“**FTC**”) alleged that the app initially
3 centered around a child-oriented activity (i.e., lip syncing); featured music by celebrities that
4 then appealed primarily to teens and tweens, such as Selena Gomez and Ariana Grande; labelled
5 folders with names meant to appeal to youth, such as “Disney” and “school”; included songs in
6 such folders related to Disney television shows and movies, such as “Can You Feel the Love
7 Tonight” from the movie “The Lion King” and “You’ve Got a Friend in Me” from the movie
8 “Toy Story” and songs covering school-related subjects or school-themed television shows and
9 movies.²²⁶

10 193. The target demographic was also reflected in the sign-up process. In 2016, the
11 birthdate for those signing up for the app defaulted to the year 2000 (i.e., 16 years old).²²⁷

12 194. TikTok also cultivated a younger demographic in unmistakable, albeit concealed,
13 ways. In 2020, the *Intercept* reported on a document TikTok prepared for its moderators. In the
14 document, TikTok instructs its moderators that videos of “senior people with too many wrinkles”
15 are disqualified for the “For You” feed because that would make “the video . . . much less
16 attractive [and] not worth[] . . . recommend[ing.]”²²⁸

17 195. In December 2016, Zhu confirmed the company had actual knowledge that “a lot
18 of the top users are under 13.”²²⁹

19 196. The FTC alleged that despite the company’s knowledge of these and a
20 “significant percentage” of other users who were under 13, the company failed to comply with
21

22 ²²⁶ Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief (“**Musical.ly**
23 **Complaint**”) at p. 8, ¶¶ 26–27, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D.
24 Cal. Feb. 27, 2019) Dkt. # 1.

25 ²²⁷ Melia Robinson, *How to use Musical.ly, the app with 150 million users that teens are obsessed*
26 *with*, Bus. Insider (Dec. 7, 2016), <https://www.businessinsider.com/how-to-use-musically-app-2016-12>.

27 ²²⁸ Sam Biddle *et al.*, *Invisible Censorship: TikTok Told Moderators to Suppress Posts by*
28 *“Ugly” People and the Poor to Attract New Users*, *Intercept* (Mar. 15, 2020),
<https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/>.

²²⁹ Jon Russell, *Muscal.ly defends its handling of young users, as it races past 40M MAUs at*
8:58–11:12, *TechCrunch* (Dec. 6, 2016), <https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/>.

1 the COPPA.²³⁰

2 197. TikTok settled those claims in 2019 by agreeing to pay what was then the largest
3 ever civil penalty under COPPA and to several forms of injunctive relief.²³¹

4 198. In an attempt to come into compliance with the consent decree and COPPA,
5 TikTok made available to users under 13 what it describes as a “limited, separate app
6 experience.”²³² The child version of TikTok restricts users from posting videos through the app.
7 Children can still, however, record and watch videos on TikTok.²³³ For that reason, experts fear
8 the app is “designed to fuel [kids’] interest in the grown-up version.”²³⁴

9 199. These subtle and obvious ways TikTok markets to and obtained a young userbase
10 are manifestations of Zhu’s views about the importance of user engagement to growing TikTok.
11 Zhu explained the target demographic to the *New York Times*: “[T]eenage culture doesn’t exist”
12 in China because “teens are super busy in school studying for tests, so they don’t have the time
13 and luxury to play social media apps.”²³⁵ By contrast, Zhu describes “[t]eenagers in the U.S. [as]
14 a golden audience.”²³⁶

15 200. TikTok’s efforts to attract young users have been successful. *See supra*
16 Section IV.A. Over 66 percent of children ages 13–17 report having used the TikTok app.

17 **c. TikTok Intentionally Maximizes the Time Users Spend on its**
18 **Platform**

19 201. TikTok employs design elements and complex algorithms to simulate variable
20

21 ²³⁰ *See generally* Musical.ly Complaint, *supra* note 202.

22 ²³¹ Lesley Fair, *Largest FTC COPPA settlement requires Musical.ly to change its tune*, FTC
(Feb. 27, 2019), [https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-](https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune)
23 [settlement-requires-musically-change-its-tune](https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune).

24 ²³² Dami Lee, *TikTok stops young users from uploading videos after FTC settlement*, Verge (Feb.
27, 2019), [https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-](https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law)
25 [settlement-13-childrens-privacy-law](https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law).

26 ²³³ *Id.*

27 ²³⁴ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022),
28 <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->.

²³⁵ Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y.
Times (Aug. 9, 2016), [https://www.nytimes.com/2016/08/10/technology/china-homegrown-](https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html)
[internet-companies-rest-of-the-world.html](https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html).

²³⁶ *Id.*

reward patterns in a flow-inducing stream of short-form videos intended to captivate its user's attention well after they are satiated.

202. Like the other Defendants' social media platforms, TikTok developed features that exploit psychological phenomenon such as IVR and reciprocity to maximize the time users spend on its platform.

203. TikTok drives habitual use of its platform using design elements that operate on principles of IVR. For example, TikTok designed its platform to allow users to like and reshare videos. Those features serve as rewards for users who create content on the platform. Receiving a like or reshare indicates that others approve of that user's content and satisfies their natural desire for acceptance.²³⁷ Studies have shown that "likes" activate the reward region of the brain.²³⁸ The release of dopamine in response to likes creates a positive feedback loop.²³⁹ Users will use TikTok—again and again—in hope of another pleasurable experience.²⁴⁰

204. TikTok also uses reciprocity to manipulate users to use the platform. TikTok invokes reciprocity through features like "Duet." The Duet feature allows users to post a video side-by-side with a video from another TikTok user. Users use Duet as a way to react to the videos of TikTok content creators. The response is intended to engender a reciprocal response from the creator of the original video.

205. TikTok, like Snapchat, offers video filters, lenses, and music, which are intended to keep users on its platform. Also, like Snapchat, TikTok has gamified its platform through "challenges." These challenges are essentially campaigns in which users compete to perform a specific task. By fostering competition, TikTok incentivizes users to use its platform.

206. TikTok's defining features, its "For You" feed, is a curated, never-ending stream

²³⁷ See, e.g., Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media*, 27(7) Psych. Sci. 1027–35 (July 2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/>.

²³⁸ *Id.*

²³⁹ Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the Development of Social Media Addiction*, 11(7) J. Neurology & Neurophysiology 507 (2020), <https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf>.

²⁴⁰ *Id.*

of short-form videos intended to keep users on its platform. In that way, TikTok feeds users beyond the point they are satiated. The ability to scroll ad infinitum, coupled with the variable reward pattern of TikTok induces a flow-like state for users that distorts their sense of time.²⁴¹ That flow is yet another way TikTok increases the time users spend on its platform.

d. TikTok’s Algorithms are Manipulative

207. The first thing a user sees when they open TikTok is the “For You” feed, even if they have never posted anything, followed anyone, or liked a video.²⁴²

208. The “For You” page presents users with a “stream of videos” TikTok claims are “curated to [each user’s] interests.”²⁴³

209. According to TikTok, it populates each user’s “For You” feed by “ranking videos based on a combination of factors,” that include, among others, any interests expressed when a user registers a new account, videos a user likes, accounts they follow, hashtags, captions, sounds in a video they watch, and certain device settings, such as their language preferences and where they are located.²⁴⁴

210. Critically, some factors weigh heavier than others. To illustrate, TikTok explains that an indicator of interest, such as “whether a user finishes watching a longer video from beginning to end, would receive greater weight than a weak indicator, such as whether the video’s viewer and creator are both in the same country.”²⁴⁵

211. TikTok claims it ranks videos in this way because the length of time a user spends watching a video is a “strong indicator of interest[.]”²⁴⁶

212. But Zhu offered a different explanation, he repeatedly told interviewers that he

²⁴¹ Christian Montag *et al.*, *Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories*, 16(14) Int’l J. Env’t Rsch. & Pub. Health 2612 (July 23, 2019), <https://doi.org/10.3390/ijerph16142612>.

²⁴² Brian Feldman, *TikTok is Not the Internet’s Eden*, N.Y. Mag. (Mar. 16, 2020), <https://nymag.com/intelligencer/2020/03/tiktok-didnt-want-you-to-see-ugly-or-poor-people-on-its-app.html>.

²⁴³ *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ *Id.*

was “focused primarily on increasing the engagement of existing users.”²⁴⁷ “Even if you have tens of millions of users,” Zhu explained, “you have to keep them *always* engaged.”²⁴⁸

213. The decisions TikTok made in programming its algorithms are intended to do just that, as TikTok candidly explained in an internal document titled, “TikTok Algo 101.” The document, which TikTok has confirmed is authentic, “explains frankly that in the pursuit of the company’s ‘ultimate goal’ of adding daily active users, it has chosen to optimize for two closely related metrics in the stream of videos it serves: ‘retention’ — that is, whether a user comes back — and ‘time spent.’”²⁴⁹

214. “This system means that watch time is key.”²⁵⁰ Guillaume Chaslot, the founder of Algo Transparency, who reviewed the document at the request of the *New York Times*, explained that “rather than giving [people] what they really want,” TikTok’s “algorithm tries to get people addicted[.]”²⁵¹

215. Put another way, the algorithm, coupled with the design elements, condition users through reward-based learning processes to facilitate the formation of habit loops that encourage excessive use.

216. The end result is that TikTok uses “a machine-learning system that analyzes each video and tracks user behavior so that it can serve up a continually refined, never-ending stream of TikToks optimized to hold [user’s] attention.”²⁵²

e. TikTok’s Conduct in Designing and Operating its Platform Has Harmed Youth Mental Health

217. TikTok’s decision to program its algorithm to prioritize user engagement causes

²⁴⁷ Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June 2, 2016), <https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html>.

²⁴⁸ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve probably never heard of*, Bus. Insider (May 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5> (emphasis added).

²⁴⁹ Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021), <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>.

²⁵⁰ *Id.*

²⁵¹ *Id.*

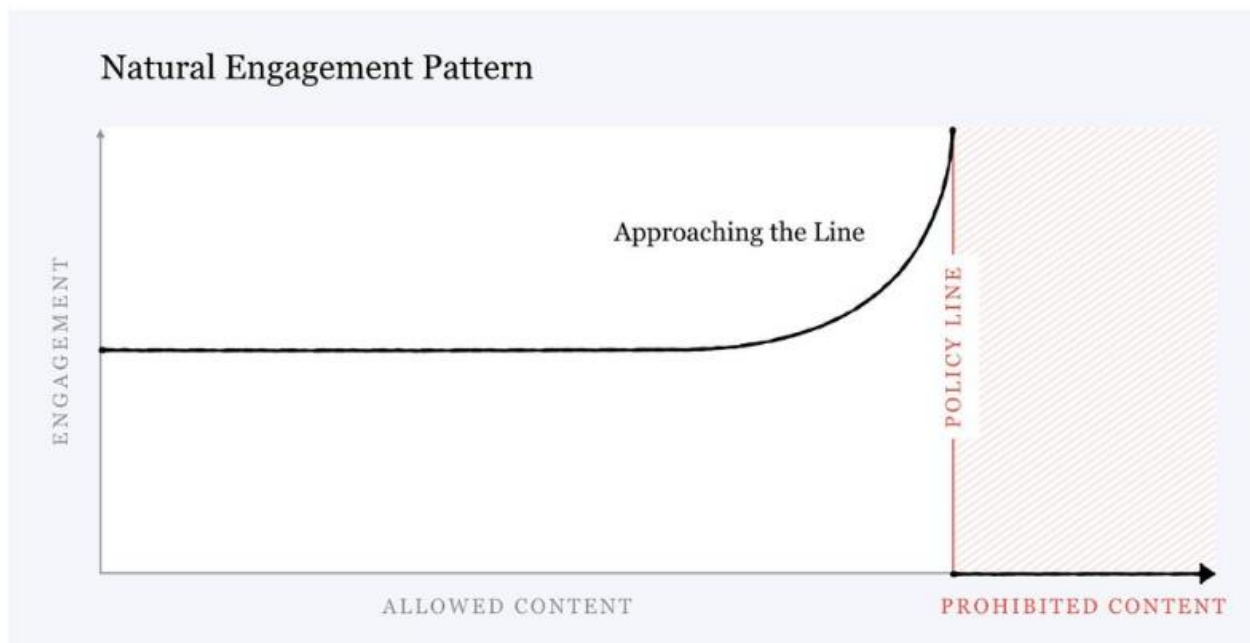
²⁵² Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019), <https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention>.

harmful and exploitive content to be amplified to the young market it has cultivated.

218. The Integrity Institute, a nonprofit of engineers, product managers, data scientists, and others, has demonstrated how prioritizing user engagement amplifies misinformation on TikTok (and other platforms).²⁵³ That pattern, the Integrity Institute notes, is “true for a broad range of harms,” such as hate speech and self-harm content, in addition to misinformation.²⁵⁴

219. The Integrity Institute’s analysis builds on a premise Mark Zuckerberg described as the “Natural Engagement Pattern.”²⁵⁵

220. This chart shows that as content gets closer and closer to becoming harmful, on average, it gets more engagement.



221. According to Zuckerberg “no matter where we draw the lines for what is allowed,

²⁵³ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022), <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>; see also Steven Lee Myers, *How Social Media Amplifies Misinformation More Than Information*, N.Y. Times (Oct. 13, 2022), <https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-report.html>.

²⁵⁴ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022), <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>.

²⁵⁵ Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, Facebook (Nov. 15, 2018), https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/?hc_location=ufi [<https://perma.cc/ZK5C-ZTSX>].

1 as a piece of content gets close to that line, people will engage with it more on average[.]”²⁵⁶

2 222. This has important implications for platform design, as the Integrity Institute
3 explains:

4 when platforms use machine learning models to predict user engagement on
5 content, we should expect the predicted engagement to follow the actual
6 engagement. When those predictions are used to rank and recommend content,
7 specifically when a higher predicted engagement score means the content is more
likely to be recommended or placed at the top of feeds, then we expect that
misinformation will be preferentially distributed and amplified on the platform.²⁵⁷

8 223. Put differently, if you use past engagement to predict future engagement, as
9 TikTok does, you are most likely to populate users “For You” feed with harmful content.

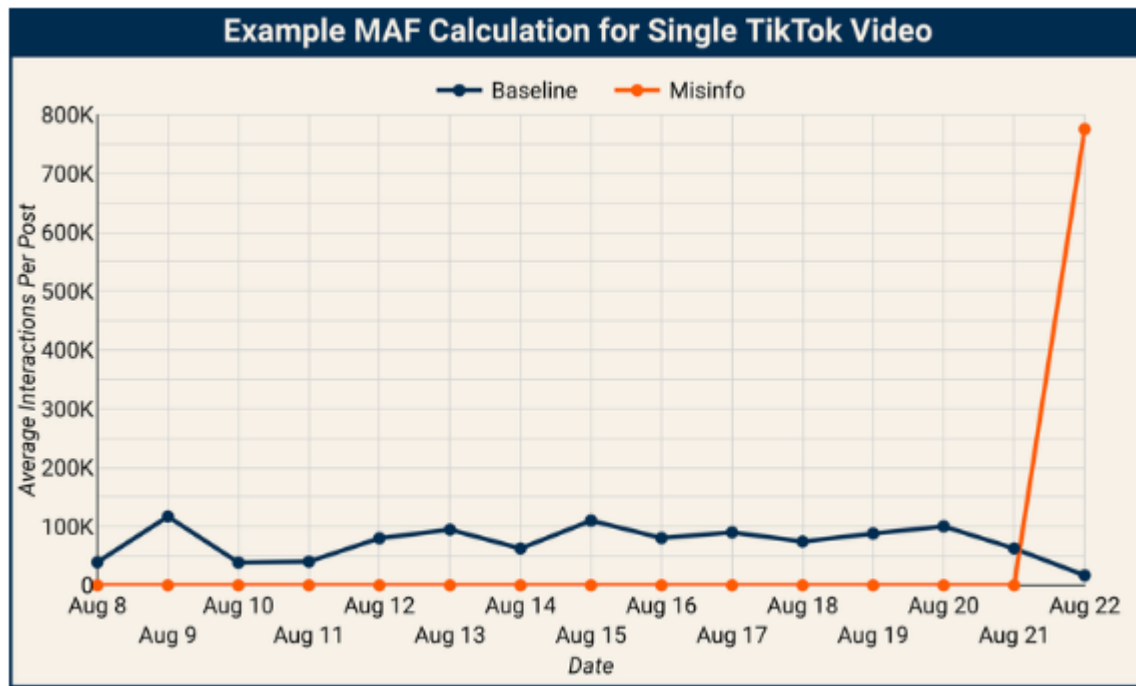
10 224. The Integrity Institute tested its theory by analyzing a category of harmful
11 content: misinformation. Specifically, the Integrity Institute compared the amount of engagement
12 (e.g., number of views) a post containing misinformation received as compared to prior posts
13 from the same content creator.²⁵⁸

26 ²⁵⁶ *Id.*

27 ²⁵⁷ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13,
28 2022), [https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-
amplification-tracking-dashboard](https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard).

²⁵⁸ *Id.*

225. For example, a TikTok user's historical posts received on average 75,000 views. When that same user posted a false statement (as determined by the International Fact Checking Network), the post received 775,000 views. In this case, TikTok amplified the misinformation 10 times more than this user's typical content.²⁵⁹



226. After analyzing many other posts from other users, the Integrity Institute found that TikTok on average amplified misinformation 29 times more than other content.²⁶⁰

227. A separate investigation by *NewsGuard* found TikTok's search algorithm similarly amplified misinformation. TikTok's search engine, like its "For You" feed, is a favorite among youth, with 40 percent preferring it (and Instagram) over Google.²⁶¹ Unfortunately, *NewsGuard* found that 1 in 5 of the top 20 TikTok search results on prominent news topics, such as school shootings and COVID vaccines, contain misinformation.²⁶²

228. Misinformation is just one type of harmful content TikTok amplifies to its young

²⁵⁹ *Id.*

²⁶⁰ *Id.*

²⁶¹ Wanda Pogue, *Move Over Google. TikTok is the Go-To Search Engine for Gen Z*, Adweek (Aug. 4, 2022), <https://www.adweek.com/social-marketing/move-over-google-tiktok-is-the-go-to-search-engine-for-gen-z/>.

²⁶² *Misinformation Monitor*, NewsGuard (Sept. 2022), <https://www.newsguardtech.com/misinformation-monitor/september-2022/>.

1 users. Investigations by the *Wall Street Journal* found TikTok inundated young users with videos
2 about depression, self-harm, drugs, and extreme diets, to name a few.

3 229. In one investigation, the *Wall Street Journal* found TikTok’s algorithm quickly
4 pushed users down rabbit holes where they were more likely to encounter harmful content. The
5 *Wall Street Journal* investigated how TikTok’s algorithm chose what content to promote to users
6 by having 100 bots scroll through the “For You” feed.²⁶³ Each bot was programmed with
7 interests, such as extreme sports, forestry, dance, astrology, and animals.²⁶⁴ Those interests were
8 not disclosed in the process of registering their accounts.²⁶⁵ Rather, the bots revealed their
9 interests through their behaviors, specifically the time they spent watching the videos TikTok
10 recommended to them. Consistent with TikTok’s internal “Algo 101” document, the *Wall Street*
11 *Journal* found that time spent watching videos to be “the most impactful data on [what] TikTok
12 serves you.”²⁶⁶

13 230. Over the course of 26 minutes, one bot watched 224 videos, lingering over videos
14 with hashtags for “depression” or “sad.”²⁶⁷ From then on, 93 percent of the videos TikTok
15 showed this account were about depression or sadness.²⁶⁸

16 231. That is not an outlier. Guillaume Chaslot, a former engineer for Google who
17 worked on the algorithm for YouTube and the founder of Algo Transparency, explained that 90–
18 95 percent of the content users see on TikTok is based on its algorithm.²⁶⁹

19 232. “Even bots with general mainstream interests got pushed to the margin as
20 recommendations got more personalized and narrow.”²⁷⁰ Deep in these rabbit holes, the *Wall*
21 *Street Journal* found “users are more likely to encounter potential harmful content.”²⁷¹ For
22 example, one video the *Wall Street Journal* encountered encouraged suicide, reading “Just go.

23 ²⁶³ *Inside TikTok’s Algorithm: A WSJ Video Investigation*, Wall St. J. (July 21, 2021),
24 <https://www.wsj.com/articles/tiktok-algorithm-video-investigation-11626877477>.

25 ²⁶⁴ *Id.*

26 ²⁶⁵ *Id.*

27 ²⁶⁶ *Id.*

28 ²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ *Id.*

²⁷⁰ *Id.*

²⁷¹ *Id.*

1 Leave. Stop trying. Stop pretending. You know it and so do they. Do Everyone a favor and
2 leave.”²⁷²

3 233. Chaslot explained why TikTok feeds users this content:

4 [T]he algorithm is able to find the piece of content that you’re vulnerable to. That
5 will make you click, that will make you watch, but it doesn’t mean you really like
6 it. And that it’s the content that you enjoy the most. It’s just the content that’s
most likely to make you stay on the platform.²⁷³

7 234. A follow-up investigation by the *Wall Street Journal* using bots found “that
8 through its powerful algorithms, TikTok can quickly drive minors—among the biggest users of
9 the app—into endless spools of content about sex and drugs.”²⁷⁴

10 235. The bots in this investigation were registered as users aged 13 to 15 and, as
11 before, programmed to demonstrate interest by how long they watched the videos TikTok’s
12 algorithms served them.²⁷⁵ Videos that did not match their interests, the bots scrolled through
13 without pausing.²⁷⁶ The bots lingered on videos that matched any of their programmed
14 interests.²⁷⁷

15 236. Every second the bot hesitated or re-watched a video again proved key to what
16 TikTok recommended to the accounts, which the *Wall Street Journal* found was used to “drive
17 users of any age deep into rabbit holes of content[.]”²⁷⁸

18 237. For example, one bot was programmed to pause on videos referencing drugs,
19 among other topics. The first day on the platform, the “account lingered on a video of a young
20 woman walking through the woods with a caption” referencing “stoner girls.”²⁷⁹ The following
21 day the bot viewed a video of a “marijuana-themed cake.”²⁸⁰ The “majority of the next thousand
22

23 ²⁷² *Id.*

24 ²⁷³ *Id.*

25 ²⁷⁴ Rob Barry *et al.*, *How TikTok Serves up Sex and Drug Videos to Minors*, Wall St. J. (Sept. 8,
2021), [https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-
11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink](https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink).

26 ²⁷⁵ *Id.*

27 ²⁷⁶ *Id.*

28 ²⁷⁷ *Id.*

²⁷⁸ *Id.*

²⁷⁹ *Id.*

²⁸⁰ *Id.*

1 videos” TikTok directed at the teenage account “tout[ed] drugs and drug use, including
2 marijuana, psychedelics and prescription medication.”²⁸¹

3 238. TikTok similarly zeroed in on and narrowed the videos it showed accounts
4 whether the bot was programmed to express interest in drugs, sexual imagery, or a multitude of
5 interests. In the first couple of days, TikTok showed the bots a “high proportion of popular
6 videos.”²⁸² “But after three days, TikTok began serving a high number of obscure videos.”²⁸³

7 239. For example, a bot registered as a 13-year-old was shown a series of popular
8 videos upon signing up.²⁸⁴ The bot, which was programmed to demonstrate interest in sexual text
9 and imagery, also watched sexualized videos. Later, “[i]t experienced one of the most extreme
10 rabbit holes among the *Wall Street Journal’s* accounts. Many videos described how to tie knots
11 for sex, recover from violent sex acts and discussed fantasies about rape.”²⁸⁵ At one point, “more
12 than 90 percent of [one] account’s video feed was about bondage and sex.”²⁸⁶

13 240. At least 2,800 of the sexualized videos that were shown to the *Wall Street*
14 *Journal’s* bots were labeled as being for adults only.²⁸⁷ Yet, TikTok directed these videos to the
15 minor accounts because, as TikTok told the *Wall Street Journal*, it does not “differentiate
16 between videos it serves to adults and minors.”²⁸⁸

17 241. TikTok also directed a concentrated stream of videos at accounts programmed to
18 express interest in a variety of topics. One such account was programmed to linger over hundreds
19 of Japanese film and television cartoons. “In one streak of 150 videos, all but four” of the videos
20 TikTok directed at the account, “featured Japanese animation—many with sexual themes.”²⁸⁹

21 242. The relentless stream of content intended to keep users engaged “can be
22 especially problematic for young people,” because they may lack the capability to stop watching,
23

24 ²⁸¹ *Id.*

25 ²⁸² *Id.*

26 ²⁸³ *Id.*

27 ²⁸⁴ *Id.*

28 ²⁸⁵ *Id.*

²⁸⁶ *Id.*

²⁸⁷ *Id.*

²⁸⁸ *Id.*

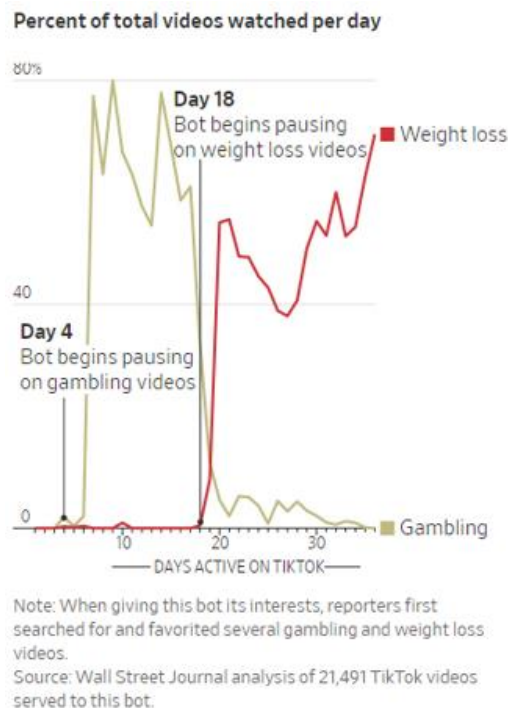
²⁸⁹ *Id.*

says David Anderson, a clinical psychologist at the nonprofit mental health care provider, The Child Mind Institute.²⁹⁰

243. In a similar investigation, the *Wall Street Journal* found TikTok “flood[ed] teen users with videos of rapid-weight-loss competitions and ways to purge food that health professionals say contribute to a wave of eating-disorder cases spreading across the country.”²⁹¹

244. In this investigation, the *Wall Street Journal* analyzed the tens of thousands of videos TikTok recommended to a dozen bots registered as 13-year-olds. As before, the bots were given interests. Bots scrolled quickly through videos that did not match their interests and lingered on videos that did.²⁹² The accounts registered as 13-year-olds were programmed at different times to display interests in weight loss, gambling, and alcohol.²⁹³

245. “TikTok’s algorithm quickly g[a]ve[] users the content they’ll watch, for as long as they’ll watch it.”²⁹⁴ For example, TikTok streamed gambling videos to a bot registered to a



²⁹⁰ *Id.*

²⁹¹ Tawnell D. Hobbs et al., *The Corpse Bride Diet: How TikTok Inundates Teens with Eating-Disorder Videos*, Wall St. J. (Dec. 17, 2021), <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848> (some of the accounts performed searches or sent other, undisclosed signals indicating their preferences).

²⁹² *Id.*

²⁹³ *Id.*

²⁹⁴ *Id.*

1 13-year-old after it first searched for and favorited several such videos.²⁹⁵ When the bot began
2 demonstrating interest in weight loss videos, the algorithm adapted quickly, as this chart
3 demonstrates.²⁹⁶

4 246. After the change in programming, weight-loss videos accounted for well over 40
5 percent of the content TikTok’s algorithm recommended to the user.²⁹⁷

6 247. The other accounts were also flooded with weight-loss videos. Over the course of
7 about 45 days, TikTok inundated the accounts with more than 32,000 such videos, “many
8 promoting fasting, offering tips for quickly burning belly fat and pushing weight-loss detox
9 programs and participation in extreme weight-loss competitions.”²⁹⁸ Some encouraged purging,
10 eating less than 300 calories a day, consuming nothing but water some days, and other hazardous
11 diets.²⁹⁹

12 248. According to Alyssa Moukheiber, a treatment center dietitian, TikTok’s powerful
13 algorithm and the harmful streams of content it directs at young users can tip them into unhealthy
14 behaviors or trigger a relapse.³⁰⁰

15 249. Unfortunately, it has for the several teenage girls interviewed by the *Wall Street*
16 *Journal*, who reported developing eating disorders or relapsing after being influenced by the
17 extreme diet videos TikTok promoted to them.³⁰¹

18 250. They are not alone. Katie Bell, a co-founder of the Healthy Teen Project, “said the
19 majority of her 17 teenage residential patients told her TikTok played a role in their eating
20 disorders.”³⁰²

21 251. Others, like Stephanie Zerwas, an associate professor of psychiatry at the
22 University of North Carolina at Chapel Hill, could not recount how many of her young patients
23 told her that “I’ve started falling down this rabbit hole, or I got really into this or that influencer

24 ²⁹⁵ *Id.*

25 ²⁹⁶ *Id.*

26 ²⁹⁷ *Id.*

27 ²⁹⁸ *Id.*

28 ²⁹⁹ *Id.*

³⁰⁰ *Id.*

³⁰¹ *Id.*

³⁰² *Id.*

on TikTok, and then it started to feel like eating-disorder behavior was normal, that everybody was doing that.”³⁰³

252. This trend extends nationwide. The National Association of Anorexia Nervosa and Associated Disorders has fielded 50 percent more calls to its hotline since the pandemic began, most of whom it says are from young people or parents on their behalf.³⁰⁴

253. Despite the ample evidence that TikTok’s design and operation of its platform harms the tens of millions of youth who use it, TikTok continues to manipulate them into returning to the platform again and again so that it may serve them ads in between the exploitive content it amplifies.

4. YouTube Intentionally Marketed to and Designed Its Social Media Platform for Youth Users, Substantially Contributing to the Mental Health Crisis

a. The YouTube Platform

254. YouTube is a platform where users can post, share, view, and comment on videos related to a vast range of topics. The platform became available publicly in December 2005 and was acquired by Google in 2006.

255. YouTube reports that today it has over 2 billion monthly logged-in users.³⁰⁵ Even more people use YouTube each month because consumers do not have to register an account to view a video on YouTube. As a result, anyone can view most content on YouTube—regardless of age.

256. Users, whether logged in or not, watch *billions of hours of videos every day*.³⁰⁶

257. Users with accounts can post their own videos, comment on others, and since 2010 express their approval of videos through “likes.”³⁰⁷

258. Beginning in 2008 and through today, YouTube has recommended videos to

³⁰³ *Id.*

³⁰⁴ *Id.*

³⁰⁵ YouTube for Press, YouTube, <https://blog.youtube/press/> (last visited June 26, 2023).

³⁰⁶ *Id.*

³⁰⁷ Josh Lowensohn, *YouTube’s big redesign goes live to everyone*, CNET (Mar. 31, 2010), <https://www.cnet.com/culture/youtubes-big-redesign-goes-live-to-everyone/>.

1 users.³⁰⁸ Early on, the videos YouTube recommended to users were the most popular videos
2 across the platform.³⁰⁹ YouTube admits “[n]ot a lot of people watched those videos[,]” at least
3 not based on its recommendation.³¹⁰

4 259. Since then, YouTube has designed and refined its recommendation system using
5 machine learning algorithms that today take into account a user’s “likes,” time spent watching a
6 video, and other behaviors to tailor its recommendations to each user.³¹¹

7 260. YouTube automatically plays those recommendations for a user after they finish
8 watching a video. This feature, known as “autoplay,” was implemented in 2015. YouTube turns
9 the feature on by default, which means videos automatically and continuously play for users
10 unless they turn it off.³¹²

11 261. YouTube purports to disable by default its autoplay feature for users aged 13–
12 17.³¹³ But, as mentioned above, YouTube does not require users to log in or even have an
13 account to watch videos. For them or anyone who does not self-report an age between 13 and 17,
14 YouTube defaults to automatically playing the videos its algorithm recommends to the user.

15 **b. YouTube Markets Its Platform to Youth**

16 262. The primary way YouTube makes money is through advertising and made \$19
17 billion in ad revenue in 2021 alone.³¹⁴

18 263. “In 2012, YouTube concluded that the more people watched, the more ads it
19 could run[.]”³¹⁵ “So YouTube . . . set a company-wide objective to reach one billion hours of

20
21 ³⁰⁸ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

22 ³⁰⁹ *Id.*

23 ³¹⁰ *Id.*

24 ³¹¹ *Id.*

25 ³¹² Autoplay videos, YouTube Help,
<https://support.google.com/youtube/answer/6327615?hl=en#:~:text=For%20users%20aged%2013%2D17,turned%20off%20Autoplay%20for%20you> (last visited June 26, 2023).

26 ³¹³ *Id.*

27 ³¹⁴ Alphabet Inc., Annual Report, Form 10-k at 60 (2021),
<https://www.sec.gov/ix?doc=/Archives/edgar/data/1652044/000165204422000019/goog-20211231.htm>.

28 ³¹⁵ Mark Bergen, *YouTube Executive Ignores Warnings, Letting Toxic Videos Run Rampant*,
Bloomberg (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant?leadSource=uverify%20wall>.

1 viewing a day[.]”³¹⁶

2 264. “[T]he best way to keep eyes on the site,” YouTube realized, was “recommending
3 videos, alongside a clip or after one was finished.”³¹⁷ That is what led to the development of its
4 recommendation algorithm and autoplay feature described above. *See supra* Section IV.D.4.a.

5 265. YouTube has long known youth use its platforms in greater proportion than older
6 demographics.

7 266. Yet, YouTube has not implemented even rudimentary protocols to verify the age
8 of users. Anyone can watch a video on YouTube without registering an account or reporting their
9 age.

10 267. Instead, YouTube leveraged its popularity among youth to increase its revenue
11 from advertisements by marketing its platform to popular brands of children’s products. For
12 example, Google pitched Mattel, the maker of Barbie and other popular kids’ toys, by telling its
13 executives that “YouTube is today’s leader in reaching children age 6–11 against top TV
14 channels.”³¹⁸ When presenting to Hasbro, the maker of Play-Doh, My Little Pony, and other
15 kids’ toys, Google touted that “YouTube was unanimously voted as the favorite website for kids
16 2-12,” and that “93% of tweens visit YouTube to watch videos.”³¹⁹ In a different presentation to
17 Hasbro, YouTube was referred to as “[t]he new ‘Saturday Morning Cartoons,’” and claimed that
18 YouTube was the “#1 website regularly visited by kids” and “the #1 source where children
19 discover new toys + games.”³²⁰

20 268. In addition to turning a blind eye towards underage users of its platform,
21 YouTube developed and marketed a version of YouTube specifically for children under the age
22 of 13.

23 269. YouTube’s efforts to attract young users have been successful. *See supra*

25 ³¹⁶ *Id.*

26 ³¹⁷ *Id.*

27 ³¹⁸ Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, Exhibit A,
FTC v. Google LLC et al., No. 1-19-cv-02642-BAH (D.D.C. Sept. 4, 2019), Dkt. # 1-1.

28 ³¹⁹ *Id.* Exhibit B.

³²⁰ *Id.* Exhibit C.

Section IV.A. A vast majority, 95 percent, of children ages 13–17 have used YouTube.³²¹

c. YouTube Intentionally Maximizes the Time Users Spend on its Platform

270. Google designed YouTube to maximize user engagement, predominantly through the amount of time users spend watching videos. To that end, Google employs design elements and complex algorithms to create a never-ending stream of videos intended to grip user’s attention.

271. Like the other Defendants’ social media platforms, Google developed features that exploit psychological phenomenon such as IVR to maximize the time users spend on YouTube.

272. YouTube uses design elements that operate on principles of IVR to drive both YouTube content creators and YouTube viewers into habitual, excessive use. Google designed YouTube to allow users to like, comment, and share videos and to subscribe to content creator’s channels. These features serve as rewards for users who create and upload videos to YouTube. As described above, receiving a like indicates others’ approval and activates the reward region of the brain.³²² The use of likes, therefore, encourages users to use YouTube over and over, seeking future pleasurable experiences.

273. YouTube also uses IVR to encourage users to view others content. One of the ways Google employs IVR into YouTube’s design is through subscriber push notifications and emails, which are designed to prompt users to watch YouTube content and encourages excessive use of the platform. When a user “subscribes” to another user’s channel, they receive notifications every time that user uploads new content, prompting them to open YouTube and watch the video.³²³

³²¹ *Id.*

³²² See, e.g., Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media*, 27(7) Psych. Sci. 1027–35 (July 2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/>.

³²³ *Manage YouTube Notifications*, YouTube, <https://support.google.com/youtube/answer/3382248?hl=en&co=GENIE.Platform%3DDesktop> (last visited June 26, 2023).

274. One of YouTube’s defining features is its panel of recommended videos. YouTube recommends videos to users on both the YouTube home page and on every individual video page in an “Up Next” panel.³²⁴ This list automatically populates next to the video a user is currently watching. This recommended video list is a never-ending feed of videos intended to keep users on the app watching videos without having to affirmatively click or search for other videos. This constant video stream, comprised of videos recommended by YouTube’s algorithms, is the primary way Google increases the time users spend on YouTube.

d. YouTube’s Algorithms are Manipulative

275. Google uses algorithms throughout YouTube to recommend videos to users. These algorithms select videos that populate the YouTube homepage, rank results in user searches, and suggest videos for viewers to watch next. These algorithms are manipulative by design and increase the amount of time users spend on YouTube.

276. Google began building the YouTube recommendation system in 2008.³²⁵ When Google initially developed its recommendation algorithms, the end goal was to maximize the amount of time users spend watching YouTube videos. A YouTube spokesperson admitted as much, saying YouTube’s recommendation system was initially set up to “optimize” the amount of time users watch videos.³²⁶

277. Former YouTube engineer Guillaume Chaslot has also stated that when he worked for YouTube designing its recommendation algorithm, the priority was to keep viewers on the site for as long as possible to maximize “watch time.”³²⁷ Chaslot further stated that “[i]ncreasing users’ watch time is good for YouTube’s business model” because the more people watch

³²⁴ *Recommended Videos*, YouTube, <https://www.youtube.com/howyoutubeworks/product-features/recommendations/> (last visited June 26, 2023).

³²⁵ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021), <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

³²⁶ Ben Popken, *As algorithms take over, YouTube’s recommendations highlight a human problem*, NBC (Apr. 19, 2018), <https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596>.

³²⁷ William Turton, *How YouTube’s algorithm prioritizes conspiracy theories*, Vice (Mar. 5, 2018), <https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-conspiracy-theories>.

1 videos, the more ads they see and YouTube’s advertising revenue increases.³²⁸

2 278. Early on, one of the primary metrics behind YouTube’s recommendation
3 algorithm was clicks. As YouTube describes, “[c]licking on a video provides a strong indication
4 that you will also find it satisfying.”³²⁹ But as YouTube learned, clicking on a video does not
5 mean a user actually watched it. Thus, in 2012, YouTube also started tracking watch time—the
6 amount of time a user spends watching a video.³³⁰ YouTube made this switch to keep people
7 watching for as long as possible.³³¹ In YouTube’s own words, this switch was successful. “These
8 changes have so far proved very positive -- primarily less clicking, more watching. We saw the
9 amount of time viewers spend watching videos across the site increase immediately[.]”³³² And in
10 2016, YouTube started measuring “valued watchtime” via user surveys to ensure that viewers are
11 satisfied with their time spent watching videos on YouTube.³³³ All of these changes to
12 YouTube’s algorithms were made to ensure that users spend more time watching videos and ads.

13 279. YouTube’s current recommendation algorithm is based on deep-learning neural
14 networks that retune its recommendations based on the data fed into it.³³⁴ While this algorithm is
15 incredibly complex, its process can be broken down into two general steps. First, the algorithm
16 compiles a shortlist of several hundred videos by finding videos that match the topic and other
17
18

19 ³²⁸ Jesselyn Cook & Sebastian Murdock, *YouTube is a Pedophile’s Paradise*, Huffington Post
20 (Mar. 20, 2020), https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db.

21 ³²⁹ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

22 ³³⁰ *Id.*

23 ³³¹ Dave Davies, *How YouTube became one of the planet’s most influential media businesses*,
NPR (Sept. 8, 2022), <https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-planets-most-influential-media-businesses>.

24 ³³² Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012),
<https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/>.

25 ³³³ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

26 ³³⁴ Alexis C. Madrigal, *How YouTube’s Algorithm Really Works*, Atl. (Nov. 8, 2018),
27 <https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/>;
28 Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, Google (2016), <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf>.

1 features of the video a user is currently watching.³³⁵ Then the algorithm ranks the list according
2 to the user's preferences, which the algorithm learns by tracking a user's clicks, likes, and other
3 interactions.³³⁶ In short, the algorithms track and measure a user's previous viewing habits and
4 then finds and recommends other videos the algorithm thinks will hold the consumer's attention.

5 280. YouTube's recommendation system "is constantly evolving, learning every day
6 from over 80 billion pieces of information."³³⁷ Some of the information the recommendation
7 algorithm relies on to deliver recommended videos to users includes users' watch and search
8 history, channel subscriptions, clicks, watch time, survey responses, shares, likes, dislikes, users'
9 location (country) and the time of day.³³⁸

10 281. The recommendation algorithm can determine what "signals" or factors are more
11 important to individual users.³³⁹ For example, if a user shares every video they watch, including
12 videos the user gives a low rating, the algorithm learns not to heavily factor the user's shares
13 when recommending content.³⁴⁰ Thus, the recommendation algorithm "develops dynamically" to
14 individual user's viewing habits and makes highly specific recommendations to keep individual
15 users watching videos.³⁴¹

16 282. In addition to the algorithm's self-learning, Google engineers consistently update
17 YouTube's recommendation and ranking algorithms, making several updates every month,
18 according to YouTube Chief Product Officer Neal Mohan.³⁴² The end goal is to increase the

19 ³³⁵ Karen Hao, *YouTube is experimenting with ways to make its algorithm even more addictive*,
20 MIT Tech. Rev. (Sept. 27, 2019),
21 [https://www.technologyreview.com/2019/09/27/132829/youtube-algorithm-gets-more-](https://www.technologyreview.com/2019/09/27/132829/youtube-algorithm-gets-more-addictive/)
22 [addictive/](https://www.technologyreview.com/2019/09/27/132829/youtube-algorithm-gets-more-addictive/); Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*,
Google (2016), [https://storage.googleapis.com/pub-tools-public-publication-](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf)
23 [data/pdf/45530.pdf](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf).

24 ³³⁶ *Id.*

25 ³³⁷ Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021),
26 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

27 ³³⁸ *Recommended Videos*, YouTube, [https://www.youtube.com/howyoutubeworks/product-](https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content)
28 [features/recommendations/#signals-used-to-recommend-content](https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content) (last visited June 26, 2023).

³³⁹ *Id.*

³⁴⁰ *Id.*

³⁴¹ *Id.*

³⁴² Nilay Patel, *YouTube Chief Product Officer Neal Mohan on The Algorithm, Monetization, and the Future for Creators*, Verge (Aug. 3, 2021),
<https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview>.

1 amount of time users spend watching content on YouTube.

2 283. Because Google has designed and refined its algorithms to be manipulative, these
3 algorithms are incredibly successful at getting users to view content based on the algorithm's
4 recommendation. Mohan stated in 2018 that YouTube's AI-driven recommendations are
5 responsible for 70 percent of the time users spend on YouTube.³⁴³ In other words, 70 percent of
6 all YouTube content that users watch was recommended to users by YouTube's algorithms as
7 opposed to users purposely searching for and identifying the content they watch.

8 284. Mohan also stated that recommendations keep mobile device users watching
9 YouTube for more than 60 minutes at a time on average.³⁴⁴

10 285. Given that people watch more than one billion hours of YouTube videos daily,³⁴⁵
11 YouTube's recommendation algorithms are responsible for hundreds of millions of hours that
12 users spend watching videos on YouTube.

13 **e. YouTube's Conduct in Designing and Operating its Platform Has**
14 **Harmed Youth Mental Health**

15 286. By designing YouTube's algorithms to prioritize and maximize the amount of
16 time users spend watching videos, Google has harmed youth mental health. In particular,
17 YouTube has harmed youth mental health by recommending content to youth through its
18 algorithms.

19 287. YouTube's algorithms push its young users down rabbit holes where they are
20 likely to encounter content that is violent, sexual, or encourages self-harm, among other types of
21 harmful content.

22 288. Research by the Tech Transparency Project ("TTP") shows that YouTube Kids
23 fed children content that involved drug culture, guns, and beauty and diet tips that could lead to
24

25
26 ³⁴³ Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET
27 (Jan. 20, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

³⁴⁴ *Id.*

28 ³⁴⁵ Shira Ovide, *The YouTube Rabbit Hole is Nuanced*, N.Y. Times (Apr. 21, 2022),
<https://www.nytimes.com/2022/04/21/technology/youtube-rabbit-hole.html>.

harmful body image issues.³⁴⁶ Among the videos TTP found were step-by-step instructions on how to conceal a gun, guides on how to bleach one's face at home, and workout videos emphasizing the importance of burning calories and telling kids to "[w]iggle your jiggle."³⁴⁷ This research shows that YouTube Kids not only lets inappropriate content slip through its algorithmic filters, but actively directed the content to kids through its recommendation engine.

289. Similar examples abound. Amanda Kloer, a campaign director with the child safety group ParentsTogether, spent an hour on her child's YouTube Kids profile and found videos "encouraging kids how to make their shirts sexier, a video in which a little boy pranks a girl over her weight, and a video in which an animated dog pulls objects out of an unconscious animated hippo's butt."³⁴⁸ Another parent recounted that YouTube Kids' autoplay function led her 6-year-old daughter to an animated video that encouraged suicide.³⁴⁹

290. Other youth are fed content by YouTube's algorithms that encourages self-harm. As reported by PBS Newshour, a middle-schooler named Olivia compulsively watched YouTube videos every day after she came home from school.³⁵⁰ Over time she became depressed and started searching for videos on how to commit suicide. Similar videos then gave her the idea of overdosing. Weeks later she was in the hospital after "downing a bottle of Tylenol."³⁵¹ Ultimately, she was admitted into rehab for digital addiction because of her compulsive YouTube watching.³⁵²

291. According to the Pew Research Center, 46 percent of parents say their child has

³⁴⁶ Alex Hern, *YouTube Kids shows videos promoting drug culture and firearms to toddlers*, Guardian (May 5, 2022), <https://www.theguardian.com/technology/2022/may/05/youtube-kids-shows-videos-promoting-drug-culture-firearms-toddlers>.

³⁴⁷ *Guns, Drugs, and Skin Bleaching: YouTube Kids Poses Risks to Children*, Tech Transparency Project (May 5, 2022), <https://www.techtransparencyproject.org/articles/guns-drugs-and-skin-bleaching-youtube-kids-still-poses-risks-children>.

³⁴⁸ Rebecca Heilweil, *YouTube's kids app has a rabbit hole problem*, Vox (May 12, 2021), <https://www.vox.com/recode/22412232/youtube-kids-autoplay>.

³⁴⁹ *Id.*

³⁵⁰ Lesley McClurg, *After compulsively watching YouTube, teenage girl lands in rehab for 'digital addiction'*, PBS (May 16, 2017), <https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction>.

³⁵¹ *Id.*

³⁵² *Id.*

1 encountered inappropriate videos on YouTube.³⁵³ And children are not encountering these videos
2 on their own volition. Rather, they are being fed harmful and inappropriate videos through
3 YouTube's algorithms. Again, YouTube's AI-driven recommendations are responsible for 70
4 percent of the time users spend on YouTube.³⁵⁴

5 292. Other reports have also found that YouTube's recommendation algorithm
6 suggests a wide array of harmful content, including videos that feature misinformation, violence,
7 and hate speech, along with other content that violates YouTube's policies.³⁵⁵ A 2021
8 crowdsourced investigation from the Mozilla Foundation involving 37,000 YouTube users
9 revealed that 71 percent of all reported negative user experiences came from videos
10 recommended by YouTube to users.³⁵⁶ And users were 40 percent more likely to report a
11 negative experience with a video recommended by YouTube's algorithm than with a video they
12 searched for.³⁵⁷

13 293. The inappropriate and disturbing content YouTube's algorithms expose children
14 to has adverse effects on mental health. Mental health experts have warned that YouTube is a
15 growing source of anxiety and inappropriate sexual behavior among kids under the age of 13.³⁵⁸

16 294. Even though much of the content YouTube's algorithms feed to youth is harmful,
17 it can activate the reward circuitry in the brain such that it encourages youth to spend more time
18 watching videos on YouTube. According to Donna Volpitta, founder of The Center for Resilient
19 Leadership, watching "fear-inducing videos cause the brain to receive a small amount of

21
22 ³⁵³ Brooke Auxier *et al.*, *Parenting Children in The Age of Screens*, Pew Rsch. Ctr. (July 28,
2020), <https://www.pewresearch.org/internet/2020/07/28/parental-views-about-youtube/>.

23 ³⁵⁴ Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET
24 (Jan. 20, 2018), [https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-](https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/)
[mohan/](https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/).

25 ³⁵⁵ Brandy Zadrozny, *YouTube's recommendations still push harmful videos, crowdsourced*
26 *study finds*, NBC News (July 17, 2021), [https://www.nbcnews.com/tech/tech-news/youtubes-](https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355)
[recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355](https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355).

27 ³⁵⁶ *Id.*

28 ³⁵⁷ *Id.*

³⁵⁸ Josephine Bila, *YouTube's dark side could be affecting your child's mental health*, CNBC
(Feb. 13, 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html)
[sexualization-in-young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

dopamine,” which acts as a reward and creates a desire to do something over and over.³⁵⁹ This dopaminergic response is in addition to the reward stimulus YouTube provides users through IVR.

295. Mental health professionals across the country have seen an increase in children experiencing mental health issues because of YouTube. Natasha Daniels, a child psychotherapist in Arizona, has said she has seen a rise in cases of children suffering from anxiety because of videos they watched on YouTube.³⁶⁰ Because of their anxiety, these children “exhibit loss of appetite, sleeplessness, crying fits, and fear.”³⁶¹

296. In addition to causing anxiety, watching YouTube is also associated with insufficient sleep.³⁶² In one study on the effect of app use and sleep, YouTube was the only app consistently associated with negative sleep outcomes.³⁶³ For every 15 minutes teens spent watching YouTube, they had a 24 percent greater chance of getting fewer than seven hours of sleep.³⁶⁴ YouTube is particularly problematic on this front because of YouTube’s recommendation and autoplay feature make it “so easy to finish one video” and watch the next, said Dr. Alon Avidan, director of the UCLA Sleep Disorders Center.³⁶⁵ In turn, insufficient sleep is associated with poor health outcomes.³⁶⁶ Thus, YouTube exacerbates an array of youth mental health issues by contributing to sleep deprivation.

297. Despite the extensive evidence that YouTube’s design and algorithms harm millions of youth, Google continues to promote YouTube unchanged, manipulating youth into

³⁵⁹ *Id.*

³⁶⁰ *Id.*

³⁶¹ *Id.*

³⁶² Meg Pillion *et al.*, *What’s ‘app’-ning to adolescent sleep? Links between device, app use, and sleep outcomes*, 100 *Sleep Med.* 174–82 (Dec. 2022), <https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub> [<https://doi.org/10.1016/j.sleep.2022.08.004>].

³⁶³ *Id.*

³⁶⁴ *Id.*

³⁶⁵ Cara Murez, *One App is Especially Bad for Teens’ Sleep*, U.S. News (Sept. 13, 2022), <https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep>.

³⁶⁶ Jessica C. Levenson *et al.*, *The Association Between Social Media Use and Sleep Disturbance Among Young Adults*, 85 *Preventive Med.* 36–41 (Apr. 2016), <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>.

staying on the platform and watching more and more videos so that it can increase its ad revenue.

E. The Effect of Social Media Use on Schools

298. School districts are uniquely harmed by the current youth mental health crisis. This is because schools are one of the main providers for mental health services for school-aged children.³⁶⁷ Indeed, over 3.1 million children ages 12–17 received mental health services through an education setting in 2020, more than any other non-specialty mental health service setting.³⁶⁸

299. Most schools offer mental health services to students. In the 2021–22 school year, 96 percent of public schools reported offering at least one type of mental health service to their students.³⁶⁹ But 88 percent of public schools did not strongly agree that they could effectively provide mental health services to all students in need.³⁷⁰ The most common barriers to providing effective mental health services are (1) insufficient number of mental health professionals; (2) inadequate access to licensed mental health professionals; and (3) inadequate funding.³⁷¹ Student opinions also reflect that schools are unable to provide adequate mental health services. Less than a quarter of students in grades 6–12 report accessing counseling or psychological services when they are upset, stressed, or having a problem.³⁷² And of the students who access mental health services, only 41 percent of middle schoolers and 36 percent of high schoolers are satisfied with the services they receive.³⁷³

300. In part, schools are struggling to provide adequate mental health services because of the increase in students seeking these services. More than two-thirds of public schools reported an increase in the percent of students seeking mental health services from school since

³⁶⁷ *National Survey on Drug Use and Health*, SAMHSA (2019 & 1st & 4th Qs. 2020), <https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables>.

³⁶⁸ *Id.*

³⁶⁹ *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat'l Ctr. Educ. Stat. (May 31, 2022), https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp.

³⁷⁰ *Id.*

³⁷¹ *Id.*

³⁷² *Insights From the Student Experience, Part I: Emotional and Mental Health* at 2, YouthTruth (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf.

³⁷³ *Id.*

the start of the pandemic.³⁷⁴

301. During this same period, adolescents increased their social media use, also raising levels of excessive and problematic use of digital media.³⁷⁵ And these higher rates of social media use are related to higher “ill-being.”³⁷⁶ Thus, the increase in adolescent social media use during the pandemic has caused an increase in adolescents experiencing mental health problems.

302. That relationship is reflected in reports from public schools. Over 75 percent of public schools reported an increase in staff expressing concerns about student depression, anxiety, and other disturbances since the start of the pandemic.³⁷⁷ Students receiving mental health services in educational settings predominately do so because they “[f]elt depressed,” “[t]hought about killing [themselves] or tried to” or “[f]elt very afraid and tense.”³⁷⁸

303. Anxiety disorders are also up, affecting 31.9 percent of adolescents between 13 and 18 years old.³⁷⁹ “Research shows that untreated teenagers with anxiety disorders are at higher risk to perform poorly in school, miss out on important social experiences, and engage in substance abuse.”³⁸⁰

304. According to the National Alliance on Mental Illness, “[s]tudents ages 6–17 with mental, emotional or behavioral concerns are **3x times more likely** to repeat a grade,” and “[h]igh school students with significant symptoms of depression are more than **twice as likely** to

³⁷⁴ *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat’l Ctr. Educ. Stat. (May 31, 2022), https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp.

³⁷⁵ Laura Marciano *et al.*, *Digital Media Use and Adolescents' Mental Health During the Covid-19 Pandemic: A Systematic Review and Meta-Analysis*, *Frontiers Pub. Health* (Feb. 2022), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8848548/>.

³⁷⁶ *Id.*

³⁷⁷ *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat’l Ctr. Educ. Stat. (May 31, 2022), https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp.

³⁷⁸ Rachel N. Lipari *et al.*, *Adolescent Mental Health Service Use and Reasons for Using Services in Specialty, Educational, and General Medical Settings*, SAMHSA (May 5, 2016), https://www.samhsa.gov/data/sites/default/files/report_1973/ShortReport-1973.html.

³⁷⁹ *Anxiety Disorders: Facts and Statistics*, Anxiety & Depression Ass’n Am., <https://adaa.org/understanding-anxiety/facts-statistics> (last visited June 26, 2023).

³⁸⁰ *Id.*

drop out compared to their peers.”³⁸¹

305. Schools are struggling not only to provide students with mental health services but also to deliver an adequate education because of the youth mental health crisis. Students in grades 6–12 identify depression, stress, and anxiety as the most prevalent obstacles to learning.³⁸² Most middle school and high school students also fail to get enough sleep on school nights, which contributes to poor academic performance.³⁸³ These negative mental health outcomes are also the most common symptoms of excessive social media use.

306. The youth mental health crisis has also caused a wide range of other behavioral issues among students that interfere with schools’ ability to teach. In 2022, 61 percent of public schools saw an increase in classroom disruptions from student misconduct compared to school years before the pandemic.³⁸⁴ Fifty-eight percent of public schools also saw an increase in rowdiness outside of the classroom, 68 percent saw increases in tardiness, 27 percent saw increases in students skipping classes, 55 percent saw increases in the use of electronic devices when not permitted, 37 percent saw an increase in bullying, 39 percent saw an increase in physical fights between students, and 46 percent saw an increase in threats of fights between students.³⁸⁵

307. Further exacerbating school’s struggle to teach is the fact students are not showing up to school. Indeed, student absenteeism has greatly increased. In the 2021–22 school

³⁸¹ *Mental Health By the Numbers*, Nat’l All. Mental Health (June 2022), <https://www.nami.org/mhstats> (citing 2018-2019 National Survey of Children’s Health, Data Res. Ctr. Child & Adolescent Health, Child and Adolescent Health Measurement Initiative, <https://www.childhealthdata.org/browse/survey/results?q=7839&r=1&g=812> (last visited June 26, 2023)); and Véronique Dupéré *et al.*, *Revisiting the Link Between Depression Symptoms and High School Dropout: Timing of Exposure Matters*, J. Adolescent Health 62 (2018) 205–211 (Sept. 24, 2017), [https://www.jahonline.org/article/S1054-139X\(17\)30491-3/fulltext](https://www.jahonline.org/article/S1054-139X(17)30491-3/fulltext) [<https://doi.org/10.1016/j.jadohealth.2017.09.024>].

³⁸² *Insights From the Student Experience, Part I: Emotional and Mental Health* at 2–3, YouthTruth (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf.

³⁸³ Anne G. Wheaton *et al.*, *Short Sleep Duration Among Middle School and High School Students-United States, 2015*, 67(3) Morbidity & Mortality Wkly. Rpt. 85–90 (Jan. 26, 2018), <http://dx.doi.org/10.15585/mmwr.mm6703a1>.

³⁸⁴ 2022 School Pulse Panel, U.S. Dep’t Educ., Inst. Educ. Sci. (2022), <https://ies.ed.gov/schoolsurvey/spp/>.

³⁸⁵ *Id.*

1 year, 39 percent of public schools experienced an increase in chronic student absenteeism
2 compared to the 2020–21 school year, and 72 percent of public schools saw increased chronic
3 student absenteeism compared to school years before the pandemic.³⁸⁶ Following suit, vandalism
4 has increased in 2022, with 36 percent of public schools reporting increased acts of student
5 vandalism on school property.³⁸⁷

6 308. School districts have borne increased costs and expenses in response to the youth
7 mental health crisis. These costs include:

- 8 • hiring additional mental health personnel (41 percent of public schools added staff
9 to focus on student mental health);³⁸⁸
- 10 • developing additional mental health resources (46 percent of public schools
11 created or expanded mental health programs for students, 27 percent added
12 student classes on social, emotional, and mental health and 25 percent offered
13 guest speakers for students on mental health);³⁸⁹
- 14 • training teachers to help students with their mental health (56 percent of public
15 schools offered professional development to teachers on helping students with
16 mental health);³⁹⁰
- 17 • increasing disciplinary services and hiring additional personnel for disciplinary
18 services;
- 19 • addressing property damaged as a result of students acting out because of mental,
20 social, and emotional problems Defendants' conduct caused;
- 21 • diverting time and resources from instruction activities to notify parents and
22 guardians of students' behavioral issues and attendance;
- 23 • updating its student handbook to address use of Defendants' platforms; and
- 24 • updating school policies to address use of Defendants' platforms.

25 **F. Impact of Social Media Use on Plaintiff**

26 309. Plaintiff Rocklin is a public school district northeast of Sacramento in Placer
27 County, California. Rocklin serves over 11,400 students in grades pre-kindergarten through 12th
28

26 ³⁸⁶ *Id.*

27 ³⁸⁷ *Id.*

28 ³⁸⁸ *Id.*

³⁸⁹ *Id.*

³⁹⁰ *Id.*

1 grade. Rocklin operates eighteen different schools, including twelve elementary schools, two
2 middle schools, two high schools, one alternative high school, and one independent study school.

3 310. Rocklin has been directly impacted by the mental health crisis among youth in its
4 community.

5 311. There has been an increase in the proportion of youth in Plaintiff's community,
6 like youth across California, who report experiencing anxiety, depression, and suicidal ideation.

7 312. Across California, more and more youth are experiencing anxiety, depression, and
8 suicidal ideation. The results of the 2017–19 *California Healthy Kids Survey* reflect that 30
9 percent of 7th graders, 33 percent of 9th graders, and 37 percent of 11th graders reported feelings
10 of “incapacitating, chronic sadness or hopelessness[.]”³⁹¹ In all grades, these results are the
11 highest reported in the past decade.³⁹² Further, 17 percent of 9th graders and 16 percent of 11th
12 graders contemplated suicide over the past twelve months.³⁹³ Other reports show that the
13 percentage of children in California ages 3–17 who had anxiety or depression increased by 70
14 percent from 2016 to 2020.³⁹⁴ The severity of these increases cannot be understated; a 2020
15 report shows that mental illness is the primary reason children in California ages birth-to-17 are
16 hospitalized.³⁹⁵

17 313. These increases in anxiety and depression also impact the number of students
18 attending school, which directly impacts school districts' mission to educate students. The 2017–
19 19 *California Healthy Kids Survey* also identifies that 5 percent of 7th graders, 8 percent of 9th
20 graders and 11 percent of 11th graders reported missing school in the past thirty days because
21
22

23 ³⁹¹ Gregory Austin *et al.*, *California healthy kids Survey: School Climate and Student*
24 *Engagement and Well-being in California, 2017/19. Results of the Seventeenth Biennial State*
25 *California Healthy Kids Survey, Grades 7, 9, and 11* at 27, WestEd for Cal. Dep't Educ.
(2020), https://data.calschls.org/resources/Biennial_State_1719.pdf.

26 ³⁹² *Id.*

27 ³⁹³ *Id.*

28 ³⁹⁴ *2022 Kids Count Data Book: State Trends in Child Well-Being* at 7, Annie E. Casey Found.
(2022), <https://assets.aecf.org/m/resourcedoc/aecf-2022kidscountdatabook-2022.pdf>.

³⁹⁵ *2020 California Children's Report Card* at 15, Child. Now (2020),
<https://files.eric.ed.gov/fulltext/ED603021.pdf>.

they felt “very sad, hopeless, anxious, stressed, or angry.”³⁹⁶

314. Placer County, where Plaintiff is located, has seen similar numbers. In 2019–2021 27 percent of 7th graders, 32 percent of 9th graders, 39 percent of 11th graders, and 41 percent of non-traditional students reported experiencing chronic sad or hopeless feelings during the past twelve months.³⁹⁷ Additionally, 14 percent of 7th graders, 14 percent of 9th graders, 16 percent of 11th graders, and 25 percent of non-traditional students seriously considered attempting suicide during the past twelve months.³⁹⁸

315. Anxiety, depression, and suicidal ideation are also rampant among Plaintiff’s students. Of Plaintiff’s students who completed the *California Healthy Kids Survey* in 2021–22, 26 percent of 7th graders, 31 percent of 9th graders, 41 percent of 11th graders, and 45 percent of non-traditional students in Plaintiff’s schools reported experiencing social emotional distress.³⁹⁹ Further, 26 percent of 7th graders, 34 percent of 9th graders, 43 percent of 11th graders, and 67 percent of non-traditional students who completed the survey reported experiencing chronic sad or hopeless feelings over the past twelve months.⁴⁰⁰ Finally, 14 percent of 7th graders, 17 percent of 9th graders, 18 percent of 11th graders, and 39 percent of non-traditional students who completed the survey seriously considered attempting suicide over the past twelve months.⁴⁰¹

316. Rocklin has also seen an increase in anxiety and anxiety-related referrals to special education programs, anxiety-related reasons for students choosing independent study programs, such as remote learning, and increased rates of hospital instruction because of students’ mental health.

³⁹⁶ Gregory Austin *et al.*, *California healthy kids Survey: School Climate and Student Engagement and Well-being in California, 2017/19. Results of the Seventeenth Biennial State California Healthy Kids Survey, Grades 7, 9, and 11* at 27, WestEd for Cal. Dep’t Educ. (2020), https://data.calschls.org/resources/Biennial_State_1719.pdf.

³⁹⁷ *California Health Kids Survey, Placer County Secondary 2019–2021: Main Report* at 31, WestEd for Cal. Dep’t Educ. (Aug. 12, 2022), [Error! Hyperlink reference not valid. https://data.calschls.org/resources/Placer_County_1921_Sec_CHKS.pdf](https://data.calschls.org/resources/Placer_County_1921_Sec_CHKS.pdf).

³⁹⁸ *Id.*

³⁹⁹ *California Healthy Kids Survey, Rocklin Unified Secondary, 2021–2022: Main Report* at 4, WestEd for Cal. Dep’t Educ. (Oct. 26, 2022), https://data.calschls.org/resources/Rocklin_Unified_2122_Sec_CHKS.pdf.

⁴⁰⁰ *Id.*

⁴⁰¹ *Id.*

1 317. In lockstep with these increases in anxiety, depression, and suicidal ideation,
2 student behavior problems have also increased in Plaintiff's schools, including disciplinary
3 incidents tied to social media.

4 318. The increase in Rocklin students who report suffering from anxiety and
5 depression and the increase in behavioral issues have not gone unnoticed. Through its Local
6 Control and Accountability Plan, Rocklin "staff, families, and students identified a need for
7 increased behavior and social-emotional supports for students."⁴⁰² In response Plaintiff
8 implemented a social-emotional curriculum,⁴⁰³ added mental health specialists, trained teachers
9 and staff to support students' social and emotional learning, and partnered with providers in the
10 community as detailed below.

11 319. While Plaintiff's schools and its staff must deal with increased behavioral issues
12 on the one hand, they must deal with increased absenteeism on the other.

13 320. The pandemic and corresponding increase in time youth spend on Defendants'
14 platforms have intensified the youth mental health crisis and the behavioral issues Plaintiff's
15 students are experiencing.

16 321. The current youth mental health crisis has led to a marked increase in the number
17 of Plaintiff's students in crisis, acting out, and in need of mental health services.

18 322. This increase has adversely impacted the educational experience for staff,
19 teachers, students, and their families. Staff and teachers cannot ignore students who are in crisis
20 and need to support those students, even if this comes at the expense of the educational goals and
21 experience for the larger student body. School campuses are public spaces, and classes and
22 activities are communal experiences. Increases in anxiety, depression, suicidal ideation, and
23 other mental health crises impact both the students suffering from these problems and the other
24 students, teachers, and staff who need to interact with these students.

25 323. The pernicious effects of Defendants' platforms are inescapable and have
26

27 ⁴⁰² *Mental Health Supports: Social-Emotional Learning Curriculum*, Rocklin Unified Sch. Dist.,
28 <https://www.rocklinusd.org/Departments/Health-Services/Mental-Health-Supports/index.html>
(last visited June 29, 2023).

⁴⁰³ *Id.*

1 fundamentally changed the learning and teaching environment at Plaintiff's schools.

2 324. In an attempt to address the decline in students' mental, emotional, and social
3 health, Plaintiff has been forced to divert resources and expend additional resources to:

- 4 a. hire additional personnel, including counselors, social workers, mental health
5 therapists, and behaviorists to address mental, emotional, and social health issues;
- 6 b. re-direct resources to address mental, emotional, and social health issues;
- 7 c. increase training for teachers and staff to identify students exhibiting symptoms
8 affecting their mental, emotional, and social health;
- 9 d. educate teachers, staff, and members of the community about the harms caused by
10 Defendants' wrongful conduct;
- 11 e. develop lesson plans to teach students about the dangers of using Defendants'
12 platforms;
- 13 f. educate students about the dangers of using Defendants' platforms;
- 14 g. update its student handbook to address use of Defendants' platforms; and
- 15 h. update school policies to address use of Defendants' platforms.

16 325. Additionally, more students have been acting out as a result of the decline
17 Defendants caused in students' mental, emotional, and social health. Resultingly, Plaintiff has
18 been forced to divert resources and expend additional resources to:

- 19 a. repair property damaged as a result of the exploitive and harmful content
20 Defendants directed to students⁴⁰⁴ and install additional cameras to deter such vandalism;
- 21 b. increase disciplinary services;
- 22 c. confiscate devices on which students were compelled by Defendants' conduct to
23 use while in class or school campuses to access Defendants' platforms;
- 24 d. meet with students and the parents of students caught using Defendants' platforms

25
26 ⁴⁰⁴ John Hanna & Heather Hollingsworth, 'Devious Licks' videos of damage, thefts bedevil US
27 schools, AP News (Sept. 17, 2021), [https://apnews.com/article/health-media-social-media-](https://apnews.com/article/health-media-social-media-coronavirus-pandemic-kansas-72898662363abae5abf70d5c7b3912e)
28 [coronavirus-pandemic-kansas-72898662363abae5abf70d5c7b3912e](https://apnews.com/article/health-media-social-media-coronavirus-pandemic-kansas-72898662363abae5abf70d5c7b3912e) ("[T]he Rocklin school
district has seen students destroy soap dispensers, damage faucets, plug toilets with whole rolls
of toilet paper and tear mirrors and railings off walls, then share videos and photos on social
media.").

1 at school; and

2 e. divert time and resources from instructional activities to notify parents and
3 guardians of students' behavioral issues and attendance.

4 326. As of the 2022–23 school year, Plaintiff employs a variety of school-based
5 behavior support staff, including behavior support specialists, mental health specialists,
6 counselors, school psychologists, and school nurses.⁴⁰⁵

7 327. In addition to the services Rocklin provides students directly, Rocklin sought and
8 received a grant in the Fall of 2022 to increase student mental health supports.⁴⁰⁶ With the funds
9 from that grant, Rocklin has partnered with Care Solace, an online referral resource to assist
10 students, staff, and their families in finding local mental health related programs and counseling
11 services.⁴⁰⁷

12 328. Rocklin also partners with Wellness Together to provide turn-key mental health
13 services for students in grades 7–12, families, and educators in its community.⁴⁰⁸ Wellness
14 Together collaborates with Rocklin's existing staff to provide evidence-based interventions, such
15 as individual and group counseling, crisis intervention, family engagement, and social-emotional
16 learning.⁴⁰⁹

17 329. Even with these costly and labor-intensive resources in place, Plaintiff cannot
18 keep up with the increased need for mental health services because of the youth mental health
19 crisis.

20 330. As a result, the rest of Plaintiff's staff must fill in the cracks to help students with
21 mental health concerns.

22 331. Ultimately, Plaintiff requires significant and long-term funding to address the

23 ⁴⁰⁵ *Staff Directory*, Rocklin Unified Sch. Dist., <https://www.rocklinusd.org/Staff-Directory/> (last
24 visited June 29, 2023).

25 ⁴⁰⁶ *Rocklin Unified Secures \$115,898 from City of Rocklin to Increase Student Mental Health*
26 *Supports*, Rocklin Unified Sch. Dist. (Aug. 24, 2022),
<https://www.rocklinusd.org/announcements/?capostid=55337>.

27 ⁴⁰⁷ *Id.*

28 ⁴⁰⁸ *Mental Health Supports: RUSD Service Providers*, Rocklin Unified Sch. Dist.,
<https://www.rocklinusd.org/Departments/Health-Services/Mental-Health-Supports/index.html>
(last visited June 29, 2023).

⁴⁰⁹ *Id.*

1 nuisance Defendants have created and amplified. Plaintiff cannot ignore the ever-increasing
2 mental health needs of its students, even if this means diverting resources away from important
3 school functions and lessening the educational experience for all students and the families. Such
4 funding should not come at the expense of the students and fall at the foot of the public. Rather,
5 Defendants must bear the burden of remedying their wrongs. It is time, as President Biden
6 declared, to get “all Americans the mental health services they need.”⁴¹⁰

7 **V. SECTION 230 IS NO SHIELD FOR DEFENDANTS’ CONDUCT**

8 332. Plaintiff anticipates that Defendants will raise section 230 of the Communications
9 Decency Act, 47 U.S.C. § 230(c)(1), as a shield for their conduct. But section 230 is no shield for
10 Defendants’ own acts in designing, marketing, and operating social media platforms that are
11 harmful to youth.

12 333. Section 230 provides immunity from liability only to “(1) a provider or user of an
13 interactive computer service (2) whom a plaintiff seeks to treat, under a state law cause of action,
14 as a publisher or speaker (3) of information provided by another information content provider.”
15 *Barnes v. Yahoo!, Inc.*, 570 F.3d 1096, 1100–01 (9th Cir. 2009), *as amended* (Sept. 28, 2009).

16 334. Publication generally involves traditional editorial functions, such as reviewing,
17 editing, and deciding whether to publish or to withdraw from publication third-party content.
18 *Lemmon v. Snap, Inc.*, 995 F.3d 1085, 1091 (9th Cir. 2021).

19 335. Publication does not, however, include duties related to designing and marketing
20 a social media platform. *See id.* at 1092–93.

21 336. Plaintiff expressly disavows any claims or allegations that attempt to hold
22 Defendants liable as the publisher or speaker of any information provided by third parties.

23 337. Section 230 does not shield Defendants’ conduct because, among other
24 considerations: (1) Defendants are liable for their own affirmative conduct in recommending and
25 promoting harmful content to youth; (2) Defendants are liable for their own actions designing
26 and marketing their social media platforms in a way that causes harm; (3) Defendants are liable
27

28 ⁴¹⁰ President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at
<https://www.whitehouse.gov/state-of-the-union-2022/> [<https://perma.cc/A9EH-DV4Q>]).

1 for the content they create that causes harm; and (4) Defendants are liable for distributing,
2 delivering, and/or transmitting material that they know or have reason to know is harmful,
3 unlawful, and/or tortious.

4 338. First, Plaintiff is not alleging Defendants are liable for what third parties have said
5 on Defendants' platforms but, rather, for Defendants' own conduct. As described above,
6 Defendants affirmatively recommend and promote harmful content to youth, such as pro-
7 anorexia and eating disorder content. Recommendation and promotion of damaging material is
8 not a traditional editorial function and seeking to hold Defendants liable for these actions is not
9 seeking to hold them liable as a publisher or speaker of third party-content.

10 339. Second, Plaintiff's claims arise from Defendants' status as designers and
11 marketers of dangerous social media platforms that have injured the health, comfort, and repose
12 of its community. The nature of Defendants' platforms centers around Defendants' use of
13 algorithms and other designs features that encourage users to spend the maximum amount of
14 time on their platforms—not on particular third-party content. The algorithms Defendants
15 employ adapt to the social media activity of individual users to promote whatever content will
16 trigger a particular user's attention and maximize their screen time. That is, Defendants'
17 algorithms are user-focused rather than content-based and are indifferent to the nature and type
18 of content they promote to users, provided that such content increases the time users spend on
19 their platforms. In that respect, they are content neutral.

20 340. Third, Defendants are liable for the content they create. In addition to content
21 such as Snapchat filters which promote body dysmorphia, Defendants send emails and
22 notifications to youth including material they create which often promotes certain harmful
23 content.

24 341. Fourth, Plaintiff does not seek to hold Defendants liable as publishers or speakers
25 of information provided by other content providers, but instead Plaintiff seeks to hold them liable
26 for distributing material they know or should know is harmful or unlawful. *See Malwarebytes,*
27 *Inc. v. Enigma Software Grp. USA, LLC*, 141 S. Ct. 13 (2020) (statement of Justice Thomas
28 respecting denial of certiorari discussing the distinction between distributor and publisher

1 liability); *cf. Restatement (Second) of Torts* § 581 (Am. Law Inst. 1977) (“[O]ne who only
2 delivers or transmits defamatory matter published by a third person is subject to liability if, but
3 only if, he knows or has reason to know of its defamatory character.”).

4 342. Ultimately, Plaintiff’s claim is not predicated on information provided by another
5 information content provider. Rather, Plaintiff’s claim rests on Defendants’ conduct which has
6 resulted in the current public health crisis among youth mental health.

7 VI. CAUSE OF ACTION

8 COUNT ONE — PUBLIC NUISANCE

9 343. Plaintiff incorporates by reference each and every preceding paragraph.

10 344. Plaintiff brings this claim under California public nuisance law as to all
11 Defendants.

12 345. Under California law, “anything which is injurious to health...or is indecent or
13 offensive to the senses, or an obstruction to the free use of property, so as to interfere with the
14 comfortable enjoyment of life or property...is a nuisance.”⁴¹¹ “A public nuisance is one which
15 affects at the same time an entire community or neighborhood, or any considerable number of
16 persons, although the extent of the annoyance or damage inflicted upon individuals may be
17 unequal.”⁴¹²

18 346. Defendants have created a mental health crisis in Plaintiff’s schools, injuring the
19 public health and safety in Plaintiff’s community and interfering with the operations, use, and
20 enjoyment of the property of Rocklin.

21 347. Defendants, by designing, developing, marketing, supplying, promoting,
22 advertising, operating, and distributing their respective social media platforms for use by
23 students in Plaintiff’s Schools in the manner described above, have engaged in conduct that
24 substantially interferes with the health and safety of the students of Rocklin, substantially
25 interferes with the functions and operations of Rocklin schools, and harms the health, safety, and
26 welfare of the Rocklin community.

27
28 ⁴¹¹ Cal. Civ. Code § 3479.

⁴¹² Cal. Civ. Code § 3480.

1 348. Each Defendant has created or assisted in the creation of a condition that is
2 injurious to the health, safety, and welfare of the Rocklin community and interferes with the
3 educational environment for students, teachers, and administrators in Plaintiff's schools.
4 Defendants have each created or assisted in the creation of a condition that significantly disrupts
5 the daily operations and functioning of Plaintiff's schools.

6 349. The health and safety of the students and employees of Rocklin, including those
7 who use, have used, or will use Defendants' platforms, as well as those affected by others' use of
8 their platforms, are matters of substantial public interest and of legitimate concern to Plaintiff.

9 350. Defendants' conduct has affected and continues to affect a substantial number of
10 people within Plaintiff's community and is likely to continue causing significant harm.

11 351. Defendants' conduct is ongoing and continues to produce permanent and long-
12 lasting damage.

13 352. Defendants' conduct substantially and unreasonably interferes with public health,
14 safety, and the right to a public education in a safe and healthy environment. In that regard, and
15 in other ways discussed herein, the public nuisance created or maintained by Defendants was
16 connected to Plaintiff's property, including but not limited to school buildings.

17 353. This harm to youth mental health and the corresponding impacts to public health,
18 safety, and the welfare of Plaintiff's community outweighs any social utility of Defendants'
19 wrongful conduct.

20 354. The rights, interests, and inconvenience to Plaintiff's community far outweighs
21 the rights, interests, and inconvenience to Defendants, who have profited tremendously from
22 their wrongful conduct.

23 355. But for Defendants' actions, Plaintiff's students would not use social media
24 platforms as frequently or long as they do today, be deluged with exploitive and harmful content
25 to the same degree, and the public health crisis that currently exists as a result of Defendants'
26 conduct would have been averted.

27 356. Logic, common sense, justice, policy, and precedent indicate Defendants' unfair
28 and deceptive conduct has caused the damage and harm complained of herein. Defendants knew

1 or reasonably should have known that their design, development, marketing, supply, promotion,
2 advertisement, operation, and distribution of their platforms would cause students to use their
3 platforms excessively, that their marketing methods were designed to appeal to youth, and that
4 their active efforts to increase youth use of their platforms were causing harm to youth and to
5 schools, including youth who attend Plaintiff's schools.

6 357. Thus, the public nuisance caused by Defendants was reasonably foreseeable,
7 including the financial and economic losses incurred by Plaintiff.

8 358. Alternatively, Defendants' conduct was a substantial factor in bringing about the
9 public nuisance even if a similar result would have occurred without it. By designing,
10 developing, marketing, supplying, promoting, advertising, operating, and distributing their
11 platforms in a manner intended to maximize the time youth spend on their respective
12 platforms—despite knowledge of the harms to youth from their wrongful conduct—Defendants
13 directly facilitated the widespread, excessive, and habitual use of their platforms and the public
14 nuisance affecting Plaintiff. By seeking to capitalize on their success by refining their platforms
15 to increase the time youth spend on their platforms, Defendants directly contributed to the public
16 health crisis and the public nuisance affecting Plaintiff.

17 359. Defendants' conduct is especially injurious to Plaintiff because, as a direct and
18 proximate cause of Defendants' conduct creating or assisting in the creation of a public nuisance,
19 the educational environment within Plaintiff's schools has been and will continue to be
20 substantially harmed.

21 360. Plaintiff has had to take steps to mitigate the harm and disruption caused by
22 Defendants' conduct, including the following:

- 23 a. hiring additional personnel to address mental, emotional, and social health issues;
- 24 b. developing additional resources to address mental, emotional, and social health
25 issues;
- 26 c. increasing training for teachers and staff to identify students exhibiting symptoms
27 affecting their mental, emotional, and social health;
- 28 d. training teachers, staff, and members of the community about the harms caused by

Defendants' wrongful conduct;

e. developing lesson plans to teach students about the dangers of using Defendants' platforms;

f. educating students about the dangers of using Defendants' platforms;

g. addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct is causing;

h. increasing disciplinary services;

i. confiscating devices on which students use Defendants' platforms while in class or on Plaintiff's school campuses;

j. meeting with students and the parents of students caught using Defendants' platforms at school or other disciplinary matters related to students' use of Defendants' platforms;

k. diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;

l. updating its student handbook to address use of Defendants' platforms; and

m. updating school policies to address use of Defendants' platforms.

361. Fully abating the nuisance resulting from Defendants' conduct will require much more than these steps.

362. As detailed herein, Plaintiff has suffered special damage different in kind or quality from that suffered by the public in common. The damages suffered by Plaintiff have been greater in degree and different in kind than those suffered by the general public including, but not limited to, costs arising from: expending, diverting, and increasing personnel to provide mental health services; expending, diverting, and increasing resources to address mental health issues; expending, diverting, and increasing staff time to confiscate cell phones and other devices; expending, diverting, and increasing staff time to communicate and engage with parents; expending, diverting, and increasing staff time associated with student discipline; expending, diverting, and increasing staff time associated with routing students to counselors; expending, diverting, and increasing staff time to train staff to identify students exhibiting symptoms affecting

1 their mental health; expending, diverting, and increasing resources for modifications to mental
2 health curriculum; and expending, diverting, and increasing resources to repair property damages
3 as a result of the exploitive and harmful content Defendants directed to students.

4 363. As a result of Defendant's conduct, Plaintiff has incurred damages and is entitled
5 to compensation therefor. Plaintiff requests all the relief to which it is entitled in its own right
6 and relating to the special damage or injury it has suffered, including actual and compensatory
7 damages in an amount to be determined at trial and an order providing for the abatement of the
8 public nuisance that Defendants have created or assisted in the creation of, and enjoining
9 Defendants from future conduct contributing to the public nuisance described above. Plaintiff's
10 claim is not brought in any representative or *parens patriae* capacity on behalf of students.

11 364. Defendants engaged in conduct, as described above, that constituted malice and/or
12 intentional, wanton, willful, or reckless disregard of Plaintiff's rights, being fully aware of the
13 probable dangerous consequences of the conduct and deliberately failing to avoid those
14 consequences.

15 365. Defendants' conduct, as described above, was intended to serve their own
16 interests despite having reason to know and consciously disregarding a substantial risk that their
17 conduct might significantly injure the rights of others, including Plaintiff, and/or Defendants
18 consciously pursued a course of conduct knowing that it created a substantial risk of significant
19 harm to others, including Plaintiff. Defendants regularly risk the health of consumers and users
20 of their platforms with full knowledge of the dangers of their platforms. Defendants consciously
21 decided not to redesign, warn, or inform the unsuspecting public, including Plaintiff's students or
22 Plaintiff. Defendants' willful, knowing, and reckless conduct therefore warrants an award of
23 aggravated or punitive damages.

24 366. Defendants are jointly and severally liable because the harms resulting from their
25 acts are indivisible.

26 **COUNT TWO — NEGLIGENCE**

27 367. Plaintiff incorporates by reference each and every preceding paragraph.

28 368. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of

1 harm, and to act with reasonable care as a reasonably careful person and/or company would act
2 under the circumstances.

3 369. At all times relevant to this litigation, Defendants owed a duty to consumers and
4 the general public, including Plaintiff, to exercise reasonable care in the design, research,
5 development, testing, marketing, supply, promotion, advertisement, operation, and distribution of
6 Defendants social media platforms, including the duty to take all reasonable steps necessary to
7 design, research , market, advertise, promote, operate, and/or distribute their platforms in a way
8 that is not unreasonably dangerous to consumers users, including youth.

9 370. At all times relevant to this litigation, Defendants owed a duty to consumers and
10 the general public, including Plaintiff, to exercise reasonable care in the design, research,
11 development, testing, marketing, supply, promotion, advertisement, operation, and distribution of
12 their social media platforms, including the duty to provide accurate, true, and correct information
13 about the risks of using Defendants' platforms; and appropriate, complete, and accurate warnings
14 about the potential adverse effects of extended social media use, in particular, social media
15 content Defendants directed via their algorithms to users, including youth.

16 371. At all times relevant to this litigation, Defendants knew or, in the exercise of
17 reasonable care, should have known of the hazards and dangers of their respective social media
18 platforms and specifically, the health hazards their platforms posed to youth in particular,
19 especially extended or problematic use of such platforms.

20 372. Accordingly, at all times relevant to this litigation, Defendants knew or, in the
21 exercise of reasonable care, should have known that use of Defendants' social media platforms
22 by youth could cause Plaintiff's injuries and thus created a dangerous and unreasonable risk of
23 injury to Plaintiff.

24 373. Defendants also knew or, in the exercise of reasonable care, should have known
25 that users and consumers of Defendants' social media platforms were unaware of the risks and
26 the magnitude of the risks associated with the use of Defendants' platforms including but not
27 limited to the risks of extended or problematic social media use and the likelihood that
28 algorithm-based recommendations would expose child and adolescent users to content that is

1 violent, sexual, or encourages self-harm, among other types of harmful content.

2 374. As such, Defendants, by action and inaction, representation and omission,
3 breached their duty of reasonable care, failed to exercise ordinary care, and failed to act as a
4 reasonably careful person and/or company would act under the circumstances in the design,
5 research, development, testing, marketing, supply, promotion, advertisement, operation, and
6 distribution of their social media platforms, in that Defendants designed, researched, developed,
7 tested, marketed, supplied, promoted, advertised, operated, and distributed social media
8 platforms that Defendants knew or had reason to know would negatively impact the mental
9 health of consumers, particularly youth, and failed to prevent or adequately warn of these risks
10 and injuries.

11 375. Despite their ability and means to investigate, study, and test their social media
12 platforms and to provide adequate warnings, Defendants have failed to do so. Defendants have
13 wrongfully concealed information and have made false and/or misleading statements concerning
14 the safety and use of Defendants' social media platforms.

15 376. Defendants' negligence includes:

16 a. Designing, researching, developing, marketing, supplying, promoting,
17 advertising, operating, and distributing their social media platforms without thorough and
18 adequate pre- and post-market testing; design, research, development, testing, marketing, supply,
19 promotion, advertisement, operation, and distribution

20 b. Failing to sufficiently study and conduct necessary tests to determine whether or
21 not their social media platforms were safe for youth users;

22 c. Failing to use reasonable and prudent care in the research, design, development,
23 testing, marketing, supply, promotion, advertisement, operation, and distribution of their social
24 media platforms so as to avoid the risk encouraging extended social media use;

25 d. Designing their social media platforms to maximize the amount of time users
26 spend on the platform and causing excessive and problematic use of their platforms, particularly
27 among youth, through the use of algorithm-based feeds, social reciprocity, and IVR;

28 e. Failing to implement adequate safeguards in the design and operation of their

platforms to ensure they would not encourage excessive and problematic use of their platforms;

f. Designing and manufacturing their platforms to appeal to minors and young people who lack the same cognitive development as adults and are particularly vulnerable to social rewards like IVR and social reciprocity;

g. Failing to take adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;

h. Failing to provide adequate warnings to child and adolescent users or parents who Defendants could reasonably foresee would use their platforms;

i. Failing to disclose to, or warn, Plaintiff, users, consumers, and the general public of the negative mental health consequences associated with social media use, especially for children and adolescents;

j. Failing to disclose to Plaintiff, users, consumers, and the general public that Defendants' platforms are designed to maximize the time users, particularly youth, spend on Defendants' platforms and cause negative mental health consequences;

k. Representing that Defendants' platforms were safe for child and adolescent users when, in fact, Defendants knew or should have known that the platforms presented acute mental health concerns for young users;

l. Failing to alert users and the general public, including students at Plaintiff's schools of the true risks of using Defendants' platforms;

m. Advertising, marketing; and recommending Defendants' platforms while concealing and failing to disclose or warn of the dangers known by Defendants to be associated with, or caused by, youth use of Defendants' platforms;

n. Continuing to design, research, develop, market, supply, promote, advertise, operate, and distribute Defendants' platforms with knowledge that Defendants' platforms are unreasonably unsafe, addictive, and dangerous to youth mental health;

o. Failing to modify Defendants' algorithms, which are used to recommend content to users, in a manner that would no longer prioritize maximizing the amount of time users spend on Defendants' platforms over the safety of its youth users;

1 p. Failing to adequately modify Defendants’ algorithm-based recommendations to
2 filter out content that expose child and adolescent users to content that is violent, sexual, or
3 encourages self-harm, among other types of harmful content.

4 q. Committing other failures, acts, and omissions set forth herein.

5 377. Defendants knew or should have known that it was foreseeable that Plaintiff
6 would suffer injuries as a result of Defendants’ failure to exercise reasonable care in designing,
7 researching, developing, testing, marketing, supplying, promoting, advertising, operating, and
8 distributing Defendants’ platforms, particularly when Defendants’ platforms were designed,
9 developed, operated and marketed to maximize the time youth spend on Defendants’ platforms.

10 378. Defendants could have reasonably foreseen the probable harm caused by their
11 negligence. Each Defendant’s acts and omissions were a substantial factor in causing harm to
12 Plaintiff.

13 379. Plaintiff did not know the nature and extent of the injuries that could result from
14 the intended use of Defendants’ social media platforms by Plaintiff’s students.

15 380. Defendants’ negligence helped to and did produce, and was the proximate cause
16 of, the injuries, harm, and economic losses that Plaintiff suffered and will continue to suffer, and
17 such injuries, harm, and economic losses would not have happened without Defendants’
18 negligence as described herein.

19 381. The mental health crisis caused and/or significantly contributed to by Defendants
20 has caused an ongoing behavioral disruption in Plaintiff’s schools, and Plaintiff has had to take
21 steps to mitigate the harm and disruption caused by Defendants’ conduct, including the
22 following:

- 23 a. hiring additional personnel to address mental, emotional, and social health issues;
- 24 b. developing additional resources to address mental, emotional, and social health
25 issues;
- 26 c. increasing training for teachers and staff to identify students manifesting mental,
27 emotional, and social health issues;
- 28 d. training teachers, staff, and members of the community about the harms caused by

Defendants' wrongful conduct;

e. developing lesson plans to teach students about the dangers of using Defendants' platforms;

f. educating students about the dangers of using Defendants' platforms;

g. addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct is causing;

h. increasing disciplinary services;

i. confiscating devices on which students use Defendants' platforms while in class or on Plaintiff's school campuses;

j. meeting with students and the parents of students caught using Defendants' platforms at school or other disciplinary matters related to students' use of Defendants' platforms;

k. diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;

l. updating its student handbook to address use of Defendants' platforms; and

m. updating school policies to address use of Defendants' platforms.

382. Defendants' conduct, as described above, was intended to serve their own interests despite having reason to know and consciously disregarding a substantial risk that their conduct might significantly injure the rights of others, including Plaintiff, and/or Defendants consciously pursued a course of conduct knowing that it created a substantial risk of significant harm to others, including Plaintiff. Defendants regularly risk the health of consumers and users of their platforms with full knowledge of the dangers of their platforms. Defendants consciously decided not to redesign, warn, or inform the unsuspecting public, including Plaintiff's students or Plaintiff. Defendants' willful, knowing, and reckless conduct therefore warrants an award of aggravated or punitive damages.

COUNT THREE — GROSS NEGLIGENCE

383. Plaintiff incorporates by reference all preceding paragraphs.

384. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of

1 harm, and to act with reasonable care as a reasonably careful person and/or company would act
2 under the circumstances.

3 385. Defendants owed a duty to users and the general public, including Plaintiff, to
4 exercise reasonable care in the design, research, development, testing, marketing, supply,
5 promotion, advertisement, operation, and distribution of Defendants social media platforms,
6 including the duty to take all reasonable steps necessary to design, research, market, advertise,
7 promote, operate, and/or distribute their platforms in a way that is not unreasonably dangerous to
8 users, including children.

9 386. Defendants owed a duty to users and the general public, including Plaintiff, to
10 exercise reasonable care in the design, research, development, testing, marketing, supply,
11 promotion, advertisement, operation, and distribution of their social media platforms, including
12 the duty to provide accurate, true, and correct information about the risks of using Defendants'
13 platforms; and appropriate, complete, and accurate warnings about the potential adverse effects
14 of extended social media use, in particular, social media content Defendants directed via their
15 algorithms to users.

16 387. Defendants knew or, in the exercise of reasonable care, should have known of the
17 hazards and dangers of their respective social media platforms and specifically, the health
18 hazards their platforms posed to youth in particular, especially extended or problematic use of
19 such platforms.

20 388. Defendants' platforms were the of the type that could endanger others,
21 particularly youth, if negligently made, promoted, or distributed. Defendants knew the risks that
22 young people would be attracted to their platforms yet unable to appropriately limit their use of
23 Defendants platforms because of their still-developing brains. Further, Defendants knew the risks
24 their platforms posed to youth, especially extended or problematic use of such platforms.

25 389. Defendants were grossly negligent in designing, researching, developing, testing,
26 marketing, supplying, promoting, advertising, operating, and distributing their social media
27 platforms.

28 390. As widely used platforms backed by powerful algorithms designed to maximize

1 the amount of time users spend on the platform, Defendants knew or should have known their
2 platforms needed to be designed, researched, developed, tested, marketed, supplying, promoted,
3 advertised, operated, and distributed with due care to avoid causing needless harm. Defendants
4 knew or should have known their products could cause serious risk of harm, particularly to
5 young persons like students in Plaintiff's schools.

6 391. Defendants engaged in gross, willful, and/or wanton conduct that lacked any care
7 and amounted to an extreme departure from what a reasonably careful person would do in the
8 same situation to prevent harm to others. Defendants' willful and wanton conduct caused
9 Plaintiff to suffer harm.

10 392. The gross, willful, and wanton conduct of Defendants includes, but is not limited
11 to, the following:

12 a. Designing researching, developing, marketing, supplying, promoting, advertising,
13 operating, and distributing their social media platforms without thorough and adequate pre- and
14 post-market testing; design, research, development, testing, marketing, supply, promotion,
15 advertisement, operation, and distribution;

16 b. Failing to sufficiently study and conduct necessary tests to determine whether or
17 not their social media platforms were safe for youth users;

18 c. Failing to use reasonable and prudent care in the research, design, development,
19 testing, marketing, supply, promotion, advertisement, operation, and distribution of their social
20 media platforms so as to avoid the risk encouraging extended social media use;

21 d. Designing their social media platforms to maximize the amount of time users
22 spend on the platform and causing excessive and problematic use of their platforms, particularly
23 among youth, through the use of algorithm-based feeds, social reciprocity, and IVR;

24 e. Failing to implement adequate safeguards in the design and operation of their
25 platforms to ensure they would not encourage excessive and problematic use of their platforms;

26 f. Designing and manufacturing their platforms to appeal to minors and young
27 people who lack the same cognitive development as adults and are particularly vulnerable to
28 social rewards like IVR and social reciprocity;

1 g. Failing to take adequate steps to prevent their platforms from being promoted,
2 distributed, and used by minors under the age of 13;

3 h. Failing to provide adequate warnings to child and adolescent users or parents who
4 Defendants could reasonably foresee would use their platforms;

5 i. Failing to disclose to, or warn, Plaintiff, users, and the general public of the
6 negative mental health consequences associated with social media use, especially for children
7 and adolescents;

8 j. Failing to disclose to Plaintiff, users, and the general public that Defendants'
9 platforms are designed to maximize the time users, particularly youth, spend on Defendants'
10 platforms and cause negative mental health consequences;

11 k. Representing that Defendants' platforms were safe for child and adolescent users
12 when, in fact, Defendants knew or should have known that the platforms presented acute mental
13 health concerns for young users;

14 l. Failing to alert users and the general public, including students at Plaintiff's
15 schools of the true risks of using Defendants' platforms;

16 m. Advertising marketing; and recommending Defendants' platforms while
17 concealing and failing to disclose or warn of the dangers known by Defendants to be associated
18 with, or caused by, youth use of Defendants' platforms;

19 n. Continuing to design, research, develop, market, supply, promote, advertise,
20 operate, and distribute Defendants' platforms with knowledge that Defendants' platforms are
21 unreasonably unsafe, addictive, and dangerous to youth mental health;

22 o. Failing to modify Defendants' algorithms, which are used to recommend content
23 to users, in a manner that would no longer prioritize maximizing the amount of time users spend
24 on Defendants' platforms over the safety of its youth users;

25 p. Failing to adequately modify Defendants' algorithm-based recommendations to
26 filter out content that expose child and adolescent users to content that is violent, sexual, or
27 encourages self-harm, among other types of harmful content; and

28 q. Committing other failures, acts, and omissions set forth herein.

1 393. Defendants breached the duties they owed to Plaintiff and in doing so were
2 wholly unreasonable.

3 394. Defendants breached their duties through their false and misleading statements
4 and omissions in the course of designing, manufacturing, distributing, and marketing their social
5 media platforms.

6 395. As a foreseeable consequence of Defendants' breaches of their duties, Plaintiff
7 has suffered and will continue to suffer direct and consequential economic and other injuries as a
8 result of dealing with the youth mental health crisis in Plaintiff's school, as described herein.

9 396. Defendants engaged in conduct, as described above, that constituted malic,
10 oppression, or fraud, with intent to cause injury and/or with willful and knowing disregard of the
11 rights or safety of another, being fully aware of the probable dangerous consequences of the
12 conduct and deliberate failing to avoid those consequences.

13 397. Defendants regularly risk the health and lives of users of its platforms with full
14 knowledge of the dangers of its platforms. Defendants made conscious decisions not to redesign,
15 warn, or inform the unsuspecting public, including Plaintiff and Plaintiff's students. Defendants'
16 willful, knowing, and reckless conduct therefore warrants an award of aggravated or punitive
17 damages.

18 **VII. PRAYER FOR RELIEF**

19 WHEREFORE, Plaintiff prays for judgment as follows:

20 398. Entering an Order that the conduct alleged herein constitutes a public nuisance
21 under California law;

22 399. Entering an Order that Defendants are jointly and severally liable;

23 400. Entering an Order requiring Defendants to abate the public nuisance described
24 herein and to deter and/or prevent the resumption of such nuisance;

25 401. Enjoining Defendants from engaging in further actions causing or contributing to
26 the public nuisance as described herein;

27 402. Awarding equitable relief to fund prevention education and treatment for
28 excessive and problematic use of social media;

