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

SEATTLE SCHOOL DISTRICT NO. 1,

Case No. **23STCV30274**

Plaintiff,

COMPLAINT

v.

JURY TRIAL DEMANDED

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., GOOGLE LLC, and YOUTUBE, LLC,

Defendants.

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	JURISDICTION AND VENUE	4
III.	PARTIES	4
A.	Plaintiff	4
B.	Facebook and Instagram Defendants	4
C.	Snap Defendant.....	6
D.	TikTok Defendants	6
E.	YouTube Defendants	7
IV.	FACTUAL ALLEGATIONS	8
A.	Millions of Youth Have Become Excessive and Problematic Users of Social Media	8
B.	Research Has Confirmed the Harmful Effects of Social Media on Youth.....	11
C.	As a Result, America’s Youth are Facing a Mental Health Crisis.....	14
D.	Defendants Intentionally Target Youth Users with the Marketing, Design, and Operation of Their Social Media Platforms.....	19
1.	Meta Intentionally Marketed to and Designed Their Social Media Platforms for Youth Users, Substantially Contributing to the Mental Health Crisis.....	25
2.	Snapchat Intentionally Marketed to and Designed Its Social Media Platform for Youth Users, Substantially Contributing to the Mental Health Crisis.....	39
3.	TikTok Intentionally Marketed to and Designed Its Social Media Platform for Youth Users, Substantially Contributing to the Mental Health Crisis.....	47
4.	YouTube Intentionally Marketed to and Designed Its Social Media Platform for Youth Users, Substantially Contributing to the Mental Health Crisis.....	62
E.	The Effect of Social Media Use on Schools	72
F.	Impact of Social Media Use on Plaintiff.....	76

V.	SECTION 230 IS NO SHIELD FOR DEFENDANTS’ CONDUCT	84
VI.	CAUSES OF ACTION	86
	COUNT ONE — Public Nuisance	86
VII.	PRAYER FOR RELIEF	91
VIII.	JURY TRIAL DEMAND	91

I. INTRODUCTION

1. 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., Google LLC, 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 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.

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

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> [<https://perma.cc/SSL6-QUN2>].

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

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

12 8. The state of children’s mental health led the American Academy of Pediatrics, the
13 American Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association to
14 jointly declare a national emergency, and the U.S. Surgeon General to issue an advisory in 2021 “to
15 highlight the urgent need to address the nation’s youth mental health crisis.”²

16 9. In his 2022 State of the Union Address, President Joe Biden also called attention to the
17 harm social media has wrought on youth and implored all to “hold social media platforms accountable
18 for the national experiment they’re conducting on our children for profit.”³

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

23 ² AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health, Am.
24 Acad. Pediatrics (Oct. 19, 2021), [https://www.aap.org/en/advocacy/child-and-adolescent-healthy-
25 mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-
26 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/) [<https://perma.cc/JKF4-XZCT>]; U.S. Surgeon General Issues Advisory on Youth Mental
27 Health Crisis Further Exposed by COVID-19 Pandemic, U.S. Dep’t Health & Hum. Servs. (Dec. 7,
28 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](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) [[https://perma.cc/G8AY-
PCGA](https://perma.cc/G8AY-PCGA)].

³ 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-DV4QJ>]).

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

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

10 12. Plaintiff Seattle School District No. 1 (“**Plaintiff**” or “**Seattle Public Schools**”) brings
11 this action to do just that. Youth in Plaintiff’s community are experiencing the same mental health crisis
12 observed nationally. King County, Washington, where Plaintiff is located, has “seen drastic increases in
13 suicides, attempted suicides, and mental-health related ER visits[,]” that has made it “clear to any parent
14 across this country and here in King County that,” even before the COVID-19 pandemic, there was and
15 is “an *existing* youth mental health crisis[.]”⁷

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

19 14. That is why Plaintiff, like 96 percent of other school districts in the United States,
20 provides mental health services to its students. For example, Plaintiff trains its teachers and staff to
21 screen students for mental health symptoms and refer them to services, such as those offered by the
22 school-based health clinics it operates in partnership with King County. But Plaintiff needs a

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

26 ⁵ *Id.* at 63.

27 ⁶ *Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental Health*,
28 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-](https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html)
[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>].

comprehensive, long-term plan and funding to drive a sustained reduction in the record rates of anxiety, depression, suicidal ideation, and other tragic indices of the mental health crisis its youth are experiencing at Defendants' hands.

II. JURISDICTION AND VENUE

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

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

17. The Court also has specific personal jurisdiction over Defendants because they actively conduct substantial business in Los Angeles County and the State of California. Defendants have purposefully availed themselves of the privilege of conducting business in this State through the design, development, programming, promotion, marketing, operations, and distribution of their platforms at issue in this lawsuit and have purposefully directed their activities toward the State of California. Defendants have sufficient minimum contacts with the State of California to render the exercise of jurisdiction by this Court permissible under California law and the United States Constitution.

18. 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

19. Plaintiff Seattle School District No. 1 ("**Plaintiff**" or "**Seattle Public Schools**") is a school district located in King County, Washington. Seattle Public Schools is the largest kindergarten through 12th grade school system in Washington. Seattle Public Schools serves approximately 49,300 students at 106 schools.

B. Facebook and Instagram Defendants

20. Defendant Meta Platforms, Inc. ("**Meta**"), formerly known as Facebook, Inc., is a

Delaware corporation with its principal place of business in Menlo Park, California.

21. 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**”).

22. 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.

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

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

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

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

27. Defendant Meta Platforms Technologies, LLC (“**Meta Technologies**”) was organized

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

28. Defendant Instagram, LLC (“**Instagram**”) was founded by Kevin Systrom and Mike Krieger in October 2010 and is a social media platform designed for photo and video sharing. In April 2012, Meta purchased the company for approximately \$1 billion. Meta reformed the limited liability company under the laws of the state of Delaware on April 7, 2012, and the company’s principal place of business is in Menlo Park, California. Defendant Meta is the sole member of Instagram.

29. Defendant Siculus, Inc. (“**Siculus**”) was incorporated in Delaware on October 19, 2011. Siculus is a wholly owned subsidiary of Meta, which supports Meta platforms by constructing data facilities and other projects. Siculus’s principal place of business is in Menlo Park, California.

C. Snap Defendant

30. Defendant Snap Inc. (“**Snap**”) is a Delaware corporation with its principal place of business in Santa Monica, California. Snap 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 others, Snap has advertised, marketed, and distributed the Snapchat social media platform to consumers throughout the United States. At all times material to this Complaint, Snap formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

D. TikTok Defendants

31. Defendant TikTok Inc. was incorporated in California on April 30, 2015, with its principal place of business in Culver City, California. TikTok Inc. 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 others, TikTok Inc. has advertised, marketed, and distributed the TikTok social media platform to consumers throughout the United States. At all times material to this Complaint, acting alone

1 or in concert with ByteDance Inc., TikTok Inc. formulated, directed, controlled, had the authority to
2 control, or participated in the acts and practices set forth in this Complaint.

3 32. Defendant ByteDance Inc. (“**ByteDance**”) is a Delaware corporation with its principal
4 place of business in Mountain View, California. ByteDance transacts or has transacted business in this
5 District and throughout the United States. At all times material to this Complaint, acting alone or in
6 concert with others, ByteDance has advertised, marketed, and distributed the TikTok social media
7 platform to consumers throughout the United States. At all times material to this Complaint, acting alone
8 or in concert with TikTok Inc., ByteDance formulated, directed, controlled, had the authority to control,
9 or participated in the acts and practices set forth in this Complaint.

10 **E. YouTube Defendants**

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

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

IV. FACTUAL ALLEGATIONS

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

35. 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

36. As described below, each Defendant designed and marketed its exploitive social media platform(s) to be extremely popular with youth. And they have all been successful. Approximately 90% of children ages 13–17 use social media.¹⁰ Younger children also regularly use social media. One study reported 38% of children ages 8–12 used social media in 2021.¹¹ Other studies reveal numbers as high as 49% of children ages 10–12 use social media and 32% of children ages 7–9 use social media.¹²

37. The most popular of these platforms is YouTube. Ninety-five percent of children ages 13–17 have used YouTube.¹³

38. 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 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

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%20\[https://perma.cc/94AL-ML97\]](https://www.addictioncenter.com/drugs/social-media-addiction/#:~:text=Due%20to%20the%20effect%20that,when%20taking%20an%20addictive%20substance%20[https://perma.cc/94AL-ML97]) (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 [https://perma.cc/VF8P-9UNT].

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 [https://perma.cc/L6ND-X7VR].

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 [https://perma.cc/ZNA9-W4E5].

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/> [https://perma.cc/BH7W-ZUPM].

of its daily users are.¹⁴ TikTok is now the second most popular social media platform among youth with over 67% of children ages 13–17 having used the app.¹⁵

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

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

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

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

43. 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

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

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> [<https://perma.cc/QQH8-SS5M>].

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/> [<https://perma.cc/BH7W-ZUPM>].

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

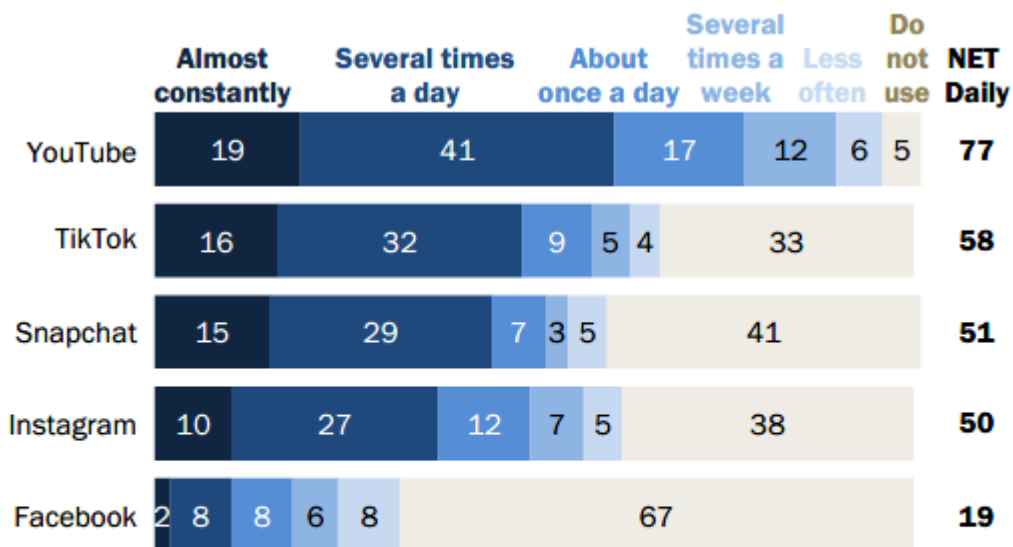
¹⁹ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 4, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf [<https://perma.cc/L6ND-X7VR>].

²⁰ *Id.* at 5.

²¹ Erinn Murphy *et al.*, *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021), tinyurl.com/89ct4p88 [<https://perma.cc/XL9U-WH57>].

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/> [<https://perma.cc/BH7W-ZUPM>].

45. As shown in the chart below, nearly 20% of teens report using YouTube almost constantly.²³ TikTok and Snapchat are close behind, with near constant use rates among teens at 16% and 15% respectively.²⁴ Meanwhile, 10% of teens use Instagram almost constantly.²⁵ And 2% 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"

PEW RESEARCH CENTER

46. Teenagers are aware of the grip social media has on their lives yet still cannot stop using it; 36% 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% said giving up social media would be hard, with 32% saying giving up social media would be very hard.²⁹

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

47. 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

48. Another study shows that among teenagers who regularly use social media, 32% “wouldn’t want to live without” YouTube.³¹ 20% of teenagers said the same about Snapchat; 13% said the same about both TikTok and Instagram; and 6% said the same about Facebook.³²

49. Despite using social media frequently, most youth do not enjoy it. Only 27% of boys and 42% 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

50. 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.

51. 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 (seven+ hours/day) are twice as likely to receive diagnoses of depression, anxiety, or need treatment for mental or behavior health conditions compared to low-screen-time users (one hour/day).³⁵

52. Researchers have found that high-volume social media use is associated with increased

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 [<https://perma.cc/L6ND-X7VR>].

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/> [<https://perma.cc/F9VM-MBRW>]; 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/> [<https://perma.cc/PTD2-G6XL>].

³⁵ *Id.*

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

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

14 54. Clinicians have also observed a clear relationship between youth social media use and
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18 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/>
19 [<https://perma.cc/PTD2-G6XL>].

20 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>.

21 ³⁷ Fazida Karim *et al.*, *Social Media Use and Its Connection to Mental Health: A Systemic Review*,
Cureus Volume 12(6) (June 15, 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7364393/>
22 [<https://perma.cc/PBC3-LF35>].

23 ³⁸ *Id.*

24 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), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/>
25 [<https://perma.cc/ZZW4-J3B2>].

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.*
27 10, 279 (2022), <https://doi.org/10.1186/s40359-022-00990-7> [<https://perma.cc/Z3K2-ZWRC>]
(explaining that youth are particularly vulnerable because they “use social networking sites for
28 construing their identity, developing a sense of belonging, and for comparison with others”).

⁴¹ *Id.*

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

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

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

57. Further, children are especially vulnerable to developing harmful behaviors because the prefrontal cortex is not fully developed in children and teens.⁴⁸ Consequently, they find it particularly

⁴² Simon M. Wilksch *et al.*, *The relationship between social media use and disordered eating in young adolescents*, 53 *Int'l J. Eating Disorders* 96–106 (2020), <https://pubmed.ncbi.nlm.nih.gov/31797420/> [<https://perma.cc/VE58-DSAC>].

⁴³ *Id.*

⁴⁴ *Id.*

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> [<https://doi.org/10.1016/j.ypmed.2016.01.001>].

⁴⁶ *Id.*

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), <https://www.businessinsider.com/social-media-costing-children-one-night-sleep-study-2022-9> [<https://perma.cc/X4J4-KYTW>] (approximately 12.5% of children report waking up to check social media notifications).

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> [<https://perma.cc/Z3K2-ZWRC>].

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

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

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

C. As a Result, America’s Youth are Facing a Mental Health Crisis

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

61. These issues led the United States Surgeon General to issue an advisory on the youth mental health crisis in December 2021.⁵³ In issuing the advisory, the Surgeon General noted, “[m]ental health challenges in children, adolescents, and young adults are real and widespread. Even before the

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Id.*

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://perma.cc/SQZ7-NDFR>].

1 pandemic, an alarming number of young people struggled with feelings of helplessness, depression, and
2 thoughts of suicide—and rates have increased over the past decade.”⁵⁴

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

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

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

13 65. From 2007 to 2019, suicide rates among youth ages 10–24 in the United States increased
14 by 57%.⁵⁹ By 2018, suicide was the second leading cause of death for youth ages 10–24.⁶⁰

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

17
18 ⁵⁴ *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19*
19 *Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 7, 2021),
20 [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](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) [[https://perma.cc/G8AY-
PCGA](https://perma.cc/G8AY-PCGA)].

21 ⁵⁵ *Id.*

22 ⁵⁶ *Id.*

23 ⁵⁷ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory* at 8, U.S. Dep’t Health &
24 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) [<https://perma.cc/SQZ7-NDFR>].

25 ⁵⁸ *Id.*

26 ⁵⁹ *Id.*

27 ⁶⁰ *AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health*,
28 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/](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/) [<https://perma.cc/JKF4-XZCT>].

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>
[<https://perma.cc/SL22-JTMG>].

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

4 68. President Biden also addressed the mental health harms Defendants’ platforms have
5 caused youth in his 2022 state of the union address⁶³ and again in 2023, demanding to “finally hold
6 social media platforms accountable for [the] experimenting they’re doing – running [on] children for
7 profit.”⁶⁴

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

11 70. For example, the Surgeon General cites research that indicates that youth who spend
12 more than three hours per day on social media platforms face twice the risk of experiencing poor mental
13 health outcomes, such as symptoms of depression and anxiety.⁶⁶ And the most recent data, as the
14 Surgeon General notes, indicates social media use by young people is “nearly universal,” with up to
15 95% of youth ages 13–17 using social media platforms and more than 33% of youth saying they use
16 social media “almost constantly.”⁶⁷ On average, the data reveals that “8th and 10th graders now spend
17 an average of 3.5 hours per day on social media.”⁶⁸

18 71. The Surgeon General’s advisory highlights two primary ways in which social media

19 ⁶² AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health,
20 Am. Acad. Pediatrics (Oct. 19, 2021), [https://www.aap.org/en/advocacy/child-and-adolescent-healthy-
21 mental-development/aap-aacap-cha-declaration-of-a-national-emergency-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/) [<https://perma.cc/JKF4-XZCT>].

22 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>].

23 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>].

24 ⁶⁵ *Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental Health*,
25 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-
26 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>].

27 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-
28 advisory.pdf](https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf) [<https://perma.cc/39QN-NAY7>].

⁶⁷ *Id.* at 4.

⁶⁸ *Id.* at 7 (citation omitted).

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

72. “Our children,” as the Surgeon General explained in his advisory, “have become unknowing participants in a decades-long experiment.”⁷⁵ The risk of harm to an entire generation is too great to wait, especially in the face of what the Surgeon General described as “*ample* indicators that social media can [] have a profound risk of harm to the mental health and well-being of children and adolescents.”⁷⁶ Therefore, the Surgeon General issued a call in his 2023 advisory to “urgently take action to create safe and healthy digital environments that minimize harm and safeguard children’s and adolescents’ mental health and well-being during critical stages of development.”⁷⁷

⁶⁹ *Id.* at 8.

⁷⁰ *Id.* at 9.

⁷¹ *Id.*

⁷² *Id.*

⁷³ *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> [<https://perma.cc/FU9W-ZG2E>].

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> [<https://perma.cc/39QN-NAY7>].

⁷⁶ *Id.* at 4 (emphasis added).

⁷⁷ *Id.*

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

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

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

⁷⁸ *Fact Sheet: Biden-Harris Administration Announces Actions to Protect Youth Mental Health, Safety & Privacy Online*, The White House (May 23, 2023), <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/> [<https://perma.cc/22Q4-PHSP>] (emphasis added).

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory* at 16, U.S. Dep’t Health & Hum. Servs. (2023), <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf> [<https://perma.cc/39QN-NAY7>].

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

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

75. 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.

76. 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.

77. Defendants make money from their social media platforms by using them as advertising platforms. Defendants collect data on their users’ viewing habits and behaviors and use that data to sell advertisers access to their youth and other users to allow those companies to promote their products. Advertisers pay a premium to target advertisements to specific categories of users, including youth.

78. Defendants view their population of adolescent and even pre-adolescent users as one of their most valuable commodities. Young users are central to Defendants’ business model and advertising revenue as an audience for advertisements because children are more likely than adults to use social

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://www.gizmodo.com.au/2022/08/for-sites-like-instagram-and-twitter-imitation-is-the-only-form-of-flattery/> [<https://perma.cc/U5E9-8X6L>].

media. Today, 95% of children ages 13–17 have cellphones,⁹⁰ 90% use social media,⁹¹ and 28% buy products and services through social media.⁹²

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

80. COPPA requires platforms that either target children under age 13 or have actual knowledge of users under age 13 to obtain “verifiable parental consent” prior to collecting and using information about children under age 13.⁹⁴ Defendants have blatantly violated COPPA or turned a blind eye to younger users on their platforms by leaving users to self-report their age.

81. Seeking to capture even younger audiences, Defendants have each offered “kid versions” of their platforms, which, while not collecting users’ information, are “designed to fuel [kids’] interest in the grown-up version.”⁹⁵

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

83. One way Defendants maximize the time users spend on their platforms involves the design of feeds—whether of photos, videos, or sponsored or promoted content. Each Defendant uses algorithms to serve users personalized content for them to consume ad nauseum. Google’s former design

⁹⁰ 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/> [<https://perma.cc/BH7W-ZUPM>].

⁹¹ *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 [<https://perma.cc/VF8P-9UNT>].

⁹² Erinn Murphy *et al.*, *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021), tinyurl.com/89ct4p88 [<https://perma.cc/XL9U-WH57>].

⁹³ See 15 U.S.C. §§ 6501-6506.

⁹⁴ *Id.*

⁹⁵ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-> [<https://perma.cc/RGX9-3JWC>].

1 ethicist, Tristan Harris, explained that this never-ending stream is designed to “keep [users] scrolling,
2 and purposely eliminate any reason for [them] to pause, reconsider or leave.”⁹⁶ Defendants’ feeds take
3 “an experience that was bounded and finite, and turn it into a bottomless flow that keeps going.”⁹⁷ This
4 “flow state,” as psychologists describe it, “fully immerse[s]” users, distorts their perception of time, and
5 “has been shown to be associated with problematic use of social networking sites.”⁹⁸

6 84. A second way social media platforms manipulate users is through social reciprocity.
7 “Reciprocity,” from a psychology perspective, refers to the powerful social phenomenon of how people
8 respond to positive or, conversely, hostile actions. Reciprocity means that in response to friendly
9 actions, people respond in a friendly manner and vice versa.⁹⁹ Sociologist Phillip Kunz best illustrated
10 the automatic nature of reciprocity through his Christmas card experiment. In the experiment, Mr. Kunz
11 sent a group of complete strangers holiday cards with pictures of his family and included a brief note.¹⁰⁰
12 Those people, whom he had never met or communicated with before, reciprocated, flooding him with
13 holiday cards.¹⁰¹ The majority of the responses did not even ask Mr. Kunz who he was.¹⁰² They simply
14 responded to his initial gesture with a reciprocal action.

15 85. Reciprocity is why Facebook and Snapchat automatically tell a “sender when you ‘saw’
16 their message, instead of letting you avoid disclosing whether you read it. As a consequence, you feel
17
18

19 ⁹⁶ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),
20 [https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237](https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html)
[[html https://perma.cc/E328-D8WY](https://perma.cc/E328-D8WY)].

21 ⁹⁷ *Id.*

22 ⁹⁸ 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> [<https://perma.cc/Z3K2-ZWRC>].

23 ⁹⁹ Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3) J. Econ.
24 Persps. 159–81 (2000), [https://www.researchgate.net/profile/Ernst-Fehr-](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)
25 [2/publication/23756527_Fairness_and_Retaliation_The_Economics_of_Reciprocity/links/5eb024e945](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)
[851592d6b87d3b/Fairness-and-Retaliation-The-Economics-of-Reciprocity.pdf](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)
[<http://dx.doi.org/10.2139/ssrn.229149>].

26 ¹⁰⁰ Phillip R. Kunz & Michael Woolcott, *Season’s Greetings: From my status to yours*, 5(3) Soc. Sci.
27 Rsch. 269–78 (Sept. 1976),
<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)].

28 ¹⁰¹ *Id.*

¹⁰² *Id.*

1 more obligated to respond[,]” immediately.¹⁰³ Through these alerts and other push notifications, users
2 feel psychologically compelled to return to the platform.

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

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

14 88. Defendants integrate IVR into the design and operations of their respective platforms by
15 “link[ing] a user’s action (like pulling a lever) with a variable reward.”¹⁰⁵ For example, when “we swipe
16 down our finger to scroll the Instagram feed, we’re playing a slot machine to see what photo comes
17 next.”¹⁰⁶ Meta also delays the time it takes to load the feed. “This is because without that three-second
18 delay, Instagram wouldn’t feel variable.”¹⁰⁷ Without that delay, there would be no time for users’
19 anticipation to build. In slot machine terms, there would be “no sense of *will I win?* because you’d know
20

21
22 ¹⁰³ 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](https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html)
24 [\[https://perma.cc/E328-D8WY\]](https://perma.cc/E328-D8WY).

25 ¹⁰⁴ See, e.g., Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),
26 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>
27 [\[https://perma.cc/2HES-Y3AB\]](https://perma.cc/2HES-Y3AB).

28 ¹⁰⁵ 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> [\[https://perma.cc/E328-D8WY\]](https://perma.cc/E328-D8WY).

¹⁰⁶ *Id.*

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>
[\[https://perma.cc/2HES-Y3AB\]](https://perma.cc/2HES-Y3AB).

1 instantly. So the delay isn't the app loading. It's the cogs spinning on the slot machine."¹⁰⁸ Each of the
2 Defendants' platforms exploits this biochemical reaction among its users, typically using "likes,"
3 "hearts," or other forms of approval that serve as the reward. *See infra* Section IV.D.1–4.

4 89. "Everyone innately responds to social approval, but some demographics, in particular
5 teenagers, are more vulnerable to it than others."¹⁰⁹

6 90. Youth are especially vulnerable both to the ways in which Defendants manipulate users
7 to maximize their "watch time," and to the resulting harms. Children's brains undergo a fundamental
8 shift around age 10 that makes "preteens extra sensitive to attention and admiration from others."¹¹⁰
9 Consequently, for young users of social media, Defendants' use of IVR, reciprocity, and other "rewards"
10 taps into this heightened sensitivity at a critical time in their development.

11 91. Adolescence is a period of rapid growth and development in the human brain, second
12 only to infancy in that regard. As a result of many of these changes during adolescence, preteens and
13 teens are highly sensitive to both positive and negative social stimuli. The structures of the brain
14 "closely tied" to social media activity and that drive instinctual behavior begin to change.¹¹¹ The ventral
15 striatum is one of those structures. It receives a rush of dopamine and oxytocin, known as the "happy
16 hormones[,] " whenever we experience social rewards.¹¹² Between the ages of 10 and 12, the receptors
17 for those happy hormones begin to multiply in this region of the brain, which makes compliments on a
18 new hairstyle, laughter from a classmate, or other social rewards "start to feel a lot more satisfying."¹¹³

19 92. These biological changes incentivize kids and teens to develop healthy social skills and
20 connections. "But arriving at school in a new pair of designer jeans, hoping your crush will smile at you
21 in the hallway, is worlds away from posting a video on TikTok that may get thousands of views and
22

23 ¹⁰⁸ *Id.*

24 ¹⁰⁹ Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int'l (July 27, 2016),
25 [https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237](https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html)
[[html https://perma.cc/E328-D8WY](https://perma.cc/E328-D8WY)].

26 ¹¹⁰ Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass'n (Aug.
27 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens> [[https://perma.cc/J68J-](https://perma.cc/J68J-JZPE)
JZPE].

28 ¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.*

likes,” according to Mitch Prinstein, Chief Science Officer for the American Psychology Association.¹¹⁴

93. 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

94. 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

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

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

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ Betul Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents*, Int’l J. Adolescence & Youth (202) 25:1, 79–93 (Mar. 3, 2019), 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>].

¹¹⁹ *Id.*

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

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

a. The Meta Platform

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

(i) The Facebook Platform

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

100. 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

101. 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.

102. 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.

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

104. 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

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-2022/> [<https://perma.cc/BH7W-ZUPM>].

¹²¹ Felix Richter, *Meta Reaches 3.6 Billion People Each Month*, Statista (Oct. 29, 2021), <https://www.statista.com/chart/2183/facebook-mobile-users/> [<https://perma.cc/5NCB-AG9B>].

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/> [<https://perma.cc/WC96-FA6Z>].

1 information and belief, Meta did not in fact require verification of a user’s age or identity and did not
2 actually verify users’ email addresses, such that underage users could easily register an account with and
3 access Facebook.

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

- 6 a. In 2009, Facebook launched the “like” button;
- 7 b. In 2011, Facebook launched Messenger, its direct messaging service, and started
8 allowing people to subscribe to accounts outside of their “friends”;
- 9 c. In 2012, Facebook started showing advertisements in its news feed and launched a real-
10 time bidding system through which advertisers could bid on users based on their visits to
11 third-party websites;
- 12 d. In 2014, Facebook’s facial recognition algorithm (DeepFace) reached near-human
13 accuracy in identifying faces;
- 14 e. In 2015, Facebook made significant changes to its news feed algorithm to determine what
15 content to show users and launched its live-streaming service;
- 16 f. In 2016, Facebook launched games for its social media platform, so that users could play
17 games without having to install new apps; and
- 18 g. In 2017, Facebook launched Facebook Creator, an app for mobile video posts that assists
19 with content creation.

20 **(ii) The Instagram Platform**

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

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

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

States.¹²³

109. 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.

110. 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.

111. Instagram has become the most popular photo sharing social media platform among children in the United States—approximately 72% of children aged 13–17 in the United States use Instagram.¹²⁵

b. Meta Markets Its Platforms to Youth

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

113. Most importantly, Meta recognizes that teenagers are the “pipeline” for the continued growth of the company. An internal Instagram strategy memo warned in 2020, “[i]f we lose the teen foothold in the U.S. we lose the pipeline.”¹²⁷ A 2018 marketing presentation declared the loss of teenage

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/> [<https://perma.cc/6LZ4-BGBB>].

¹²⁴ *Introducing Instagram Reels*, Instagram (Aug. 5, 2020), <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement> [<https://perma.cc/6FJX-3LV2>].

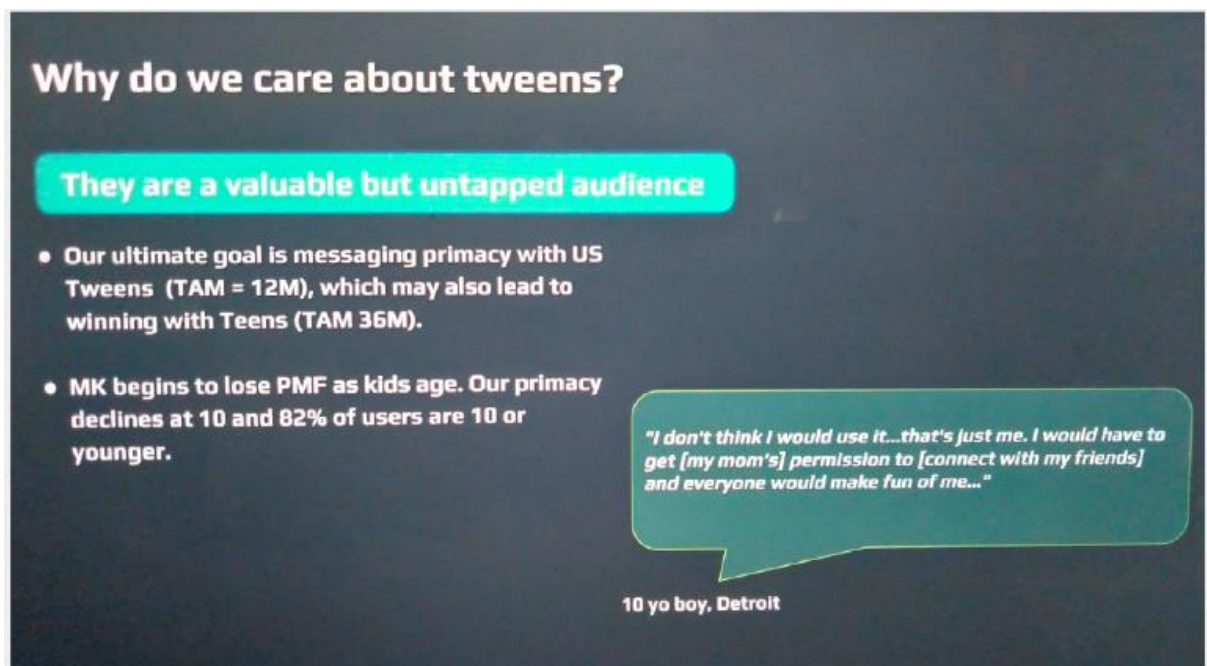
¹²⁵ Katherine Schaeffer, *7 Facts About Americans and Instagram*, Pew Rsch. Ctr. (Oct. 7, 2021), <https://www.pewresearch.org/fact-tank/2021/10/07/7-facts-about-americans-and-instagram/> [<https://perma.cc/C244-RDFH>].

¹²⁶ 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> [<https://perma.cc/SSL6-QUN2>].

¹²⁷ *Id.*

1 users to other social media platforms an “existential threat.”¹²⁸ In response, starting in 2018, Instagram
2 devoted almost all its annual marketing budget to attracting teenagers—hundreds of millions of dollars
3 annually.¹²⁹

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

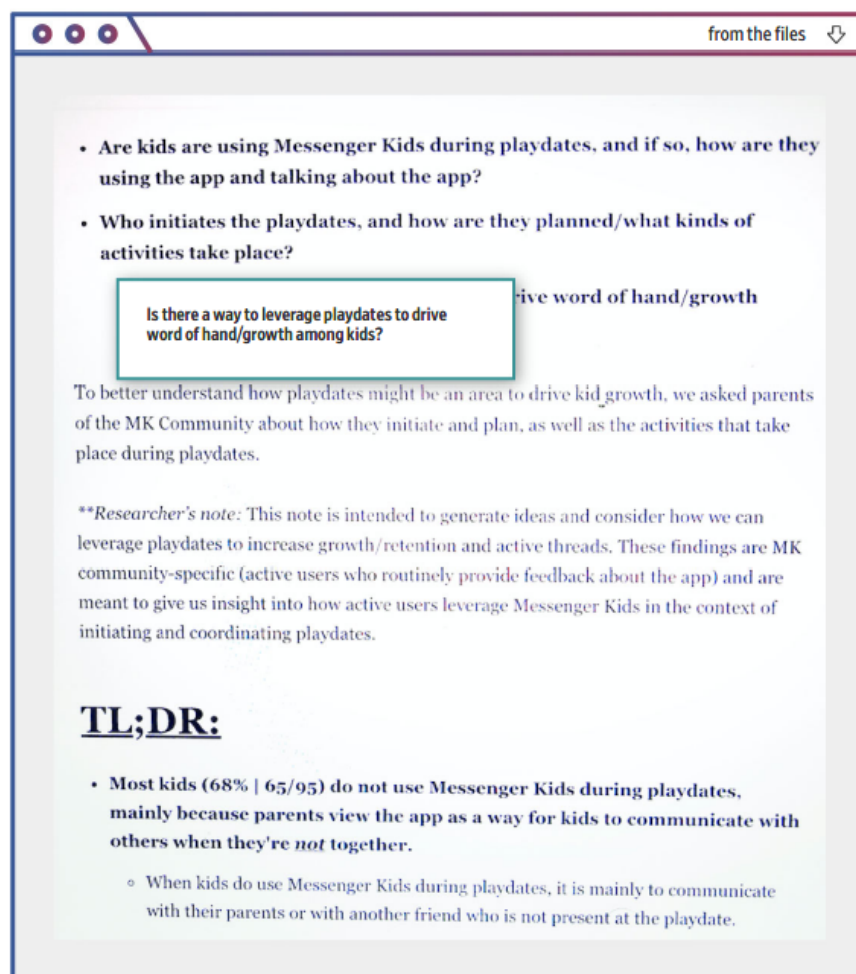


128 *Id.*

129 *Id.*

130 *Id.*

131 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, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667> [<https://perma.cc/3QRQ-NU4C>].



115. For these reasons, the Meta platforms are designed to be used by children and are actively marketed to children throughout the Meta markets in the United States. Meta advertises to children through its own efforts as well as through advertisers that create and target advertisements to children. Internal Meta documents establish that Meta spends hundreds of millions of dollars researching, analyzing, and marketing to children to find ways to make its platforms more appealing to these age groups and to maximize the time they spend on its platforms, as these age groups are seen as essential to Meta's long-term profitability and market dominance.¹³² For instance, after Instagram's founders left Meta in September 2018, "Facebook went all out to turn Instagram into a main attraction for young audiences," and "began concentrating on the 'teen time spent' data point," in order to "drive up the amount of time that teenagers were on the app with features including Instagram Live, a broadcasting

¹³² *Id.*

1 tool, and Instagram TV, where people upload videos that run as long as an hour.”¹³³

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

7 117. Although Meta’s policy is that children younger than 13 cannot register an account, it
8 lacks effective age-verification protocols—an issue long known to Meta. Since at least 2011, Meta has
9 known that its age-verification protocols are largely inadequate, estimating at that time that it removed
10 20,000 children under age 13 from Facebook every day.¹³⁵ A decade later, in 2021, an Instagram
11 executive acknowledged that users under 13 can still “lie about [their] age now,” to register an
12 account.¹³⁶

13 118. Meta has yet to implement protocols to verify a user’s age. Meta also has agreements
14 with cell phone manufacturers and/or providers and/or retailers, who often pre-install its platforms on
15 mobile devices prior to sale and without regard to the age of the intended user of each such device. That
16 is, even though Meta is prohibited from providing the Meta platforms to users under the age of 13, Meta
17 actively promotes and provides underage users access to its platforms by encouraging and allowing cell
18 phone manufacturers to pre-install the platforms on mobile devices indiscriminately. Consequently,
19

20
21 ¹³³ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y.
22 Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>
[<https://perma.cc/SSL6-QUN2>].

23 ¹³⁴ Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents*
24 *Show; Its own in-depth research shows a significant teen mental-health issue that Facebook plays*
25 *down in public*, Wall St. J. (Sept. 14, 2021), [https://www.wsj.com/articles/facebook-knows-instagram-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739)
[is-toxic-for-teen-girls-company-documents-show-11631620739](https://perma.cc/3VKL-UW94) [<https://perma.cc/3VKL-UW94>].

26 ¹³⁵ Austin Carr, *Facebook Booting “20,000” Underage Users Per Day: Reaction to Growing Privacy*
27 *Concerns?*, Fast Co. (Mar. 22, 2011), [https://www.fastcompany.com/1741875/facebook-booting-](https://www.fastcompany.com/1741875/facebook-booting-20000-underage-users-day-reaction-growing-privacy-concerns)
28 [20000-underage-users-day-reaction-growing-privacy-concerns](https://perma.cc/8228-YGS7) [<https://perma.cc/8228-YGS7>].

¹³⁶ 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, 2021),
<https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>
[<https://perma.cc/3QRQ-NU4C>].

1 approximately 11% of United States children between the ages of 9 and 11 used Instagram in 2020,¹³⁷
2 despite Meta claiming to remove approximately 600,000 underage users per quarter.¹³⁸

3 119. Ultimately, as discussed above, Meta’s efforts to attract young users have been
4 successful. *See supra* Section IV.A.

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

6 120. Once users begin using its platforms, Meta employs a variety of strategies to keep them
7 there, using features that exploit the natural human desire for social interaction and the neurophysiology
8 of the brain’s reward systems to keep users endlessly scrolling, posting, “liking,” commenting, and
9 counting the number of “likes” and comments to their own posts. As discussed above, the rapidly
10 developing adolescent brain, highly attuned to social rewards, is particularly vulnerable to such
11 exploitation.

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

17 122. Another way in which Meta employs IVR is through its push notifications and emails.
18 These notifications alert users to activity related to their account, such as when someone else has
19 “Liked” a post or when the user has been tagged in someone else’s post. Meta spaces out notifications of
20 likes and comments into multiple bursts rather than notifying users in real time, which activates the
21 brain’s reward circuitry and then creates dopamine gaps that leave users craving in anticipation for

22 ¹³⁷Brooke Auxier *et al.*, *Parenting Children in the Age of Screens: 1. Children’s engagement with digital*
23 *devices, screen time*, Pew Rsch. Ctr. (July 28, 2020),
24 [https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-](https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/)
[time/ \[https://perma.cc/U7LH-D62Q\]](https://perma.cc/U7LH-D62Q).

25 ¹³⁸Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids,*
26 *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, 2021),
27 <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>
[\[https://perma.cc/3QRQ-NU4C\]](https://perma.cc/3QRQ-NU4C).

28 ¹³⁹*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-](https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-dystopia)
[addiction-silicon-valley-dystopia \[https://perma.cc/8DU4-MLJA\]](https://perma.cc/8DU4-MLJA).

1 more. In this regard, Meta’s push notifications and emails are specifically designed to manipulate users
2 to reengage with Meta’s platforms to increase user engagement regardless of a user’s health or
3 wellbeing.

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

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

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

19 **d. Meta’s Algorithms Are Manipulative and Harmful**

20 126. Meta also employs advanced computer algorithms and artificial intelligence to make its
21 platforms as engaging and habit forming as possible for users. For example, the Meta platforms display
22 curated content and employ recommendations that are customized to each user by using sophisticated
23 algorithms. The proprietary services developed through such algorithms include News Feed (a newsfeed
24 of stories and posts published on the platform, some of which are posted by connections and others that
25 are suggested by Meta’s algorithms), People You May Know (algorithm-based suggestions of persons
26 with common connections or background), Suggested for You, Groups You Should Join, and Discover

27 ¹⁴⁰ Allison Slater Tate, *Facebook whistleblower Frances Haugen says parents make 1 big mistake with*
28 *social media*, Today (Feb. 7, 2022), <https://www.today.com/parents/teens/facebook-whistleblower-frances-haugen-rcna15256> [<https://perma.cc/7P7V-CDNH>].

(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.

127. 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 prioritization.¹⁴¹

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

129. Although Meta claims that the goal of this engagement-based ranking is "helping you have more meaningful social interactions,"¹⁴² Meta's algorithms covertly operate on the principle that intense reactions invariably compel attention. Because these algorithms measure reactions and contemporaneously immerse users in the most reactive content, these algorithms effectively work to steer users toward the most negative content, because negative content routinely elicits passionate

¹⁴¹ See, e.g., Adam Mosseri, *Shedding More Light on How Instagram Works*, Instagram (June 8, 2021), <https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works> [<https://perma.cc/8MTZ-238X>].

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 reactions. In other words, the algorithm is designed to prioritize the number of interactions rather than
2 the quality of interactions.

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

7 131. Meta’s shift from chronological ranking to algorithm-driven content and
8 recommendations has changed the Meta platforms in ways that are profoundly dangerous and harmful to
9 children. Meta’s algorithms exploit vulnerabilities that are heightened in preteens and teens due to their
10 social and psychological development—and Meta designs its platforms with these specific
11 vulnerabilities in mind.

12 **e. Meta’s Harmful “Feeds”**

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

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

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

25 135. As Senator Richard Blumenthal, Chair of the Subcommittee on Consumer Protection,
26 Product Safety, and Data Security, explained during one of a series of Senate hearings in 2021 on

27 ¹⁴³ See Zara Abrams, *How Can We Minimize Instagram’s Harmful Effects?*, Am. Psych. Ass’n (Dec. 2,
28 2021), <https://www.apa.org/monitor/2022/03/feature-minimize-instagram-effects>
[\[https://perma.cc/XV58-GHJ4\]](https://perma.cc/XV58-GHJ4).

1 “Protecting Kids Online,” Meta utilizes private information of its child users to “precisely target [them]
2 with content and recommendations, assessing what will provoke a reaction,” including encouragement
3 of “destructive and dangerous behaviors,” which is how Meta “can push teens into darker and darker
4 places.”¹⁴⁴ Whistleblower Frances Haugen testified that Meta’s “amplification algorithms, things like
5 engagement based ranking . . . can lead children . . . all the way from just something innocent like
6 healthy recipes to anorexia promoting content over a very short period of time.”¹⁴⁵ Meta thus
7 specifically selects and pushes this harmful content on its platforms, for which it is then paid, and does
8 so both for direct profit and also to increase user engagement, resulting in additional profits down the
9 road.

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

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

22 138. Instagram also features a feed called “Explore,” which displays content posted by users
23

24 ¹⁴⁴ See *Facebook Whistleblower Frances Haugen Testifies on Children & Social Media Use: Full Senate*
25 *Hearing Transcript* at 09:02, Rev (Oct. 5, 2021), [https://www.rev.com/blog/transcripts/facebook-](https://www.rev.com/blog/transcripts/facebook-whistleblower-frances-haugen-testifies-on-children-social-media-use-full-senate-hearing-transcript)
26 [whistleblower-frances-haugen-testifies-on-children-social-media-use-full-senate-hearing-transcript](https://www.rev.com/blog/transcripts/facebook-whistleblower-frances-haugen-testifies-on-children-social-media-use-full-senate-hearing-transcript)
[<https://perma.cc/WML5-286H>] (statement by Mr. Chairman Blumenthal).

27 ¹⁴⁵ *Id.* at 37:34 (statement by Ms. Frances Haugen).

28 ¹⁴⁶ Vanessa Romo, *4 Takeaways from Senators’ Grilling of Instagram’s CEO About Kids and Safety*,
NPR (Dec. 8, 2021, 10:13 PM), [https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-](https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-brush-aside-his-promises-to-self-poli)
[mosseri-hears-senators-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) [<https://perma.cc/3CH4-GWJW>].

¹⁴⁷ *Id.*

not previously “followed.” The content in “Explore” is selected and presented by an algorithm designed by Meta to maximize the amount of time a user spends on the app. As with other feeds, the Explore feature may be scrolled endlessly, and its algorithm will continually generate new recommendations, encouraging users to use the app for unlimited periods of time.

139. Further, Instagram also features another feed called “Reels,” which presents short video posts by users not previously followed. These videos play automatically, without input from the user, encouraging the user to stay on the app for indefinite periods of time. As with other feeds, Reels content is selected and presented by an algorithm designed by Meta to maximize the amount of time a user spends on the app.

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

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

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

142. Upon information and belief, at least as far back as 2019, Meta initiated a Proactive Incident Response experiment, which began researching the effect of Meta on the mental health of

¹⁴⁸ 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> [<https://perma.cc/3VKL-UW94>].

¹⁴⁹ The *Wall Street Journal* and *Digital Wellbeing* published several of these documents in November 2021. See Paul Marsden, *The ‘Facebook Files’ on Instagram Harms—All Leaked Slides on a Single Page*, Digit. Wellbeing (Oct. 20, 2021), <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/> [<https://perma.cc/XT2G-A77K>]. 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-read-1848702919> [<https://perma.cc/7K26-G7GF>].

1 today's children.¹⁵⁰ Meta's own in-depth analyses show significant mental-health issues stemming from
2 the use of Instagram among teenage girls, many of whom linked suicidal thoughts and eating disorders
3 to their experiences on the app.¹⁵¹ In this regard, Meta's researchers have repeatedly found that
4 Instagram is harmful for a sizable percentage of teens that use the platform.¹⁵²

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

15 144. Similarly, in a March 2020 presentation posted to Meta's internal message board,
16 researchers found that 32% of teen girls said that "when they felt bad about their bodies, Instagram made
17 them feel worse."¹⁵⁹ 66% of teen girls and 40% of teen boys have experienced negative social

18 ¹⁵⁰ See *Facebook Whistleblower Testifies on Protecting Children Online*, C-SPAN (Oct. 5, 2021),
19 [https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook)
20 [facebook](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook) [<https://perma.cc/5QN2-MKRX>].

21 ¹⁵¹ See Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents*
22 *Show*, Wall St. J. (Sept. 14, 2021, 7:59 AM), [https://www.wsj.com/articles/facebook-knows-instagram-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline)
23 [is-toxic-for-teen-girls-company-documents-show-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline)
24 [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) [<https://perma.cc/3VKL-UW94>].

25 ¹⁵² *Id.*

26 ¹⁵³ *Id.*

27 ¹⁵⁴ *Id.*

28 ¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

29 ¹⁵⁹ *Id.*; *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.*,
30 Wall St. J. (Sept. 29, 2021), [https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)
31 [Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf) [<https://perma.cc/7D2X-363R>]; see
32 also *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019),

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

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

<https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf> [<https://perma.cc/6JNT-ZLJQ>]; 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-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page> [<https://perma.cc/XT2G-A77K>] (hard life moment – mental health deep dive).

¹⁶⁰ *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.* at 9, 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> [<https://perma.cc/7D2X-363R>].

¹⁶¹ *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> [<https://perma.cc/6JNT-ZLJQ>]; 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-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page> [<https://perma.cc/XT2G-A77K>].

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-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf> [<https://perma.cc/7D2X-363R>].

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-1.pdf> [<https://perma.cc/6JNT-ZLJQ>].

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

a. The Snapchat Platform

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

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

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

149. In 2015, Snap added a “Discover” feature that promotes videos from news outlets and

¹⁶⁶ Katie Benner, *How Snapchat is Shaping Social Media*, N.Y. Times (Nov. 30, 2016), <https://www.nytimes.com/2016/11/30/technology/how-snapchat-works.html> [<https://perma.cc/6GCG-ZHYX>].

¹⁶⁷ J.J. Colao, *Snapchat Adds Video, Now Seeing 50 Million Photos A Day*, Forbes (Dec. 14, 2012), <https://www.forbes.com/sites/jjcolao/2012/12/14/snapchat-adds-video-now-seeing-50-million-photos-a-day/?sh=55425197631b> [<https://perma.cc/6DYM-QAGC>].

¹⁶⁸ Ellis Hamburger, *Snapchat's Next Big Thing: 'Stories' That Don't Just Disappear*, Verge (Oct. 3, 2013), <https://www.theverge.com/2013/10/3/4791934/snapchats-next-big-thing-stories-that-dont-just-disappear> [<https://perma.cc/25YP-T7W4>].

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/> [<https://perma.cc/3UAN-LY4N>].

¹⁷⁰ Laura Stamper, *Snapchat Just Unveiled a New Feature*, Time (June 17, 2014), <https://time.com/2890073/snapchat-new-feature/> [<https://perma.cc/E28M-8KLT>].

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> [<https://perma.cc/NJ9E-3JYD>].

1 other content creators.¹⁷² Users can watch that content by scrolling through the Discover feed. After the
2 selected video ends, Snapchat automatically plays other video content in a continuous stream, which
3 does not cease until a user manually exits the stream.

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

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

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

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

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

21 ¹⁷² Steven Tweedie, *How to Use Snapchat’s New ‘Discover’ Feature*, Bus. Insider (Jan. 27, 2015),
22 <https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1>
23 [<https://perma.cc/22ST-8HAL>].

24 ¹⁷³ Salvador Rodriguez, *Snap is launching a competitor to TikTok and Instagram Reels*, CNBC (Nov.
25 23, 2020), [https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-](https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html)
26 [reels.html](https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html) [<https://perma.cc/2HCW-KUFG>].

27 ¹⁷⁴ *October 2022 Investor Presentation* at 5, Snap Inc. (Oct. 20, 2022), [https://investor.snap.com/events-](https://investor.snap.com/events-and-presentations/presentations/default.aspx)
28 [and-presentations/presentations/default.aspx](https://investor.snap.com/events-and-presentations/presentations/default.aspx) [<https://perma.cc/8BDK-7S9V>].

¹⁷⁵ *Id.* at 6–7.

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-1513300279>
[<https://perma.cc/7XTY-2AXS>].

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-twitter-snapchat-combined-](https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/)
[2022-report-2022-04-11/](https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/) [<https://perma.cc/L8U2-Q9ZZ>].

age range.¹⁷⁸

154. While Snap lumps teenagers in with younger adults in its investor materials, Snap marketing materials features young models that reveal its priority market:



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

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

¹⁷⁸ October 2022 Investor Presentation at 27, Snap Inc. (Oct. 20, 2022), <https://investor.snap.com/events-and-presentations/presentations/default.aspx> [<https://perma.cc/8BDK-7S9V>].

¹⁷⁹ See Hannah Kuchler & Tim Bradshaw, *Snapchat's Youth Appeal Puts Pressure on Facebook*, Fin. Times (Aug. 21, 2017), <https://www.ft.com/content/07e4dc9e-86c4-11e7-bf50-e1c239b45787> [<https://perma.cc/D9A4-JFEA>].

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/> [<https://perma.cc/DJT8-TK3L>].

1 insulates youth from adult oversight.

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

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

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

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

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

16 161. Snap promotes excessive use of its platform through design features and manipulative
17 algorithms intended to maximize users’ screen time.

18 162. Snap has implemented inherently and intentionally exploitive features into Snapchat,

19 ¹⁸¹ Kif Leswing, *Snapchat just introduced a feature it paid more than \$100 million for*, Bus. Insider
20 (July 19, 2016), [https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-](https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-than-100-million-for-2016-7)
21 [than-100-million-for-2016-7](https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-than-100-million-for-2016-7) [<https://perma.cc/4PRE-VSW9>].

22 ¹⁸² Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, Forbes (June 23, 2013),
23 [https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-](https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a)
24 [under-13/?sh=7c682a555e5a](https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a) [<https://perma.cc/ZQA9-F2VC>].

25 ¹⁸³ *Id.*

26 ¹⁸⁴ *Id.*

27 ¹⁸⁵ Isobel Asher Hamilton, *Snapchat admits its age verification safeguards are effectively useless*, Bus.
28 Insider (Mar. 19, 2019), [https://www.businessinsider.com/snapchat-says-its-age-verification-](https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3)
[safeguards-are-effectively-useless-2019-3](https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3) [<https://perma.cc/V938-6AEG>].

¹⁸⁶ Victoria Rideout *et al.*, *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-](https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf)
[census-integrated-report-final-web_0.pdf](https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf) [<https://perma.cc/L6ND-X7VR>].

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/>
[<https://perma.cc/BH7W-ZUPM>].

1 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.

4 163. Snaps are intended to manipulate users by activating the rule of reciprocity.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 to keep users on the platform.

11 164. 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 lives as a whole.”¹⁹² Some children become so obsessed with

18 ¹⁸⁸ Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 14, 2015),
19 <https://www.nirandfar.com/psychology-of-snapchat/> [<https://perma.cc/ZQC2-8W3M>].

20 ¹⁸⁹ 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> [<https://perma.cc/5RE8-3PMA>]; see generally Virginia Smart & Tyana Grundig, *‘We’re designing minds’: Industry insider reveals secrets of addictive app trade*, CBC (Nov. 3, 2017),
22 <https://www.cbc.ca/news/science/marketplace-phones-1.4384876> [<https://perma.cc/93PV-XE3E>];
23 Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),
24 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>
25 [<https://perma.cc/2HES-Y3AB>].

26 ¹⁹⁰ Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017),
27 <https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker>
28 [<https://perma.cc/V92N-WSGP>].

¹⁹¹ *Id.*

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>

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

165. 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.

166. 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 information.¹⁹⁵ Snap personalizes, designs and modifies these filters to maximize the amount of time users spend on Snapchat.¹⁹⁶

d. Snapchat’s Algorithms Are Manipulative and Harmful

167. Snap also uses complex algorithms to suggest friends and recommend content to users to keep them using Snapchat.

[<https://perma.cc/5RE8-3PMA>]; 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> [<https://perma.cc/47HQ-7WVQ>].

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> [<https://perma.cc/WWR9-6E2P>]; 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> [<https://perma.cc/RDR2-TKDR>].

¹⁹⁴ Josh Constine, *Now Snapchat Has ‘Filter Games’*, TechCrunch (Dec. 23, 2016), <https://techcrunch.com/2016/12/23/snapchat-games/> [<https://perma.cc/U9UY-C5NR>].

¹⁹⁵ *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> [<https://perma.cc/93WL-GSY8>] (last visited June 26, 2023).

¹⁹⁶ *Id.*

1 168. Snap utilizes an equation to determine whether someone should add someone else as a
2 friend on Snapchat and notifies the user of these recommendations. This is known as “Quick Add.” By
3 using an algorithm to suggest friends to users, Snapchat increases the odds that users will add additional
4 friends, send additional snaps, and spend more time on the app.

5 169. Snapchat also contains “Discover” and “Spotlight” features that use algorithms to
6 recommend content to users. The Discover feature includes content from news and other media
7 outlets.¹⁹⁷ A user’s Discover page is populated by an algorithm and constantly changes depending on
8 how a user interacts with the content.¹⁹⁸ Similarly, the Spotlight feature promotes popular videos from
9 other Snapchat users and is based on an algorithm that determines whether a user has positively or
10 negatively engaged with similar content.¹⁹⁹ Snap programs its algorithms to push content to users that
11 will keep them engaged for increased amounts of time on Snapchat and, thereby, worsen their mental
12 health.

13 **e. Snap’s Conduct in Designing and Operating Its Platform Has Harmed Youth**
14 **Mental Health**

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

17 171. Snap knows Snapchat is harming youth because, as alleged above, Snap intentionally
18 designed Snapchat to maximize engagement by preying on the psychology of children through its use of
19 algorithms and other features including Snapstreaks, various trophies and reward systems, quickly
20 disappearing messages, filters, and games.

21 172. Snap should know that its conduct has negatively affected youth. Snap’s conduct has
22 been the subject of inquiries by the United States Senate regarding Snapchat’s use “to promote bullying,

24 ¹⁹⁷ Steven Tweedie, *How to Use Snapchat’s New ‘Discover’ Feature*, Bus. Insider (Jan. 27, 2015),
25 <https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1>
26 [\[https://perma.cc/22ST-8HAL\]](https://perma.cc/22ST-8HAL).

27 ¹⁹⁸ *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information>
28 [\[https://perma.cc/93WL-GSY8\]](https://perma.cc/93WL-GSY8) (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>
[\[https://perma.cc/3FYB-C2DU\]](https://perma.cc/3FYB-C2DU); *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> [\[https://perma.cc/93WL-GSY8\]](https://perma.cc/93WL-GSY8) (last visited June 26, 2023).

worsen eating disorders, and help teenagers buy dangerous drugs or engage in reckless behavior.”²⁰⁰ Further, Senators across the ideological spectrum have introduced bills that would ban many of the features Snapchat offers, 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 features that award users’ levels of engagement with Snapchat.

173. Snap also knows or should know of Snapchat’s other negative effects on youth based on 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 this phrase to describe people, usually young women, who are 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 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

174. 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.

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> [<https://perma.cc/8GNJ-PLE9>].

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> [<https://perma.cc/VP9G-EVBK>]; *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> [<https://perma.cc/JDZ7-TUX7>].

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> [<https://perma.cc/KA79-G2PX>].

²⁰⁵ *Id.*

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

3 **a. TikTok's Platform**

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

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

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

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

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

14 180. Since then, TikTok has expanded the length of time for videos from 15-seconds to up to
15 10 minutes;²¹² created a fund that was expected to grow to over \$1 billion within three years to
16

17 ²⁰⁶ *About: Our Mission*, TikTok, <https://www.tiktok.com/about> [<https://perma.cc/3XS6-U99U>] (last
18 visited June 26, 2023).

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

22 ²⁰⁸ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you've*
23 *probably never heard of*, Bus. Insider (May 28, 2016), [https://www.businessinsider.com/what-is-](https://www.businessinsider.com/what-is-musically-2016-5)
24 [musically-2016-5](https://www.businessinsider.com/what-is-musically-2016-5) [<https://perma.cc/78KJ-WBRS>].

25 ²⁰⁹ Paresh Dave, *China's ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018),
26 [https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-](https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW)
27 [favor-of-tiktok-idUSKBN1KN0BW](https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW) [<https://perma.cc/EZ6K-3Q8B>].

28 ²¹⁰ 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-](https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-acquired-for-as-much-as-1-billion-1510278123)
[1510278123](https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-acquired-for-as-much-as-1-billion-1510278123) [<https://perma.cc/KXV7-C5HW>].

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-](https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW)
[favor-of-tiktok-idUSKBN1KN0BW](https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW) [<https://perma.cc/EZ6K-3Q8B>].

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-](https://www.socialmediatoday.com/news/tiktok-confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/)
[minute-video-uploads-are-coming-to-all-users/619535/](https://www.socialmediatoday.com/news/tiktok-confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/) [<https://perma.cc/DY6R-A9QY>].

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

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

182. “[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

183. 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 monthly users as of September 2021.²¹⁹

b. TikTok Markets Its Platform to Youth

184. TikTok, like the other Defendants’ platforms, has built its business plan around advertising revenue, which has boomed. In 2022, TikTok is projected to receive \$11 billion in

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> [<https://perma.cc/5HJ4-475H>].

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> [<https://perma.cc/452K-SEAS>].

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> [<https://perma.cc/82VQ-8VPF>].

²¹⁶ *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you> [<https://perma.cc/4DBQ-MCQY>].

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> [<https://perma.cc/82VQ-8VPF>].

²¹⁹ Jessica Bursztynsky, *TikTok says 1 billion people use the app each month*, CNBC (Sept. 27, 2021), <https://www.cnbc.com/2021/09/27/tiktok-reaches-1-billion-monthly-users.html> [<https://perma.cc/S6WT-2ET7>].

1 advertising revenue, over half of which (*i.e.*, \$6 billion) is expected to come from the United States.²²⁰

2 185. TikTok, since its inception as Musical.ly, has been designed and developed with youth in
3 mind.

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

8 187. According to Zhu, he stumbled upon the idea that would become known as TikTok while
9 observing teens on a train, half of whom were listening to music while the other half took selfies or
10 videos and shared the results with friends.²²³ “That’s when Zhu realized he could combine music,
11 videos, and a social network to attract the early-teen demographic.”²²⁴

12 188. Zhu and Yang thereafter developed the short-form video app that is now known as
13 TikTok, which commentators have observed “encourages a youthful audience in subtle and obvious
14 ways.”²²⁵

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

22 ²²⁰ Bhanvi Staija, *TikTok’s ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters (Apr.
23 11, 2022), <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/> [<https://perma.cc/L8U2-Q9ZZ>].

24 ²²¹ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve*
25 *probably never heard of*, Bus. Insider (May 28, 2016), [https://www.businessinsider.com/what-is-](https://www.businessinsider.com/what-is-musically-2016-5)
[musically-2016-5](https://perma.cc/78KJ-WBRS) [<https://perma.cc/78KJ-WBRS>].

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-](https://www.nytimes.com/2016/09/17/business/media/a-social-network-frequented-by-children-tests-the-limits-of-online-regulation.html)
[tests-the-limits-of-online-regulation.html](https://perma.cc/9HTF-BHT7) [<https://perma.cc/9HTF-BHT7>].

1 subjects or school-themed television shows and movies.²²⁶

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

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

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

11 193. The FTC alleged that despite the company’s knowledge of these and a “significant
12 percentage” of other users who were under 13, the company failed to comply with the COPPA.²³⁰

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

15 195. In an attempt to come into compliance with the consent decree and COPPA, TikTok
16 made available to users under 13 what it describes as a “limited, separate app experience.”²³² The child

17
18 ²²⁶ Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief (“**Musical.ly**
19 **Complaint**”) at p. 8, ¶¶ 26–27, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb.
20 27, 2019), ECF No. 1.

21 ²²⁷ Melia Robinson, *How to use Musical.ly, the app with 150 million users that teens are obsessed with*,
22 Bus. Insider (Dec. 7, 2016), <https://www.businessinsider.com/how-to-use-musically-app-2016-12>
23 [<https://perma.cc/2Q9R-F8TN>].

24 ²²⁸ Sam Biddle *et al.*, *Invisible Censorship: TikTok Told Moderators to Suppress Posts by “Ugly”*
25 *People and the Poor to Attract New Users*, *Intercept* (Mar. 15, 2020),
26 <https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/>
27 [<https://perma.cc/6YKN-G54N>].

28 ²²⁹ Jon Russell, *Musical.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-](https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/)
[london/](https://perma.cc/CCX9-WQDF) [<https://perma.cc/CCX9-WQDF>].

²³⁰ See generally *Musical.ly Complaint*, *supra* note 227.

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-settlement-requires-](https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune)
27 [musically-change-its-tune](https://perma.cc/S747-9RDD) [<https://perma.cc/S747-9RDD>].

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-settlement-](https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law)
28 [13-childrens-privacy-law](https://perma.cc/W2BQ-T5Y7) [<https://perma.cc/W2BQ-T5Y7>].

version of TikTok restricts users from posting videos through the app. Children can still, however, record and watch videos on TikTok.²³³ For that reason, experts fear the app is “designed to fuel [kids’] interest in the grown-up version.”²³⁴

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

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

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

198. TikTok employs design elements and complex algorithms to simulate variable reward patterns in a flow-inducing stream of short-form videos intended to captivate its user’s attention well after they are satiated.

199. 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.

200. 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

²³³ *Id.*

²³⁴ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-> [<https://perma.cc/RGX9-3JWC>].

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-internet-companies-rest-of-the-world.html> [<https://perma.cc/2Q2L-DYWZ>].

²³⁶ *Id.*

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/> [<https://perma.cc/9T58-KJBG>].

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

201. 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.

202. 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.

203. TikTok’s defining features, its “For You” feed, is a curated, never-ending stream 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

204. 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

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> [<https://perma.cc/3QWP-9N5A>].

²⁴⁰ *Id.*

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> [<https://perma.cc/JUG3-P7VH>].

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> [<https://perma.cc/A5TR-U794>].

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

206. 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

207. 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

208. 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

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

210. 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

²⁴³ *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you> [<https://perma.cc/4DBQ-MCQY>].

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ *Id.*

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> [<https://perma.cc/2VJM-NSSX>].

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> [<https://perma.cc/78KJ-WBRS>] (emphasis added).

1 videos it serves: ‘retention’ — that is, whether a user comes back — and ‘time spent.’”²⁴⁹

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

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

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

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

13 214. TikTok’s decision to program its algorithm to prioritize user engagement causes harmful
14 and exploitive content to be amplified to the young market it has cultivated.

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

19 ²⁴⁹ Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),
20 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html> [<https://perma.cc/KTT2-UWTH>].

21 ²⁵⁰ *Id.*

22 ²⁵¹ *Id.*

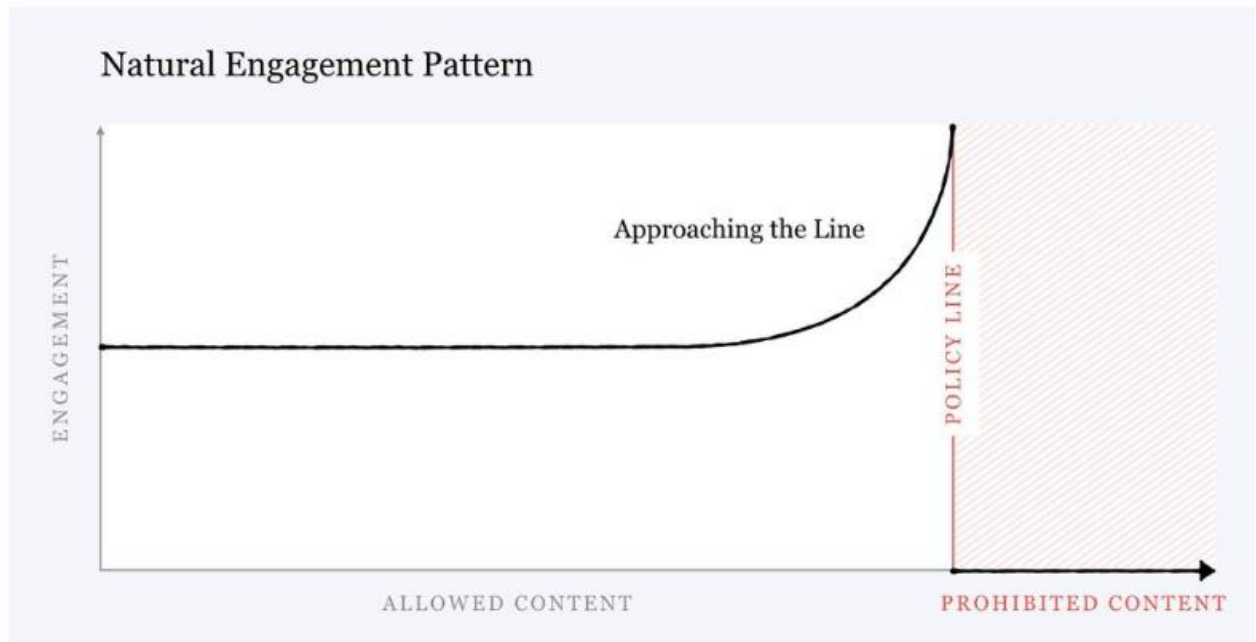
23 ²⁵² Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019),
<https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention>
24 [<https://perma.cc/YX85-ZFV6>].

25 ²⁵³ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022),
[https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-](https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard)
26 [dashboard](https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard) [<https://perma.cc/59QV-BYVK>]; see also Steven Lee Myers, *How Social Media Amplifies*
27 *Misinformation More Than Information*, N.Y. Times (Oct. 13, 2022),
<https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-report.html>
28 [<https://perma.cc/EA9U-UBZF>].

²⁵⁴ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022),
[https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-](https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard)
[dashboard](https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard) [<https://perma.cc/59QV-BYVK>].

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

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



218. According to Zuckerberg “no matter where we draw the lines for what is allowed, as a piece of content gets close to that line, people will engage with it more on average[.]”²⁵⁶

219. This has important implications for platform design, as the Integrity Institute explains:

when platforms use machine learning models to predict user engagement on content, we should expect the predicted engagement to follow the actual engagement. When those predictions are used to rank and recommend content, 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

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

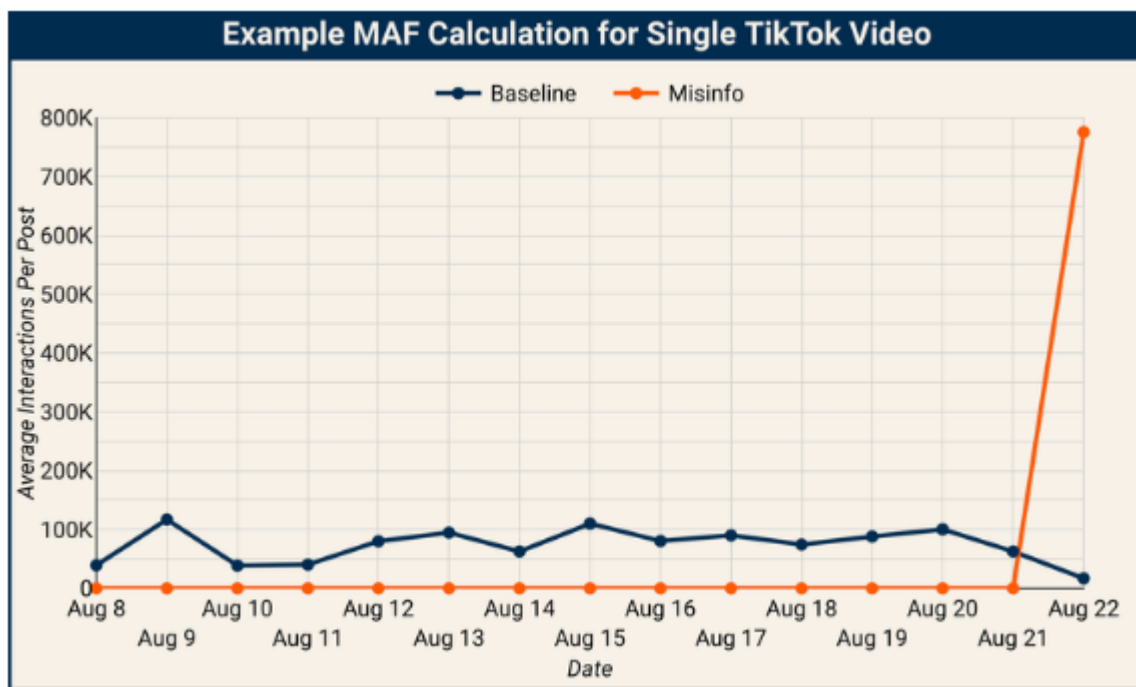
²⁵⁵ Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, Facebook (Nov. 15, 2018), https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/?hc_location=ufi [<https://perma.cc/ZK5C-ZTSX>].

²⁵⁶ *Id.*

²⁵⁷ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022), <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard> [<https://perma.cc/59QV-BYVK>].

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

222. 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



223. 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

224. 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% preferring it (and Instagram) over Google.²⁶¹ Unfortunately, *NewsGuard* found that one in five

²⁵⁸ *Id.*

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/> [<https://perma.cc/327V-7T46>].

of the top 20 TikTok search results on prominent news topics, such as school shootings and COVID vaccines, contain misinformation.²⁶²

225. Misinformation is just one type of harmful content TikTok amplifies to its young users. Investigations by the *Wall Street Journal* found TikTok inundated young users with videos about depression, self-harm, drugs, and extreme diets, to name a few.

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

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

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

229. “Even bots with general mainstream interests got pushed to the margin as

²⁶² *Misinformation Monitor*, NewsGuard (Sept. 2022), <https://www.newsguardtech.com/misinformation-monitor/september-2022/> [<https://perma.cc/XH7X-RYZY>].

²⁶³ *Inside TikTok’s Algorithm: A WSJ Video Investigation*, Wall St. J. (July 21, 2021), <https://www.wsj.com/articles/tiktok-algorithm-video-investigation-11626877477> [<https://perma.cc/L3F2-DA4M>].

²⁶⁴ *Id.*

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ *Id.*

1 recommendations got more personalized and narrow.”²⁷⁰ Deep in these rabbit holes, the *Wall Street*
2 *Journal* found “users are more likely to encounter potential harmful content.”²⁷¹ For example, one video
3 the *Wall Street Journal* encountered encouraged suicide, reading “Just go. Leave. Stop trying. Stop
4 pretending. You know it and so do they. Do Everyone a favor and leave.”²⁷²

5 230. Chaslot explained why TikTok feeds users this content:

6 [T]he algorithm is able to find the piece of content that you’re vulnerable to. That will
7 make you click, that will make you watch, but it doesn’t mean you really like it. And that
8 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

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

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

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

19 234. For example, one bot was programmed to pause on videos referencing drugs, among
20 other topics. The first day on the platform, the “account lingered on a video of a young woman walking
21

22 ²⁷⁰ *Id.*

23 ²⁷¹ *Id.*

24 ²⁷² *Id.*

25 ²⁷³ *Id.*

26 ²⁷⁴ 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-](https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink)
[11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink](https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink) [[https://perma.cc/UVX9-](https://perma.cc/UVX9-8MCG)
[8MCG](https://perma.cc/UVX9-8MCG)].

27 ²⁷⁵ *Id.*

28 ²⁷⁶ *Id.*

²⁷⁷ *Id.*

²⁷⁸ *Id.*

1 through the woods with a caption” referencing “stoner girls.”²⁷⁹ The following day the bot viewed a
2 video of a “marijuana-themed cake.”²⁸⁰ The “majority of the next thousand videos” TikTok directed at
3 the teenage account “tout[ed] drugs and drug use, including marijuana, psychedelics and prescription
4 medication.”²⁸¹

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

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

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

19 238. TikTok also directed a concentrated stream of videos at accounts programmed to express
20 interest in a variety of topics. One such account was programmed to linger over hundreds of Japanese
21 film and television cartoons. “In one streak of 150 videos, all but four” of the videos TikTok directed at
22

23 ²⁷⁹ *Id.*

24 ²⁸⁰ *Id.*

25 ²⁸¹ *Id.*

26 ²⁸² *Id.*

27 ²⁸³ *Id.*

28 ²⁸⁴ *Id.*

²⁸⁵ *Id.*

²⁸⁶ *Id.*

²⁸⁷ *Id.*

²⁸⁸ *Id.*

1 the account, “featured Japanese animation—many with sexual themes.”²⁸⁹

2 239. The relentless stream of content intended to keep users engaged “can be especially
3 problematic for young people,” because they may lack the capability to stop watching, says David
4 Anderson, a clinical psychologist at the nonprofit mental health care provider, The Child Mind
5 Institute.²⁹⁰

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

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

14 242. “TikTok’s algorithm quickly g[a]ve[] users the content they’ll watch, for as long as
15 they’ll watch it.”²⁹⁴ For example, TikTok streamed gambling videos to a bot registered to a 13-year-old
16 after it first searched for and favorited several such videos.²⁹⁵ When the bot began demonstrating interest
17 in weight loss videos, the algorithm adapted quickly, as this chart demonstrates.²⁹⁶

23 ²⁸⁹ *Id.*

24 ²⁹⁰ *Id.*

25 ²⁹¹ Tawnell D. Hobbs *et al.*, *The Corpse Bride Diet: How TikTok Inundates Teens with Eating-Disorder*
26 *Videos*, Wall St. J. (Dec. 17, 2021), [https://www.wsj.com/articles/how-tiktok-inundates-teens-with-](https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848)
27 [eating-disorder-videos-11639754848](https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848) [<https://perma.cc/TS8V-QQJX>] (some of the accounts performed
28 searches or sent other, undisclosed signals indicating their preferences).

²⁹² *Id.*

²⁹³ *Id.*

²⁹⁴ *Id.*

²⁹⁵ *Id.*

²⁹⁶ *Id.*



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

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

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

246. Unfortunately, it has for the several teenage girls interviewed by the *Wall Street Journal*,

²⁹⁷ *Id.*

²⁹⁸ *Id.*

²⁹⁹ *Id.*

³⁰⁰ *Id.*

who reported developing eating disorders or relapsing after being influenced by the extreme diet videos TikTok promoted to them.³⁰¹

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

248. Others, like Stephanie Zerwas, an associate professor of psychiatry at the University of North Carolina at Chapel Hill, could not recount how many of her young patients told her that “I’ve started falling down this rabbit hole, or I got really into this or that influencer on TikTok, and then it started to feel like eating-disorder behavior was normal, that everybody was doing that.”³⁰³

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

250. 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

251. 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.

252. 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.

³⁰¹ *Id.*

³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ *Id.*

³⁰⁵ *YouTube for Press*, YouTube, <https://blog.youtube/press/> [<https://perma.cc/GC4P-PVBW>] (last visited June 26, 2023).

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

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

255. Beginning in 2008 and through today, YouTube has recommended videos to users.³⁰⁸ Early on, the videos YouTube recommended to users were the most popular videos across the platform.³⁰⁹ YouTube admits “[n]ot a lot of people watched those videos[,]” at least not based on its recommendation.³¹⁰

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

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

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

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/> [<https://perma.cc/Y6S6-KGXG>].

³⁰⁸ Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/> [<https://perma.cc/WM6C-D36J>].

³⁰⁹ *Id.*

³¹⁰ *Id.*

³¹¹ *Id.*

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> [<https://perma.cc/RYN4-LA55>] (last visited June 26, 2023).

³¹³ *Id.*

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

2 259. The primary way YouTube makes money is through advertising. In 2021 alone, YouTube
3 made \$19 billion in ad revenue.³¹⁴

4 260. “In 2012, YouTube concluded that the more people watched, the more ads it could
5 run[.]”³¹⁵ “So YouTube . . . set a company-wide objective to reach one billion hours of viewing a
6 day[.]”³¹⁶

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

10 262. YouTube has long known that youth use its platforms in greater proportion than older
11 demographics.

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

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

22 ³¹⁴ *Alphabet Inc., Annual Report, Form 10-k* at 60 (2021),
23 <https://www.sec.gov/ix?doc=/Archives/edgar/data/1652044/000165204422000019/goog-20211231.htm> [<https://perma.cc/9SJ8-FGW8>].

24 ³¹⁵ Mark Bergen, *YouTube Executive Ignores Warnings, Letting Toxic Videos Run Rampant*, Bloomberg
25 (Apr. 2, 2019), <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant?leadSource=uverify%20wall> [<https://perma.cc/98GG-VNSS>].

26 ³¹⁶ *Id.*

27 ³¹⁷ *Id.*

28 ³¹⁸ 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), ECF No. 1-1.

³¹⁹ *Id.* Exhibit B.

1 #1 source where children discover new toys + games.”³²⁰

2 265. In addition to turning a blind eye towards underage users of its platform, YouTube
3 developed and marketed a version of YouTube specifically for children under the age of 13.

4 266. YouTube’s efforts to attract young users have been successful. *See supra* Section IV.A. A
5 vast majority, 95%, of children ages 13–17 have used YouTube.³²¹

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

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

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

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

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

23 271. One of YouTube’s defining features is its panel of recommended videos. YouTube

24 ³²⁰ *Id.* Exhibit C.

25 ³²¹ *Id.*

26 ³²² *See, e.g.,* Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence*
27 *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/> [<https://perma.cc/9T58-KJBG>].

28 ³²³ *Manage YouTube Notifications*, YouTube,
<https://support.google.com/youtube/answer/3382248?hl=en&co=GENIE.Platform%3DDesktop>
[\[https://perma.cc/6NT6-NQ9M\]](https://perma.cc/6NT6-NQ9M) (last visited June 26, 2023).

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

272. 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.

273. 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

274. 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 videos, the more ads they

³²⁴ *Recommended Videos*, YouTube, <https://www.youtube.com/howyoutubeworks/product-features/recommendations/> [<https://perma.cc/WN7Y-F2ZH>] (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/> [<https://perma.cc/WM6C-D36J>].

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> [<https://perma.cc/2EV7-GUCT>].

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> [<https://perma.cc/8VC9-AYZY>].

1 see, resulting in an increase of YouTube’s advertising revenue.³²⁸

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

13 276. YouTube’s current recommendation algorithm is based on deep-learning neural networks
14 that retune its recommendations based on the data fed into it.³³⁴ While this algorithm is incredibly
15 complex, its process can be broken down into two general steps. First, the algorithm compiles a shortlist

17 ³²⁸ Jesselyn Cook & Sebastian Murdock, *YouTube is a Pedophile’s Paradise*, Huffington Post (Mar. 20,
18 2020), https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db
19 [<https://perma.cc/8GJ2-KXL4>].

20 ³²⁹ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
21 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/> [<https://perma.cc/WM6C-D36J>].

22 ³³⁰ *Id.*

23 ³³¹ Dave Davies, *How YouTube became one of the planet’s most influential media businesses*, NPR
24 (Sept. 8, 2022), [https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-](https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-planets-most-influential-media-businesses)
25 [planets-most-influential-media-businesses](https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-planets-most-influential-media-businesses) [<https://perma.cc/JR2R-E7CF>].

26 ³³² Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012),
27 <https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/>
28 [<https://perma.cc/5D2X-QUZP>].

29 ³³³ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
30 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/> [<https://perma.cc/WM6C-D36J>].

31 ³³⁴ Alexis C. Madrigal, *How YouTube’s Algorithm Really Works*, Atl. (Nov. 8, 2018),
32 [https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-](https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/)
33 [works/575212/](https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/) [<https://perma.cc/V6B7-64LA>]; Paul Covington *et al.*, *Deep Neural Networks for*
34 *YouTube Recommendations*, Google (2016), [https://storage.googleapis.com/pub-tools-public-](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf)
35 [publication-data/pdf/45530.pdf](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf) [<https://perma.cc/P3V7-BDNF>].

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

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

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

17 279. In addition to the algorithm’s self-learning, Google engineers consistently update
18 YouTube’s recommendation and ranking algorithms, making several updates every month, according to
19

20
21 ³³⁵ Karen Hao, *YouTube is experimenting with ways to make its algorithm even more addictive*, MIT
22 Tech. Rev. (Sept. 27, 2019), [https://www.technologyreview.com/2019/09/27/132829/youtube-](https://www.technologyreview.com/2019/09/27/132829/youtube-algorithm-gets-more-addictive/)
23 [algorithm-gets-more-addictive/](https://www.technologyreview.com/2019/09/27/132829/youtube-algorithm-gets-more-addictive/) [<https://perma.cc/CC7F-S7DN>]; Paul Covington *et al.*, *Deep Neural*
Networks for YouTube Recommendations, Google (2016), [https://storage.googleapis.com/pub-tools-](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf)
[public-publication-data/pdf/45530.pdf](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf) [<https://perma.cc/P3V7-BDNF>].

24 ³³⁶ *Id.*

25 ³³⁷ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/> [[https://perma.cc/WM6C-](https://perma.cc/WM6C-D36J)
[D36J](https://perma.cc/WM6C-D36J)].

26 ³³⁸ *Recommended Videos*, YouTube, [https://www.youtube.com/howyoutubeworks/product-](https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content)
[features/recommendations/#signals-used-to-recommend-content](https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content) [<https://perma.cc/WN7Y-F2ZH>] (last
27 visited June 26, 2023).

28 ³³⁹ *Id.*

³⁴⁰ *Id.*

³⁴¹ *Id.*

1 YouTube Chief Product Officer Neal Mohan.³⁴² The end goal is to increase the amount of time users
2 spend watching content on YouTube.

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

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

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

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

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

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

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

23 ³⁴² Nilay Patel, *YouTube Chief Product Officer Neal Mohan on The Algorithm, Monetization, and the*
24 *Future for Creators*, Verge (Aug. 3, 2021), [https://www.theverge.com/22606296/youtube-shorts-fund-](https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview)
25 [neal-mohan-decoder-interview](https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview) [<https://perma.cc/2HWP-YSL4>].

26 ³⁴³ Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET (Jan. 20,
27 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>
28 [<https://perma.cc/Q6GM-SSDG>].

³⁴⁴ *Id.*

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> [[https://perma.cc/7NCH-](https://perma.cc/7NCH-GHBV)
[GHBV](https://perma.cc/7NCH-GHBV)].

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.

286. 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

287. 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

288. According to the Pew Research Center, 46% of parents say their child has encountered

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> [<https://perma.cc/UMK2-H43F>].

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> [<https://perma.cc/EHB9-MBX8>].

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> [<https://perma.cc/C6BA-AU6E>].

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> [<https://perma.cc/M594-VB5A>].

³⁵¹ *Id.*

³⁵² *Id.*

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

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

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

15 291. Even though much of the content YouTube’s algorithms feed to youth is harmful, it can
16 activate the reward circuitry in the brain such that it encourages youth to spend more time watching
17 videos on YouTube. According to Donna Volpitta, founder of The Center for Resilient Leadership,
18 watching “fear-inducing videos cause the brain to receive a small amount of dopamine,” which acts as a
19 reward and creates a desire to do something over and over.³⁵⁹ This dopaminergic response is in addition

20 _____
21 ³⁵³ Brooke Auxier *et al.*, *Parenting Children in The Age of Screens: 2. Parental views about YouTube*,
22 Pew Rsch. Ctr. (July 28, 2020), [https://www.pewresearch.org/internet/2020/07/28/parental-views-](https://www.pewresearch.org/internet/2020/07/28/parental-views-about-youtube/)
23 [about-youtube/](https://www.pewresearch.org/internet/2020/07/28/parental-views-about-youtube/) [<https://perma.cc/U7LH-D62Q>].

24 ³⁵⁴ Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, CNET (Jan. 20,
25 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>
26 [<https://perma.cc/Q6GM-SSDG>].

27 ³⁵⁵ Brandy Zadrozny, *YouTube’s recommendations still push harmful videos, crowdsourced study finds*,
28 NBC News (July 17, 2021), [https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-](https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355)
29 [still-push-harmful-videos-crowdsourced-study-rcna1355](https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355) [<https://perma.cc/HT4Q-QSN5>].

30 ³⁵⁶ *Id.*

31 ³⁵⁷ *Id.*

32 ³⁵⁸ Josephine Bila, *YouTube’s dark side could be affecting your child’s mental health*, CNBC (Feb. 13,
33 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html)
34 [children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html) [<https://perma.cc/CRQ9-6VJV>].

35 ³⁵⁹ *Id.*

1 to the reward stimulus YouTube provides users through IVR.

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

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

15 294. Despite the extensive evidence that YouTube’s design and algorithms harm millions of
16 youth, Google continues to promote YouTube unchanged, manipulating youth into staying on the
17 platform and watching more and more videos so that it can increase its ad revenue.

18 **E. The Effect of Social Media Use on Schools**

19 295. School districts are uniquely harmed by the current youth mental health crisis. This is

20 ³⁶⁰ *Id.*

21 ³⁶¹ *Id.*

22 ³⁶² 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),
23 <https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub>
24 [<https://doi.org/10.1016/j.sleep.2022.08.004>].

25 ³⁶³ *Id.*

26 ³⁶⁴ *Id.*

27 ³⁶⁵ Cara Murez, *One App is Especially Bad for Teens’ Sleep*, U.S. News (Sept. 13, 2022),
28 <https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep> [<https://perma.cc/L8HD-ZTZ2>].

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>
[<https://doi.org/10.1016/j.ypmed.2016.01.001>].

1 because schools are one of the main providers for mental health services for school-aged children.³⁶⁷
2 Indeed, over 3.1 million children ages 12–17 received mental health services through an education
3 setting in 2020, more than any other non-specialty mental health service setting.³⁶⁸

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

14 297. In part, schools are struggling to provide adequate mental health services because of the
15 increase in students seeking these services. More than two-thirds of public schools reported an increase
16 in the percent of students seeking mental health services from school since the start of the pandemic.³⁷⁴

17 298. During this same period, adolescents increased their social media use, also raising levels
18
19

20
21 ³⁶⁷ *National Survey on Drug Use and Health*, SAMHSA (2019 & 1st & 4th Qs. 2020),
<https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables> [<https://perma.cc/NA32-JYQX>].

22 ³⁶⁸ *Id.*

23 ³⁶⁹ *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 [<https://perma.cc/P4K9-4HF7>].

24 ³⁷⁰ *Id.*

25 ³⁷¹ *Id.*

26 ³⁷² *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
[<https://perma.cc/UHV7-RNQ6>].

27 ³⁷³ *Id.*

28 ³⁷⁴ *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 [<https://perma.cc/P4K9-4HF7>].

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.

299. That relationship is reflected in reports from public schools. Over 75% 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

300. Anxiety disorders are also up, affecting 31.9% 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

301. 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 drop out compared to their peers.”³⁸¹

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/> [<https://perma.cc/3ZSA-UBDF>].

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 [<https://perma.cc/P4K9-4HF7>].

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 [<https://perma.cc/X4YF-ZAB7>].

³⁷⁹ *Anxiety Disorders: Facts and Statistics*, Anxiety & Depression Ass’n Am., <https://adaa.org/understanding-anxiety/facts-statistics> [<https://perma.cc/EBF6-CXBF>] (last visited June 26, 2023).

³⁸⁰ *Id.*

³⁸¹ *Mental Health By the Numbers*, Nat’l All. Mental Health (June 2022), <https://www.nami.org/mhstats> [<https://perma.cc/DNB4-SA2R>] (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> [<https://perma.cc/Y5ZQ-4XQN>] (last visited Apr. 19, 2023)); and Véronique Dupère *et al.*, *Revisiting the Link Between Depression Symptoms and High School Dropout: Timing of Exposure Matters*, J. Adolescent Health 62

302. 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.

303. 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% of public schools saw an increase in classroom disruptions from student misconduct compared to school years before the pandemic.³⁸⁴ In that same year, 58% of public schools also saw an increase in rowdiness outside of the classroom, 68% saw increases in tardiness, 27% saw increases in students skipping classes, 55% saw increases in the use of electronic devices when not permitted, 37% saw an increase in bullying, 39% saw an increase in physical fights between students, and 46% saw an increase in threats of fights between students.³⁸⁵

304. 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 year, 39% of public schools experienced an increase in chronic student absenteeism compared to the 2020–21 school year, and 72% of public schools saw increased chronic student absenteeism compared to prior school years.³⁸⁶ Following suit, vandalism has increased in 2022, with 36% of public schools reporting increased acts of student vandalism on school property.³⁸⁷

(2018) 2015-211 (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 [<https://perma.cc/UHV7-RNQ6>].

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> [<https://perma.cc/873Q-D5PC>].

³⁸⁴ 2022 *School Pulse Panel*, U.S. Dep't Educ., Inst. Educ. Sci. (2022), <https://ies.ed.gov/schoolsurvey/spp/> [<https://perma.cc/364R-H5U4>].

³⁸⁵ *Id.*

³⁸⁶ *Id.*

³⁸⁷ *Id.*

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

- a. Hiring additional mental health personnel (41% of public schools added staff to focus on student mental health);³⁸⁸
- b. Developing additional mental health resources (46% of public schools created or expanded mental health programs for students, 27% added student classes on social, emotional, and mental health and 25% offered guest speakers for students on mental health);³⁸⁹
- c. Training teachers to help students with their mental health (56% of public schools offered professional development to teachers on helping students with mental health);³⁹⁰
- d. Increasing disciplinary services and hiring additional personnel for disciplinary services;
- e. Addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct caused;
- f. Diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;
- g. investigating and responding to threats made against schools and students over social media;
- h. Updating its student handbook to address use of Defendants' platforms; and
- i. Updating school policies to address use of Defendants' platforms.

F. Impact of Social Media Use on Plaintiff

306. Plaintiff Seattle Public Schools is the largest school district in Washington State³⁹¹ and is located in King County, Washington, one of the largest counties in the country.³⁹² Seattle Public Schools

³⁸⁸ *Id.*

³⁸⁹ *Id.*

³⁹⁰ *Id.*

³⁹¹ *About Seattle Public Schools*, Seattle Pub. Schs., <https://www.seattleschools.org/about/> (last visited Dec. 8, 2022).

³⁹² *Quick Facts: King County, Washington*, U.S. Census Bureau, <https://www.census.gov/quickfacts/fact/map/kingcountywashington/PST045216> (last visited Dec. 8, 2022).

operates 106 schools, serving approximately 49,300 students.³⁹³

307. Seattle Public Schools has been directly impacted by the mental health crisis among youth in its community.

308. There has been a surge in the proportion of youth in Plaintiff's community who say they cannot stop or control their anxiety, who feel so sad and hopeless that they stop doing the activities that they used to love, who are considering suicide, who made plans to commit suicide. Students across Washington reported high rates of anxiety, depression, and suicidal thoughts and behavior. In 2021, 35 percent of 8th graders, 38 percent of 10th graders, and approximately 45 percent of 12th graders reported feeling sad or hopeless for two or more weeks that they stopped doing some of their usual activities.³⁹⁴ That same year, 19 percent of 8th and 10th graders and 20 percent of 12th graders seriously considered attempting suicide.³⁹⁵ Moreover, approximately 16 percent of 8th graders, 15.6 percent of 10th graders, and 14.8 percent of 12th graders reported making a plan on how they would attempt suicide.³⁹⁶ Even worse, over 9 percent of 8th graders, over 8 percent of 10th graders, and 6.6 percent of 12th grades attempted suicide at least once.³⁹⁷ Ultimately, suicide was the second leading cause of death for Washington teens 15–19 years old in 2021.³⁹⁸

309. From 2009 to 2019, there was an on-average 30 percent increase in the number of students at Plaintiff's schools who reported feeling "so sad or hopeless almost every day for two weeks or more in a row that [they] stopped doing some usual activities."³⁹⁹

310. King County, where Plaintiff is located, bears similar numbers. From 2010 to 2018, more

³⁹³ *Enrollment Reporting*, Seattle Pub. Schs., <https://www.seattleschools.org/departments/dots/data-reporting/enrollment-reporting-p223/> (last visited Dec. 16, 2022).

³⁹⁴ *Healthy Youth Survey 2021 Report of Results: Statewide Results Grades 6, 8, 10 and 12* at 31, Looking Glass Analytics (Mar. 1, 2022), [https://www.askhys.net/SurveyResults/GetReport?year=2021&reportLevel=2&reportLabel=Multi-grade%20\(6%2F8%2F10%2F12\)](https://www.askhys.net/SurveyResults/GetReport?year=2021&reportLevel=2&reportLabel=Multi-grade%20(6%2F8%2F10%2F12)).

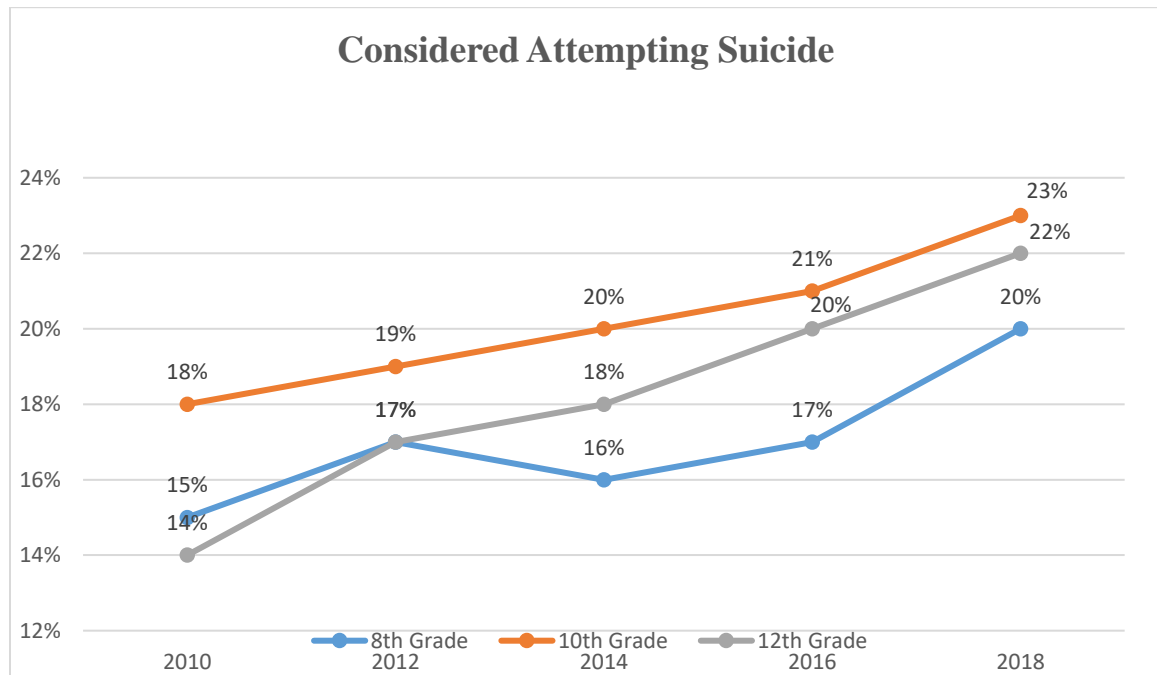
³⁹⁵ *Id.*

³⁹⁶ *Id.* at 32.

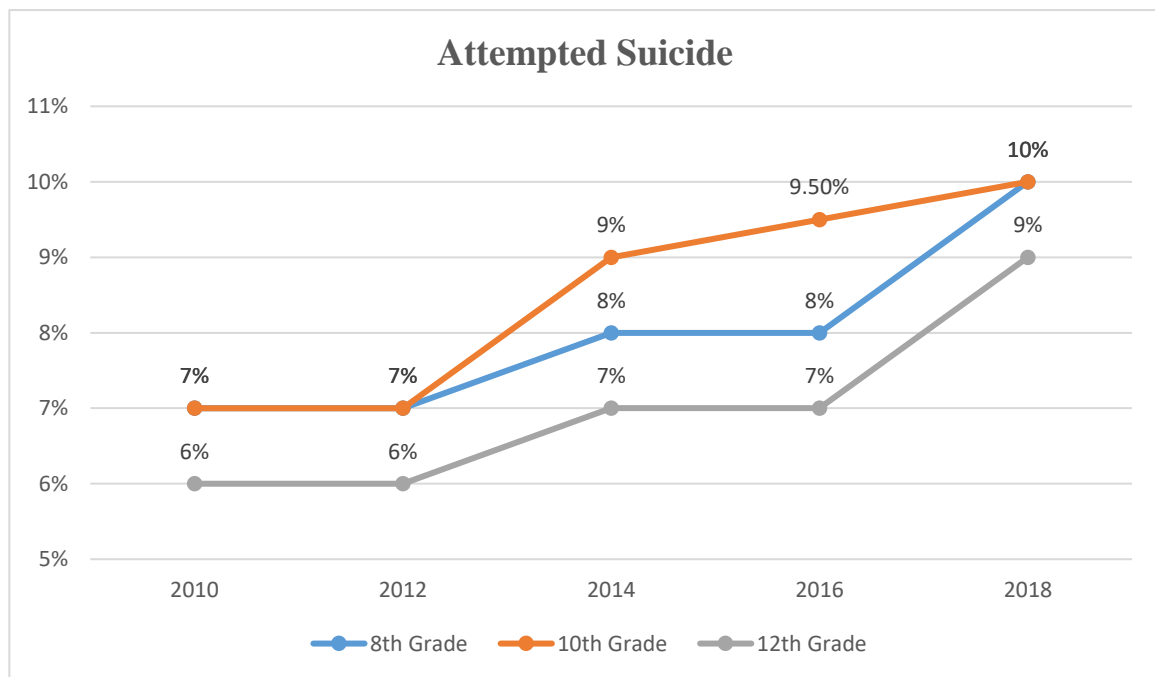
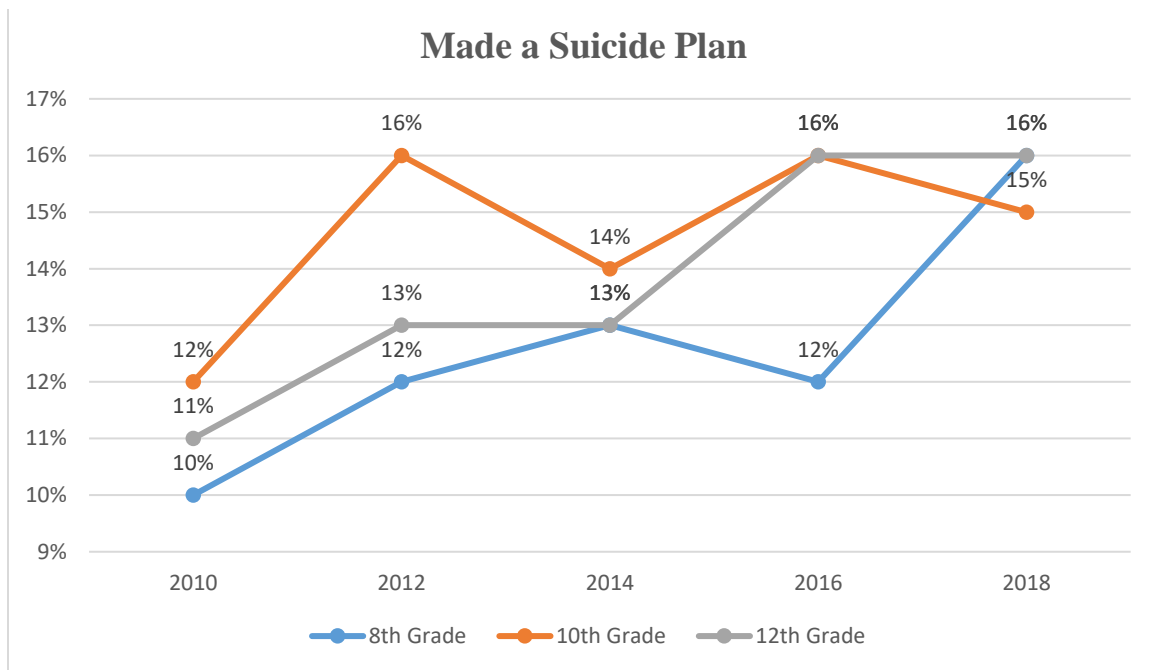
³⁹⁷ *Id.*

³⁹⁸ Kayla Harris, *Spreading Hope for Suicide Prevention Awareness Month*, NAMI Seattle (Aug. 16, 2023), <https://namiseattle.org/spreading-hope-for-suicide-prevention-awareness-month/#:~:text=In%20Washington%20State%2C%201%2C229%20lives,teens%2015%2D19%20years%20old>.

youth became depressed, more youth reported considering suicide, making plans to commit suicide, and attempting suicide.⁴⁰⁰



⁴⁰⁰ Washington State, *Healthy Youth Survey Data Dashboard*, Looking Glass Analytics (2023), <https://www.askhys.net/SurveyResults/DataDashboard/> (follow “*Healthy Youth Survey Data Dashboard*” hyperlink; then search starting points for “Select Grade: 8th Grade”, “Select Grade: 10th Grade”, and “Select Grade: 12th Grade”; for “Select Location: King County”; for “Select Topic: Mental Health”; for “Select Measure: Contemplation of Suicide” and “Select Measure: Plan to Attempt Suicide”); see also *Health of Children & Youth in King County* at 66, King Cty. Pub. Health (Sept. 2016), <https://kingcounty.gov/en/legacy/depts/health/data/-/media/depts/health/data/documents/health-of-children-youth-king-county-2016.ashx> (finding rates for youth considering suicide had been rising prior to the pandemic).



311. The pandemic and corresponding increase in time youth spend on Defendants' platforms have intensified the crisis.⁴⁰¹

⁴⁰¹ *Mental Health Among Youth and Young Adults in King County, WA: January 2019 – October 2021*, Pub. Health Seattle & King Cnty. (Jan. 2022), <https://kingcounty.gov/depts/health/~media/depts/health/communicable->

312. As students’ use of Defendants’ platforms has increased, students’ mental, emotional, and social health has declined. An investigation by the *Seattle Times* found that “[b]etween 2015 and 2021, the total number of hospitalizations nearly doubled among youth whose primary diagnosis is psychiatric[.]”⁴⁰² As a result, “[c]harges to government insurance for youth psychiatric stays did double, rising to more than \$151 million last year.”⁴⁰³

313. Moreover, the number of emergency department visits involving suspected suicide attempts was “significantly higher in September 2021 than September 2019,” for residents aged 10–24.⁴⁰⁴ The difference in the number involving kids aged 10–13 were particularly stark, increasing from 56 in 2019 to 122 in 2021.⁴⁰⁵ The Washington Poison Center also reported 130 more suspected suicide calls from females ages 6–17 between 2019 and 2021.⁴⁰⁶

314. The “drastic increases in suicides, attempted suicides, and mental-health related ER visits” have not gone unnoticed.⁴⁰⁷ As Councilmember Rod Dembowski observed, it is “clear to any parent across this country and here in King County[.]” where Plaintiff is located, that even before the COVID-19 pandemic, there was and is “an *existing* youth mental health crisis[.]”⁴⁰⁸

315. Leo Flor, the director of King County’s Department of Community and Human Services echoed Councilmember Dembowski’s comments, telling reporters that “[i]t could not be more clear that

[diseases/documents/C19/report-YYA-behavioral-health.ashx#:~:text=If%20you%20need%20support%20in,appropriate%20treatment%20in%20your%20community.](#)

⁴⁰² Hannah Furfaro, *Caught in WA’s youth mental health ‘disaster,’ a teen with nowhere to go*, *Seattle Times* (Dec. 18, 2022), <https://www.seattletimes.com/seattle-news/mental-health/caught-in-was-youth-mental-health-disaster-a-teen-with-nowhere-to-go/> [].

⁴⁰³ *Id.*

⁴⁰⁴ *Mental Health Among Youth and Young Adults in King County, WA: January 2019 – October 2021* at 3, Pub. Health Seattle & King Cnty. (Jan. 2022), <https://kingcounty.gov/depts/health/~/media/depts/health/communicable-diseases/documents/C19/report-YYA-behavioral-health.ashx#:~:text=If%20you%20need%20support%20in,appropriate%20treatment%20in%20your%20community>.

⁴⁰⁵ *Id.*

⁴⁰⁶ *Id.* at 4.

⁴⁰⁷ Press Release, *Council approves \$5 million in funding for youth mental health*, King Cnty. (Aug. 17, 2022), <https://kingcounty.gov/council/news/2022/August/8-17-youth-mental-health-funding-release.aspx> (emphasis added).

⁴⁰⁸ *Id.*

1 we have a crisis in behavioral health, mental health in our youth.”⁴⁰⁹ That crisis “shows up in many
2 ways.”⁴¹⁰ “It shows up in what [Director Flor and his staff] are hearing from staff at school districts,
3 what they see every day,” and “in things as terrible as kids taking their own lives.”⁴¹¹

4 316. The decline in students’ mental, emotional, and social health has coincided with high
5 rates of students using Defendants’ platforms. In 2021, parents of teens in Washington State, where
6 Plaintiff is located, estimated 47 percent of 13–17-year-olds spend between one and three hours a day on
7 social media platforms, 19 percent spend between three and five hours, and 10 percent spend more than
8 five hours a day on social media platforms.⁴¹²

9 317. To help identify students struggling with their mental health, Plaintiff has invested
10 resources to train both staff and students to identify signs of depression, self-harm, and suicidal ideation.
11 Moreover, mental health curriculum has become a larger part of the overall health coursework at
12 Plaintiff’s schools.

13 318. Students’ mental, emotional, and social health has declined as students’ use of
14 Defendants’ platforms has increased, both in frequency and intensity. Administrators and teachers alike
15 have noted that social media use among Plaintiff’s students is ubiquitous and a huge distraction from
16 learning. Students access social media during class time, between classes, and during lunch.

17 319. In lockstep with these increases in anxiety, depression, and suicidal ideation, student
18 behavior problems have also increased in Plaintiff’s schools, including disciplinary incidents tied to
19 social media. Many of these disciplinary incidents are connected to social media, according to
20 administrators.

21 320. While Plaintiff’s schools and its staff must deal with increased behavioral issues on the
22 one hand, they must deal with increased absenteeism on the other.

23 ⁴⁰⁹ Chris Daniels, *King County schools face mental and behavioral health crisis*, King5 (June 2, 2022),
24 <https://www.king5.com/article/news/health/teens-mental-behavioral-health-crisis/281-6f8bbdd5-ebc4-42a4-93e1-0f1eb7901595>.

25 ⁴¹⁰ *Id.*

26 ⁴¹¹ *Id.*

27 ⁴¹² Jake Whittenberg, *Should my middle schooler be on social media? A mental health counselor weighs in*, King5 News (Nov. 5, 2021), <https://www.king5.com/article/life/family/when-should-kids-be-allowed-social-media/281-19b0d6f9-bbb8-4fec-9257-1d9e91f6c207> (reporting on survey); *see also*
28 *Results of SurveyUSA News Poll #26154*, KING-TV Seattle (Nov. 4, 2021), <https://www.surveyusa.com/client/PollReport.aspx?g=4d325b35-64be-42a0-86f1-7de82d6aa243>.

321. The ongoing increase in time youth spend on Defendants' platforms have intensified the youth mental health crisis and the behavioral issues Plaintiff's students are experiencing.

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

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

324. The pernicious effects of Defendants' platforms are inescapable and have fundamentally changed the learning and teaching environment at Plaintiff's schools.

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

- a. hire additional personnel, including counselors, social workers, mental health therapists, and behaviorists to address mental, emotional, and social health issues;
- b. re-direct resources to address mental, emotional, and social health issues;⁴¹³
- c. increase training for teachers and staff to identify students exhibiting symptoms affecting their mental, emotional, and social health;
- d. increase training for students to identify peers exhibiting symptoms affecting their mental, emotional, and social health;
- e. educate teachers, staff, and members of the community about the harms caused by

⁴¹³ See, e.g., *SBIRT and Check Yourself*, Seattle Pub. Schs., https://www.seattleschools.org/departments/prevention-and-intervention/sbirt_checkyourself/#:~:text=Screening%3A%20Students%20take%20an%20interactive,s tudent%20may%20need%20additional%20support (last visited Dec. 8, 2022); see also Andrew Scheinthal, *Viral social media post puts Western Washington schools on alert*, KIRO 7 (Dec. 16, 2021), <https://www.kiro7.com/news/local/viral-social-media-post-puts-western-washington-schools-alert/YUNV6CJNYVH6DNWPVSLXAVIFD4/> (district leaders describing the need for more mental health support).

Defendants' wrongful conduct;

f. develop lesson plans to teach students about the dangers of using Defendants' platforms;⁴¹⁴

g. educate students about the dangers of using Defendants' platforms.

h. update its student handbook to address use of Defendants' platforms; and

i. update school policies to address use of Defendants' platforms.⁴¹⁵

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

a. repair property damaged as a result of the exploitive and harmful content Defendants directed to students;

b. increase disciplinary services;

c. confiscate devices Defendants' conduct compelled students to use to access Defendants' platforms while in class or on school campus;

d. meet with students and the parents of students caught using Defendants' platforms at school; and

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

327. As of the 2022–23 school year, Plaintiff employs 133 school counselors, 21 social workers, 62 psychologists, and 87 nurses.⁴¹⁶ Plaintiff also partners with 29 King County-based health centers and contracts with 17 community agencies to offer mental health support to its students.⁴¹⁷

328. But even with these resources, Plaintiff cannot keep up with the increased need for

⁴¹⁴ See, e.g., *Online Safety and Responsibility*, Seattle Pub. Schs., <https://www.seattleschools.org/student-portal/technology-supports-for-families/online-safety-and-responsibility/> (last visited Dec. 8, 2022).

⁴¹⁵ See, e.g., *School Board Action Report: Revisions to Board Policy No. 2022, Electronic Resources and Use of the Internet*, Seattle Pub. Schs. (Oct. 8, 2019), https://www.seattleschools.org/wp-content/uploads/2021/07/I09_20191016_Board-Policy-2022.pdf.

⁴¹⁶ Monica Velez, *This is how far Seattle Schools are from meeting students' mental health demands*, Seattle Times (July 18, 2022), <https://www.seattletimes.com/education-lab/this-is-how-far-seattle-schools-are-from-meeting-students-mental-health-demands/>.

⁴¹⁷ *Id.*

1 mental health services because of the youth mental health crisis. “The waitlists for mental health
2 services were ‘astronomical’” according to a counselor at Ingraham High School.⁴¹⁸

3 329. As a result, the rest of Plaintiff’s staff must fill in the cracks to help students with mental
4 health concerns. JoLynn Berge, who was Plaintiff’s assistant superintendent for business and finance at
5 the time, observed that “all of our school staff are addressing mental health needs every day.”⁴¹⁹ Simply
6 put, Plaintiff has “so many students in crisis.”⁴²⁰ The King County Council has recognized Plaintiff’s and
7 other schools’ need for additional resources to address this crisis and recently allocated \$2 million to go
8 “to behavioral health providers with prioritization of school-based services, mental health first aid for
9 youth, and suicide prevention for youth.”⁴²¹

10 330. While the efforts of Plaintiff’s staff and students are admirable, Plaintiff’s educational
11 mission remains hindered. Ultimately, students spend less time learning because they are either pre-
12 occupied with mental health concerns when in class or are distracted by social media, or they spend less
13 time in class because they are receiving mental health services.

14 331. Ultimately, Plaintiff requires significant and long-term funding to address the nuisance
15 Defendants have created and amplified. Such funding should not fall at the foot of the legislature and, in
16 turn, the public. Rather, Defendants must bear the burden of remedying their wrongs. It is time, as
17 President Biden declared, to get “all Americans the mental health services they need”⁴²² and “hold social
18 media companies accountable[.]”⁴²³

19 V. SECTION 230 IS NO SHIELD FOR DEFENDANTS’ CONDUCT

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

23 ⁴¹⁸ *Id.*

24 ⁴¹⁹ *Id.*

25 ⁴²¹ Press Release, *Council approves \$5 million in funding for youth mental health*, King Cnty. (Aug. 17,
26 2022), [https://kingcounty.gov/council/news/2022/August/8-17-youth-mental-health-funding-
release.aspx](https://kingcounty.gov/council/news/2022/August/8-17-youth-mental-health-funding-release.aspx).

27 ⁴²² President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at
<https://www.whitehouse.gov/state-of-the-union-2022/>).

28 ⁴²³ President Biden, State of the Union Address (Feb. 7, 2023) (transcript available at
<https://www.whitehouse.gov/state-of-the-union-2023/>).

1 youth.

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

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

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

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

13 337. Section 230 does not shield Defendants’ conduct because, among other considerations:
14 (1) Defendants are liable for their own affirmative conduct in recommending and promoting harmful
15 content to youth; (2) Defendants are liable for their own actions designing and marketing their social
16 media platforms in a way that causes harm; (3) Defendants are liable for the content they create that
17 causes harm; and (4) Defendants are liable for distributing, delivering, and/or transmitting material that
18 they know or have reason to know is harmful, unlawful, and/or tortious.

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

25 339. Second, Plaintiff’s claims arise from Defendants’ status as designers and marketers of
26 dangerous social media platforms that have injured the health, comfort, and repose of its community.
27 The nature of Defendants’ platforms centers around Defendants’ use of algorithms and other designs
28 features that encourage users to spend the maximum amount of time on their platforms—not on

1 particular third-party content. The algorithms Defendants employ adapt to the social media activity of
2 individual users to promote whatever content will trigger a particular user’s attention and maximize their
3 screen time. That is, Defendants’ algorithms are user-focused rather than content-based and are
4 indifferent to the nature and type of content they promote to users, provided that such content increases
5 the time users spend on their platforms. In that respect, they are content neutral.

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

9 341. Fourth, Plaintiff does not seek to hold Defendants liable as publishers or speakers of
10 information provided by other content providers, but instead Plaintiff seeks to hold them liable for
11 distributing material they know or should know is harmful or unlawful. *See Malwarebytes, Inc. v.*
12 *Enigma Software Grp. USA, LLC*, 141 S. Ct. 13 (2020) (statement of Justice Thomas respecting denial
13 of certiorari discussing the distinction between distributor and publisher liability); *cf. Restatement*
14 *(Second) of Torts* § 581 (Am. Law Inst. 1977) (“[O]ne who only delivers or transmits defamatory matter
15 published by a third person is subject to liability if, but only if, he knows or has reason to know of its
16 defamatory character.”).

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

20 VI. CAUSES OF ACTION

21 COUNT ONE — PUBLIC NUISANCE

22 343. Plaintiff incorporates by reference all preceding paragraphs.

23 344. Plaintiff brings this claim under the Revised Code of Washington 7.48.010 *et seq.* and
24 common law regarding public nuisances.

25 345. Washington defines an actionable nuisance as, *inter alia*, “whatever is injurious to health
26 or indecent or offensive to the senses, or an obstruction to the free use of property, so as to essentially
27 interfere with the comfortable enjoyment of the life and property.”⁴²⁴

28 _____
⁴²⁴ RCW 7.48.120.

1 346. Specifically, a “[n]uisance consists in unlawfully doing an act, or omitting to perform a
2 duty, which act or omission either annoys, injures or endangers the comfort, repose, health or safety of
3 others, offends decency . . . or in any way renders other persons insecure in life, or in the use of
4 property.”⁴²⁵

5 347. Under Washington law, conduct that substantially and/or unreasonably interferes with the
6 Plaintiff’s use of its property is a nuisance even if it would otherwise be lawful.

7 348. Under Washington law, “[a] public nuisance is one which affects equally the rights of an
8 entire community or neighborhood, although the extent of the damage may be unequal.”⁴²⁶ Defendants
9 have created a mental health crisis in Plaintiff’s schools, injuring the public health and safety in
10 Plaintiff’s community and interfering with the operations, use, and enjoyment of the property of Seattle
11 Public Schools.

12 349. Defendants, by designing, developing, marketing, supplying, promoting, advertising,
13 operating, and distributing their respective social media platforms for use by students in Plaintiff’s
14 schools in the manner described above, have engaged in conduct that substantially interferes with the
15 health and safety of the students of Seattle Public Schools, substantially interferes with the functions and
16 operations of Plaintiff’s schools, and harms the health, safety, and welfare of the Seattle Public Schools
17 community.

18 350. Each Defendant has created or assisted in the creation of a condition that is injurious to
19 the health, safety, and welfare of the Seattle Public Schools community and interferes with the
20 educational environment for students, teachers, and administrators in Plaintiff’s schools. Defendants
21 have each created or assisted in the creation of a condition that significantly disrupts the daily operations
22 and functioning of Plaintiff’s schools.

23 351. The health and safety of the students and employees of Seattle Public Schools, including
24 those who use, have used, or will use Defendants’ platforms, as well as those affected by others’ use of
25 their platforms, are matters of substantial public interest and of legitimate concern to Plaintiff.

26 352. Defendants’ conduct has affected and continues to affect a substantial number of people
27

28 ⁴²⁵ *Id.*

⁴²⁶ RCW 7.48.130.

1 within Plaintiff's community and is likely to continue causing significant harm.

2 353. Defendants' conduct is ongoing and continues to produce permanent and long-lasting
3 damage.

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

8 355. This harm to youth mental health and the corresponding impacts to public health, safety,
9 and the welfare of Plaintiff's community outweighs any social utility of Defendants' wrongful conduct.

10 356. The rights, interests, and inconvenience to Plaintiff's community far outweighs the rights,
11 interests, and inconvenience to Defendants, who have profited tremendously from their wrongful
12 conduct.

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

17 358. Logic, common sense, justice, policy, and precedent indicate Defendants' unfair and
18 deceptive conduct has caused the damage and harm complained of herein. Defendants knew or
19 reasonably should have known that their design, development, marketing, supply, promotion,
20 advertisement, operation, and distribution of their platforms would cause students to use their platforms
21 excessively, that their marketing methods were designed to appeal to youth, and that their active efforts
22 to increase youth use of their platforms were causing harm to youth and to schools, including youth who
23 attend Plaintiff's schools.

24 359. Thus, the public nuisance caused by Defendants was reasonably foreseeable, including
25 the financial and economic losses incurred by Plaintiff.

26 360. Alternatively, Defendants' conduct was a substantial factor in bringing about the public
27 nuisance even if a similar result would have occurred without it. By designing, developing, marketing,
28 supplying, promoting, advertising, operating, and distributing their platforms in a manner intended to

1 maximize the time youth spend on their respective platforms—despite knowledge of the harms to youth
2 from their wrongful conduct—Defendants directly facilitated the widespread, excessive, and habitual
3 use of their platforms and the public nuisance affecting Plaintiff. By seeking to capitalize on their
4 success by refining their platforms to increase the time youth spend on their platforms, Defendants
5 directly contributed to the public health crisis and the public nuisance affecting Plaintiff.

6 361. Defendants’ conduct is especially injurious to Plaintiff because, as a direct and proximate
7 cause of Defendants’ conduct creating or assisting in the creation of a public nuisance, the educational
8 environment within Plaintiff’s schools has been and will continue to be substantially harmed.

9 362. Plaintiff has had to take steps to mitigate the harm and disruption caused by Defendants’
10 conduct, including the following:

- 11 a. hiring additional personnel to address mental, emotional, and social health issues;
- 12 b. developing additional resources to address mental, emotional, and social health issues;
- 13 c. increasing training for teachers and staff to identify students exhibiting symptoms
14 affecting their mental, emotional, and social health;
- 15 d. training teachers, staff, and members of the community about the harms caused by
16 Defendants’ wrongful conduct;
- 17 e. developing lesson plans to teach students about the dangers of using Defendants’
18 platforms;
- 19 f. educating students about the dangers of using Defendants’ platforms;
- 20 g. addressing property damaged as a result of students acting out because of mental, social,
21 and emotional problems Defendants’ conduct is causing;
- 22 h. confiscating devices on which students use Defendants’ platforms while in class or on
23 Plaintiff’s school campuses;
- 24 i. meeting with students and the parents of students caught using Defendants’ platforms at
25 school or other disciplinary matters related to students’ use of Defendants’ platforms;
- 26 j. diverting time and resources from instruction activities to notify parents and guardians of
27 students’ behavioral issues and attendance;
- 28 k. updating its student handbook to address use of Defendants’ platforms; and

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

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

4 364. As detailed herein, Plaintiff has suffered special damage different in kind or quality from
5 that suffered by the public in common. The damages suffered by Plaintiff have been greater in degree and
6 different in kind than those suffered by the general public including, but not limited to, costs arising from:
7 expending, diverting, and increasing personnel to provide mental health services; expending, diverting,
8 and increasing resources to address mental health issues; expending, diverting, and increasing staff time
9 to confiscate cell phones and other devices; expending, diverting, and increasing staff time to
10 communicate and engage with parents; expending, diverting, and increasing staff time associated with
11 student discipline; expending, diverting, and increasing staff time associated with routing students to
12 counselors; expending, diverting, and increasing staff time to train staff to identify students exhibiting
13 symptoms affecting their mental health; expending, diverting, and increasing resources for modifications
14 to mental health curriculum; and expending, diverting, and increasing resources to repair property
15 damages as a result of the exploitive and harmful content Defendants directed to students.

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

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

26 367. Defendants' conduct, as described above, was intended to serve their own interests
27 despite having reason to know and consciously disregarding a substantial risk that their conduct might
28 significantly injure the rights of others, including Plaintiff, and/or Defendants consciously pursued a

1 course of conduct knowing that it created a substantial risk of significant harm to others, including
2 Plaintiff. Defendants regularly risk the health of consumers and users of their platforms with full
3 knowledge of the dangers of their platforms. Defendants consciously decided not to redesign, warn, or
4 inform the unsuspecting public, including Plaintiff's students or Plaintiff. Defendants' willful, knowing,
5 and reckless conduct therefore warrants an award of aggravated or punitive damages.

6 368. Defendants are jointly and severally liable because the harms resulting from their acts are
7 indivisible.

8 **VII. PRAYER FOR RELIEF**

9 WHEREFORE, Plaintiff prays for judgment as follows:

10 369. Entering an Order that the conduct alleged herein constitutes a public nuisance under
11 Washington law;

12 370. Entering an Order that Defendants are jointly and severally liable;

13 371. Entering an Order requiring Defendants to abate the public nuisance described herein and
14 to deter and/or prevent the resumption of such nuisance;

15 372. Enjoining Defendants from engaging in further actions causing or contributing to the
16 public nuisance as described herein;

17 373. Awarding equitable relief to fund prevention education and treatment for excessive and
18 problematic use of social media;

19 374. Awarding actual, compensatory, and punitive damages;

20 375. Awarding statutory damages in the maximum amount permitted by law;

21 376. Awarding reasonable attorneys' fees and costs of suit;

22 377. Awarding pre-judgment and post-judgment interest; and

23 378. Such other and further relief as the Court deems just and proper under the circumstances.

24 **VIII. JURY TRIAL DEMAND**

25 379. Plaintiff hereby demands a trial by jury.
26
27
28

1 RESPECTFULLY SUBMITTED this 11th day of December, 2023.
2
3

4 KELLER ROHRBACK L.L.P.

5 By 

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