

Flipped Learning in the Math Classroom (and Beyond)



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What is a Flipped Classroom and Flipped Learning?



THE FLIPPED CLASSROOM

Turning Traditional Education on Its Head

Many educators are experimenting with the idea of a flipped classroom model. So what is it and why is everyone talking about it?

WHAT IS THE FLIPPED CLASSROOM?

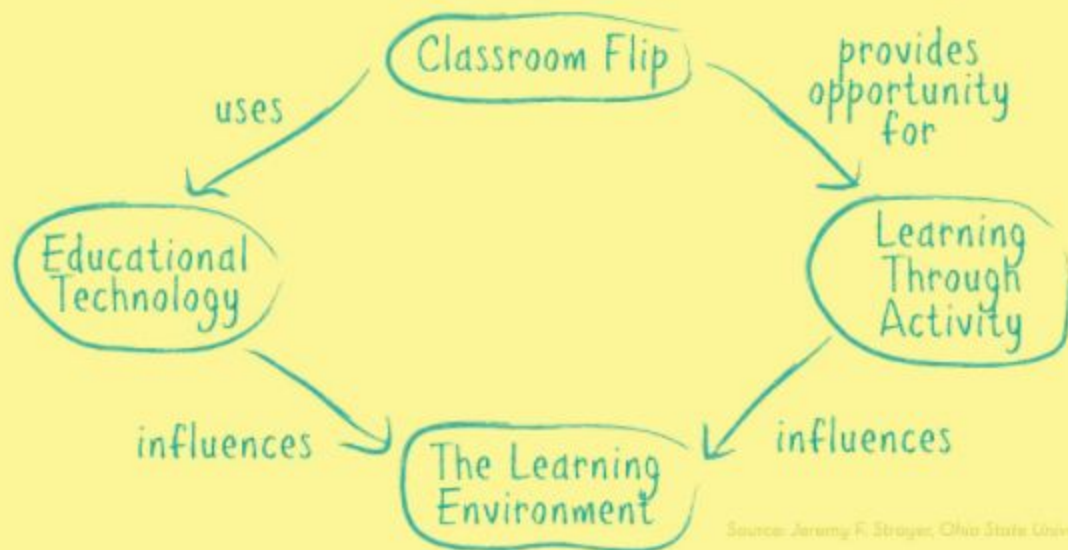
The flipped classroom inverts traditional teaching methods, delivering instruction online outside of class and moving "homework" into the classroom.

<http://www.firstyearflipped.com/>



A THEORETICAL FRAMEWORK

Educational technology and activity learning are two key components of the flipped classroom model. They both influence student learning environments in fundamental ways.



Source: Jeremy F. Strayer, Ohio State University

HOW IT WORKED



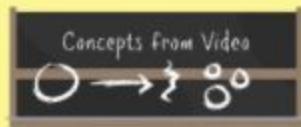
- Teachers created three videos a week.
- Students watched the 5- to 7-minute videos at home, or in school if they didn't have Internet access at home.
- Class time was spent doing labs or interactive activities to illustrate concepts.



Students receive instant feedback.
Teachers have more time to help students and explain difficult concepts.



Students don't get as frustrated.
Before, many students wouldn't complete homework if they got frustrated with it. Working on problems in class minimizes this problem.



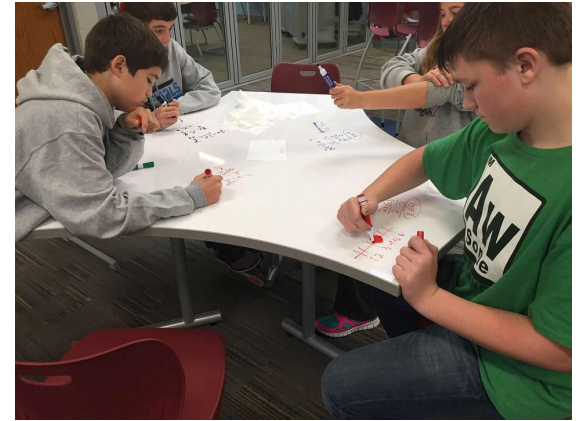
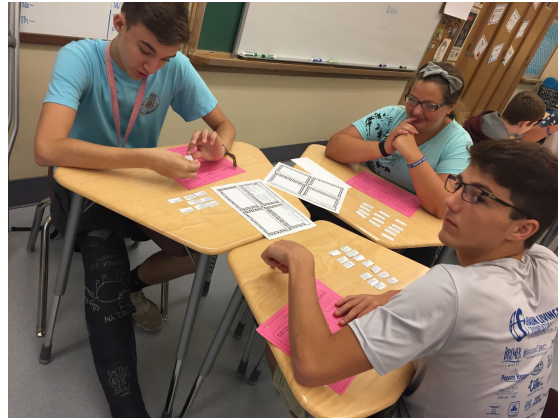
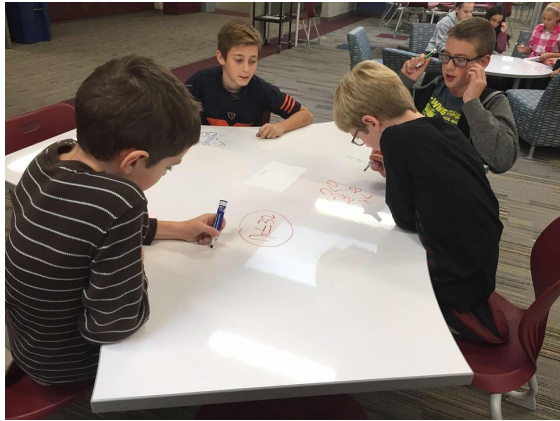
Teachers revisit concepts students don't understand. After students watch lessons, they write down any questions they have. Teachers review those questions with students individually.

DO NOT FLIP your classroom unless....

[Do not flip your classroom unless](#)

1. DO NOT FLIP unless... you are doing this to solve pre-existing problems(not just to be cool, or tech-savvy)
2. DO NOT FLIP unless... students have appropriate technology access
3. DO NOT FLIP unless... you are prepared to stubbornly demand that your students attempt to learn from the flipped instruction.
4. DO NOT FLIP unless... you have an accountability system to verify students' learning from the videos.
5. DO NOT FLIP unless... your learning objectives are rock-solid. Flipping will quickly expose your curriculum weaknesses.
6. DO NOT FLIP unless... you've considered the impact on your grading system.

So why did we start to flip our classrooms?



What is flipped learning?

1. **F**lexible environment- Students should be able to reflect and interact. Teacher is monitoring students and providing ways for them to learn
2. **L**earning culture- activities should be scaffolded, student -centered and meaningful
3. **I**ntentional content- how the concepts are being prioritized in their individual work time... relative content, primarily through videos
4. **P**rofessional educators- being available for different types of feedback, carrying out ongoing assessment and collaborating with fellow educators



How to Use Videos to Flip a Classroom



How do you make or find videos?

Screencastify

Edpuzzle

Youtube

ScreenCastify - Make a Video

The screenshot displays a Google Drive interface with a folder named "ScreenCastify". The folder contains several PDF files related to AP Calculus. The files are listed in a table with columns for Name, Owner, Last modified, and File size.

Name	Owner	Last modified	File size
AP Calculus Exponential Growth and Decay Day 2 Notes.webm .js	me	Mar 6, 2017 10:00	102 KB
AP Calculus Notes 1.5.webm	me	Aug 23, 2017 10:00	91 KB
AP Calculus Notes 6 & 8.webm	me	Mar 1, 2017 10:00	--
AP Calculus Notes 7.1 Part 2.webm .js	me	Mar 15, 2017 10:00	24 KB
AP Calculus Notes 7.1 Part 2a.webm .js	me	Mar 15, 2017 10:00	118 KB
AP Calculus Notes 7.2 Day 2.webm .js	me	Mar 21, 2017 10:00	45 KB
AP Calculus Summer Packet Page 2 Section 1a.webm .js	me	Aug 6, 2017 10:00	60 KB
AP Calculus Summer Packet Section 1 and 2a.webm .js	me	Aug 6, 2017 10:00	--
AP Calculus Trig Notes.webm .js	me	Apr 6, 2017 10:00	--
Apr 29, 2017 18:21 AM.webm	me	Apr 29, 2017 18:21 AM	--
Apr 29, 2017 18:24 AM.webm	me	Apr 29, 2017 18:24 AM	--

In the bottom right corner, there is a video inset showing a woman with blonde hair wearing an orange top, speaking. The video has a "1 upload" notification and a "Close" button.

EdPuzzle Example

<https://edpuzzle.com/media/59a3135a1c6a194c5ce593ec>



What to do during class time?

Group Problem Solving

Think-Pair-Share

Stand and Talks

Extension Projects

Kids teaching others

Experiments and Labs

Added bonus to a flipped classroom...

Absent students do not get behind

Re-watch videos for reteaching

Parents can access the same information as the students (so they are more involved in their learning)

Less cheating

TIME for engaging, meaningful activities

Additional Flipped Learning Resources

Martha Ramirez- flipping

Websites to use:

[Flipped Learning](#)

[First year flipped](#)

[Flip Teaching](#)

[The Teacher's Guide to Flipped Classroom](#)

Make your Own Videos

Make your own video

Watch edpuzzle

Talk to others and see what they are doing

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Give us your email so we can share with presentation