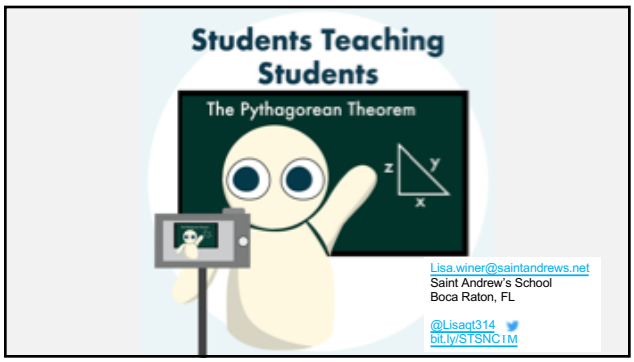
Lisa Winer
Saint Andrew's School
lisa.winer@saintandrews.net
#StudentsTeachingStudents
bit.ly/STSNCTM

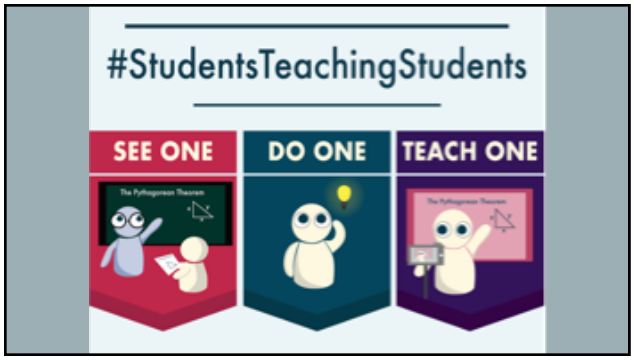


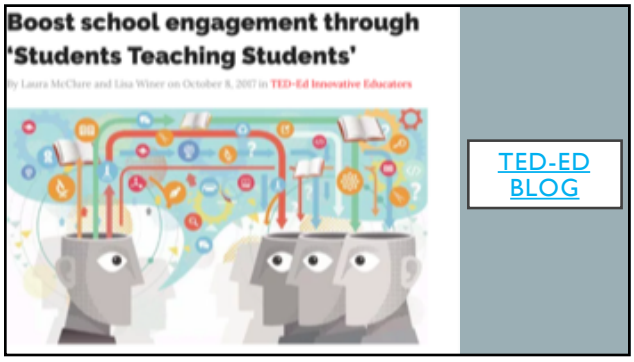
TED-ED INNOVATIVE EDUCATOR (TIE)

The TED-Ed Innovative Educator program is a year-long professional development program that connects outstanding educators in K-12, university and non-traditional educational environments around the globe. During the year-long professional development program, TED-Ed Innovative Educators participate in two months of digital training in how to help people make the most of TED's free tools for teachers and students — including TED-Ed Animated Lessons, TED-Ed Clubs and the TED-Ed Platform — followed by 10 months of TED-Ed Innovation Project coaching and support within a dynamic learning community.

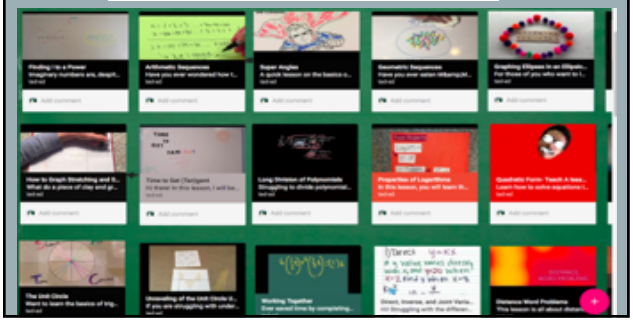
Are you an educator seeking an inspiring community of learners and innovators? Do you find creative ways to solve problems in your classroom, school or district? Are you passionate about sharing TED-Ed tools with your community of students and teachers? Then you might be one of the next TED-Ed Innovative Educators. Apply here.

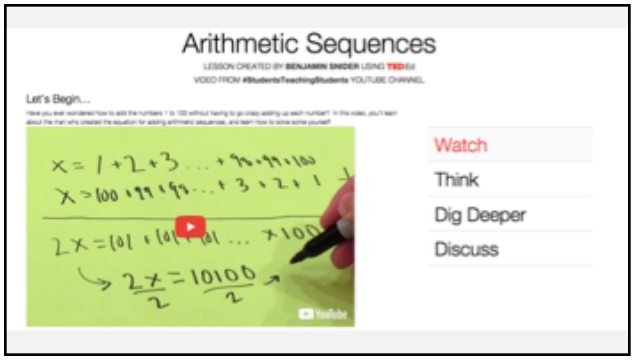

Meet the third cohort of TED-Ed Innovative Educators!
By Laura McClure on September 27, 2016 in TED-Ed Innovative Educators
TEDEd INNOVATIVE EDUCATORS


#StudentsTeachingStudents
SEE ONE
DO ONE
TEACH ONE


Boost school engagement through 'Students Teaching Students'
By Laura McClure and Lisa Winer on October 8, 2017 in TED-Ed Innovative Educators
TED-ED BLOG

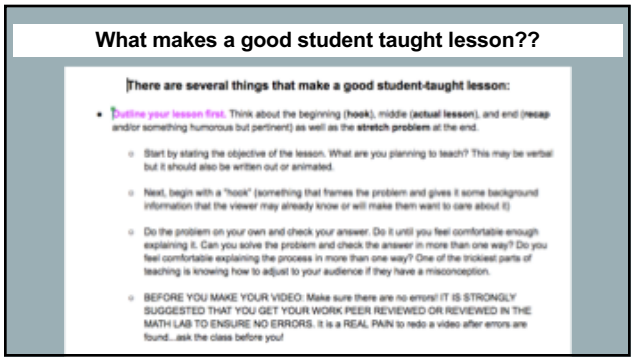
https://padlet.com/lisawiner/studentsteachingstudents





#StudentsTeachingStudents Topics to select:

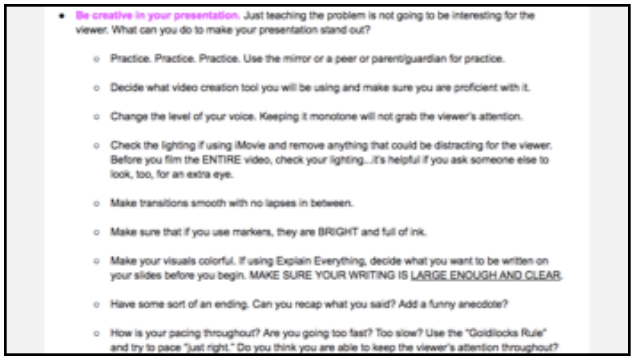
- Completing the square (geometric interpretation as well as algebraic)
- Solving radical equations (all types, including extraneous solutions)
- Graphing piecewise functions
- Finding the domain and zeros of a function given its equation
- Solving the max/min/zeros of a quadratic word problem
- Evaluating a difference quotient
- Finding combinations of functions and their domains
- Finding intervals Increasing and decreasing, maximums, and minimums of a function
- Determining whether a function is even, odd, or neither given a graph or an equation and also symmetries
- Finding the inverse of a function algebraically and graphically
- The horizontal line test and restricting inverses of functions that fail the HLT
- Finding the vertex and x-intercepts of a parabola multiple ways
- Long division of polynomials; remainder and factor theorems
- Using the rational zero theorem to factor polynomials
- Solving problems using inverse, direct, and joint variation
- Sketching rational functions by finding vertical & horizontal asymptotes, zeros, and test points (part 1)
- Sketching rational functions by finding holes and slant asymptotes (part 2)
- Finding the directrix, focus, and vertex of a parabola
- Finding the equation of a parabola given certain features
- Graphing an ellipse by completing the square and putting it in standard form
- Finding the equation of an ellipse given certain features
- Graphing a hyperbola by completing the square and putting it in standard form
- Finding the equation of a hyperbola given certain features



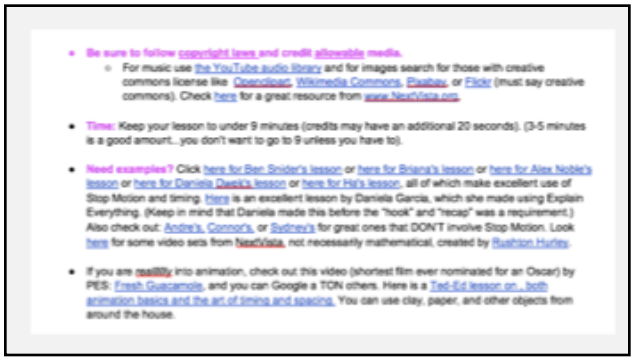
What makes a good student taught lesson??

There are several things that make a good student-taught lesson:

- **Outline your lesson first.** Think about the beginning (**hook**), middle (**actual lesson**), and end (**recap** and/or something humorous but pertinent) as well as the **stretch problem** at the end.
  - Start by stating the objective of the lesson. What are you planning to teach? This may be verbal but it should also be written out or animated.
  - Next, begin with a "hook" (something that frames the problem and gives it some background information that the viewer may already know or will make them want to care about it)
  - Do the problem on your own and check your answer. Do it until you feel comfortable enough explaining it. Can you solve the problem and check the answer in more than one way? Do you feel comfortable explaining the process in more than one way? One of the trickiest parts of teaching is knowing how to adjust to your audience if they have a misconception.
  - BEFORE YOU MAKE YOUR VIDEO: Make sure there are no errors! IT IS STRONGLY SUGGESTED THAT YOU GET YOUR WORK PEER REVIEWED OR REVIEWED IN THE MATH LAB TO ENSURE NO ERRORS. It is a REAL PAIN to redo a video after errors are found...ask the class before you!



- **Be creative in your presentation.** Just teaching the problem is not going to be interesting for the viewer. What can you do to make your presentation stand out?
  - Practice. Practice. Practice. Use the mirror or a peer or parent/guardian for practice.
  - Decide what video creation tool you will be using and make sure you are *proficient* with it.
  - Change the level of your voice. Keeping it monotone will not grab the viewer's attention.
  - Check the lighting if using iMovie and remove anything that could be distracting for the viewer. Before you film the ENTIRE video, check your lighting...it's helpful if you ask someone else to look, too, for an extra eye.
  - Make transitions smooth with no lapses in between.
  - Make sure that if you use markers, they are BRIGHT and full of ink.
  - Make your visuals colorful. If using Explain Everything, decide what you want to be written on your slides before you begin. MAKE SURE YOUR WRITING IS LARGE ENOUGH AND CLEAR.
  - Have some sort of an ending. Can you recap what you said? Add a funny anecdote?
  - How is your pacing throughout? Are you going too fast? Too slow? Use the "Goldilocks Rule" and try to pace "just right." Do you think you are able to keep the viewer's attention throughout?

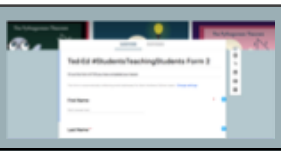


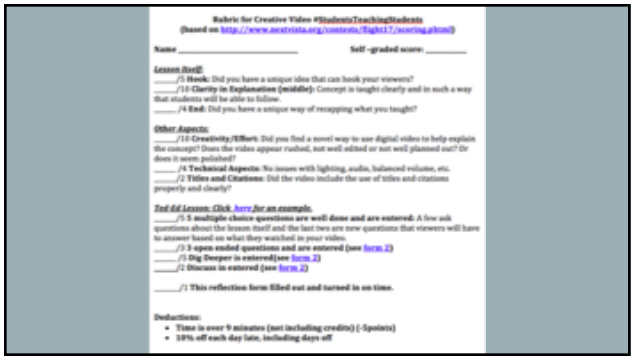
- **Be sure to follow copyright laws and credit allowable media.**
  - For music use the YouTube audio library and for images search for those with creative commons license like Openclipart, Wikimedia Commons, Pixabay, or Flickr (must say creative commons). Check here for a great resource from www.NewVista.org.
- **Time:** Keep your lesson to under 9 minutes (credits may have an additional 20 seconds). (3-5 minutes is a good amount...you don't want to go to 9 unless you have to).
- **Need examples?** Click here for Ben Snider's lesson or here for Briana's lesson or here for Alex Noble's lesson or here for Daniela Dapp's lesson or here for Hil's lesson, all of which make excellent use of Stop Motion and timing. Here is an excellent lesson by Daniela Garcia, which she made using Explain Everything. (Keep in mind that Daniela made this before the "hook" and "recap" was a requirement.) Also check out: Andre's, Connor's, or Sydney's for great ones that DON'T involve Stop Motion. Look here for some video sets from NewVista, not necessarily mathematical, created by Rushton Hurley.
- If you are ~~really~~ into animation, check out this video (shortest film ever nominated for an Oscar) by PES: Fresh Guacamole, and you can Google a TON others. Here is a Ted-Ed lesson on...both animation basics and the art of timing and spacing. You can use clay, paper, and other objects from around the house.

STUDENT FORM 1 - BEFORE VIDEOTAPING

HTTPS://ED.TED.COM/

STUDENT FORM 2 - AFTER VIDEOTAPING





Rubric for Creative Video #StudentsTeachingStudents
(based on http://www.nextvista.org/contests/flight17/scoring.phtml)

Name _____ **Self -graded score:** _____

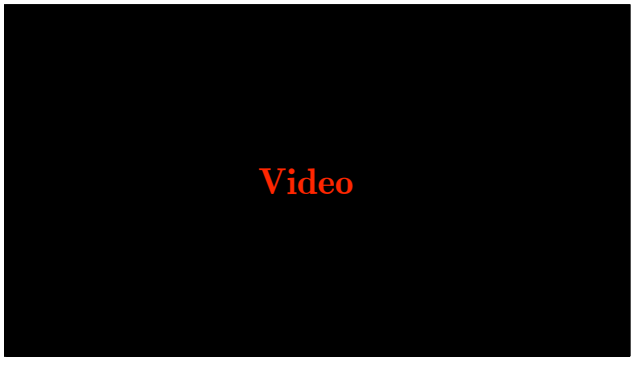
Lesson Itself:
_____/5 **Hook:** Did you have a unique idea that can hook your viewers?
_____/10 **Clarity in Explanation (middle):** Concept is taught clearly and in such a way that students will be able to follow.
_____/4 **End:** Did you have a unique way of recapping what you taught?

Other Aspects:
_____/10 **Creativity/Effort:** Did you find a novel way to use digital video to help explain the concept? Does the video appear rushed, not well edited or not well planned out? Or does it seem polished?
_____/4 **Technical Aspects:** No issues with lighting, audio, balanced volume, etc.
_____/2 **Titles and Citations:** Did the video include the use of titles and citations properly and clearly?

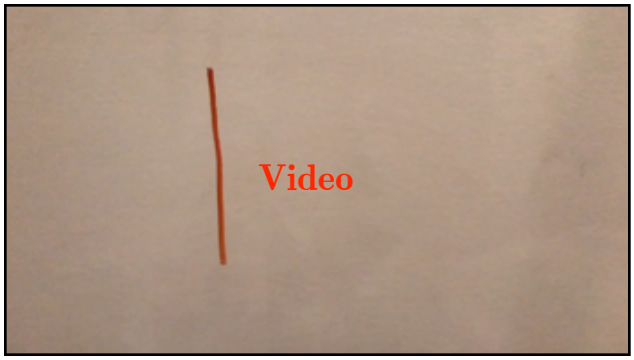
Ted Ed Lesson: Click here for an example.
_____/5 **5 multiple choice questions are well done and are entered:** A few ask questions about the lesson itself and the last two are new questions that viewers will have to answer based on what they watched in your video.
_____/3 **3 open ended questions and are entered (see form 2)**
_____/5 **Dig Deeper is entered(see form 2)**
_____/2 **Discuss is entered (see form 2)**

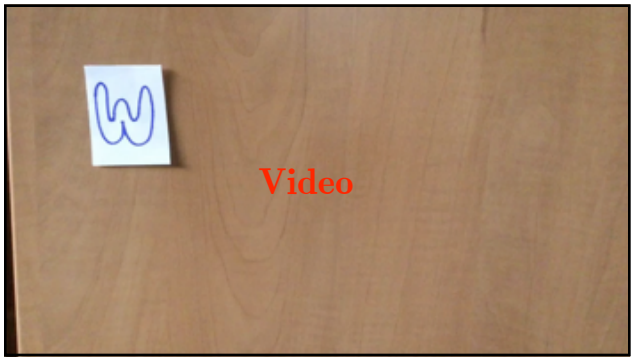
_____/1 **This reflection form filled out and turned in on time.**

Deductions:
- **Time is over 9 minutes (not including credits) (-5points)**
- **10% off each day late, including days off**



Video

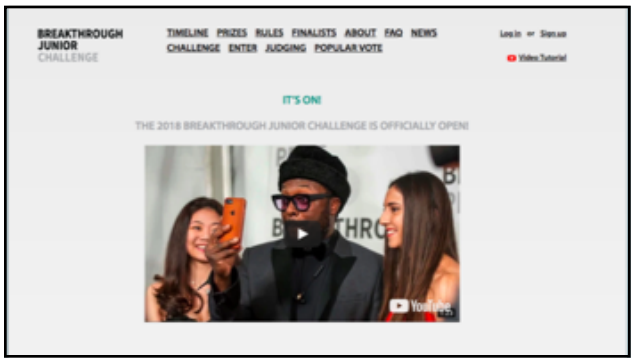


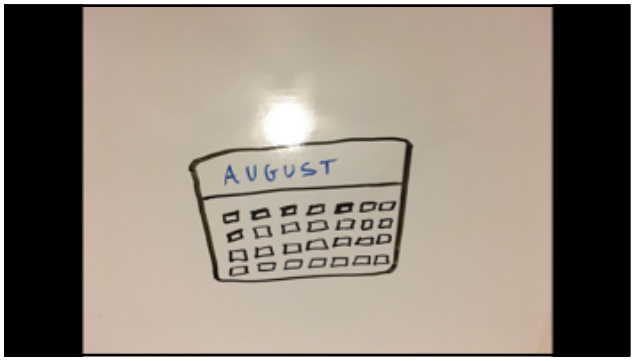


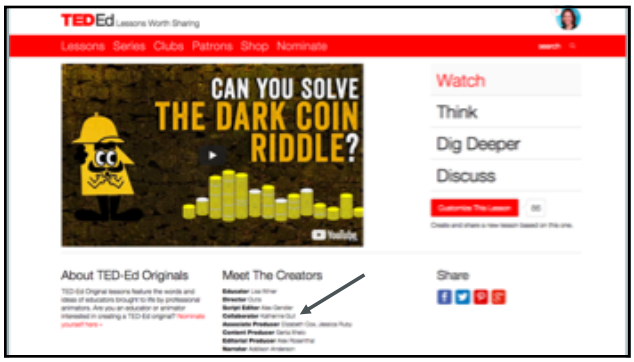

home | videos | speaking | contact
NEXT VISTA FOR LEARNING
CONTESTS
VIDEOS
SPEAKING
I want to find a video about...
Search
Videos
Featured Video
Contests

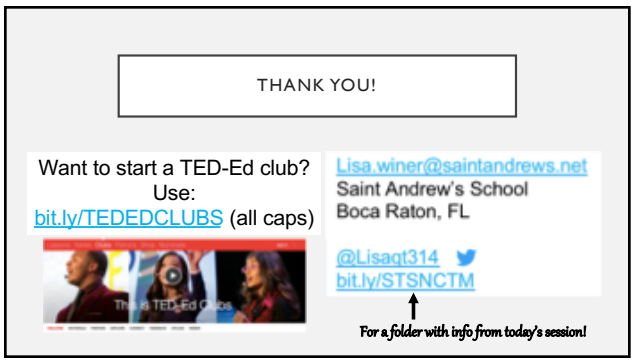
Video

Video


BREAKTHROUGH
JUNIOR
CHALLENGE
TIMELINE PRIZES RULES FINALISTS ABOUT FAQ NEWS
CHALLENGE ENTER JUDGING POPULAR VOTE
Log in or Sign up
Video Tutorial
IT'S ON!
THE 2018 BREAKTHROUGH JUNIOR CHALLENGE IS OFFICIALLY OPEN!


AUGUST


TEDEd
Lessons Worth Sharing
Lessons Series Clubs Patrons Shop Nominate
search
CAN YOU SOLVE THE DARK COIN RIDDLE?
Watch
Think
Dig Deeper
Discuss
About TED-Ed Originals
Meet The Creators
Share


THANK YOU!
Want to start a TED-Ed club? Use: bit.ly/TEDEDCLUBS (all caps)
Lisa.winer@saintandrews.net
Saint Andrew's School
Boca Raton, FL
@Lisaqt314
bit.ly/STSNCTM
For a folder with info from today's session!