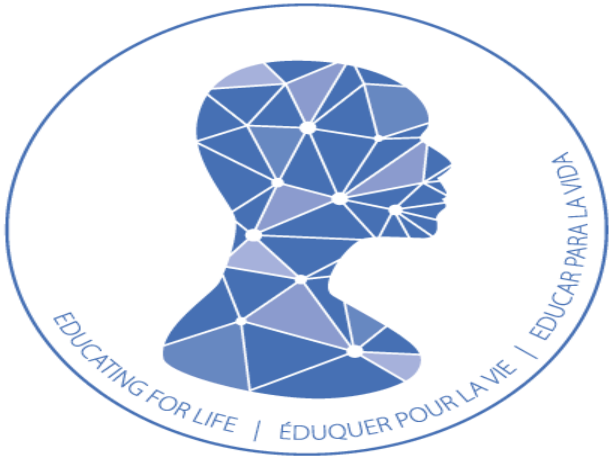

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Gamification and Enrichment in an IB Classroom

James Hron and Joel Weingart - Fridley Middle School, Fridley, MN

Please join us at Today's Meet for any questions or comments.
https://todaysmeet.com/IB2015games

Link to our Google Drive
https://goo.gl/jqqkuV

Who We Are?

- James Hron - 6-8 Technology (PLTW) and Science Teacher
- Joel Weingart - Sixth Grade Math Teacher
- FMS is in Fridley, Minnesota, a first ring suburb of Minneapolis.
- FMS has close to 900 students in grades 5-8.
- Demographics: 45% Caucasian, 30% African American, 11% Hispanic, 19% English Learners, 16% Special Education, and 65% Free and Reduced

Session Objectives

Goal:

Our goal is to provide educators strategies and examples of gamification and enrichment they can use in their classrooms that will lead to increased student motivation, engagement, and promote a life of learning.

Objective:

Educators will receive resources to help develop and incorporate games and enrichment into their classroom.

Connections

- Fridley's vision is to develop an educational foundation for students to be prepared to thrive in a diverse, changing society

- Students at International Baccalaureate® (IB) World Schools will be able to engage with people in an increasingly globalized, rapidly changing world.

What is Gamification?

Gamification is the idea of using game elements in non-game contexts.

- Theme
- Competition
- Point Scoring
- Game Mechanics

Research: Why Use Gamification in the Classroom?

- 97% of Teens Play Games (Pew Research Center)
- Gamification can also be used for the purpose of improving user engagement and instruction (Kim, 2015).
- Most companies (50%) predict that they will gamify at least one aspect of their workplace by 2015 (Hanus & Fox, 2015).
- Our Thoughts

My Thoughts on Games

- Games as a tool
- Love of games
- Luke’s story

Games in My Classroom

- Game Club
- Apocalypse Machine
- Robotic Companies
- Fridley Space Program
- Levelled Challenges

What Are Levelled Challenges

- Levelled challenges teach a real-life skill with game elements
- Levelled challenges focus on skills not explicitly taught in curriculum
  - Keyboarding
  - Digital Organization
  - Programming
  - Digital Citizenship

Levelled Challenges in My Classroom

- Exciting, beginning of the year introduction to increase student ‘buy-in’
- Challenges fill ‘dead time’
- Not graded--student motivation is intrinsic
- Be like the McRib

Design Challenge—Homestyler!

This challenge is designed to help you start learning about architecture, floor planning, and 3d modeling! The challenge starts with the steps below. Be sure to follow them carefully! If you have any questions, be sure to ask Mr. Hron!

This challenge requires the use of the internet, and asks you to set up an account with an online service. While this service is provided by a software company we use software from in school, it is important to remain safe online. DO NOT give out personal information like your name or address online.

- **Level 1:** Go to: www.homestyler.com

  Click on Create New Design in the tabs on top.

- **Level 2:** A pop-up should show up that says, "Start Designing with Autodesk Homestyler".
  - Click the Green "Get Started Now" Button
  - You will see a grid on the right, and different design functions on the left
  - Design a square room

- **Level 3:** Press the green home button in the upper left corner of your screen
  - Select "Doors"
  - Add a door to your room
  - Go to the green home button and select windows
  - Add a window to your room

- **Level 4:** Using your school google email, save your project and create an account (DO NOT give away personal information like your name or address)
  - Finish making your room

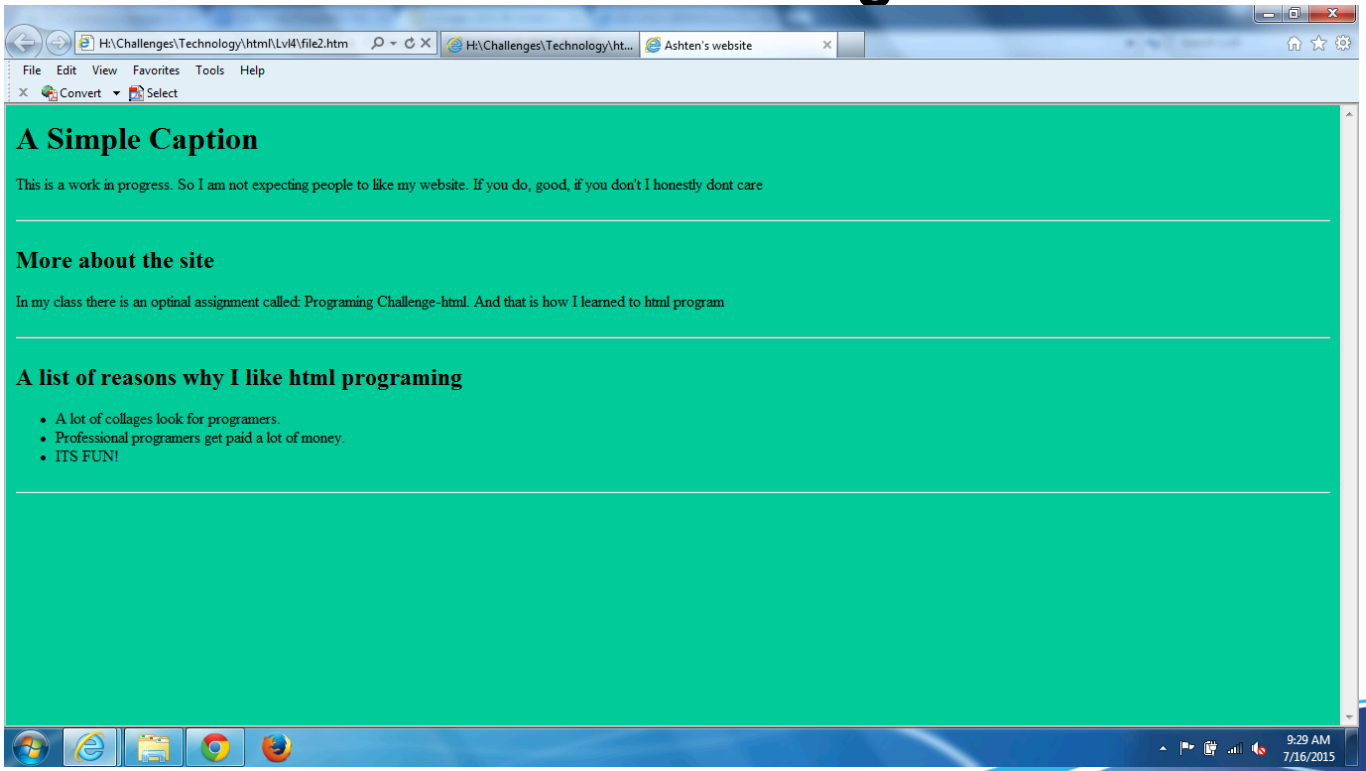
After you have finished creating your first room, go to File→Export Image, and email the image of your room to Mr. Hron! Mr. Hron's email is:

Design Challenge Level 7
DESIGN
Lance Yang
html Programming Challenge Level 7
Cassandra Zotz
Grace Rose
Ryan Stolle
Graham Hoglund
Hung Nguyen
Sabrina Herder
Emily Rice
Gerrine Olson
Typing Challenge Level 7
Abdullah Salim
Ashina Jayan
Lucy Kuempel
Robert Cuentes
Jeffrey Soledad-Quesada
Graham Hoglund
Homestyler Challenge Level 7
Ramone Salcedo
Jeffrey Soledad-Quesada
Kane Hoff
Harrison Blum
Minecraft Challenge Level 7
Anya Herlofsky
Carson Boyd
Josh Hoy
Lance Yang
Design Challenge Level 4
Programming Challenge Level 4
Typing Challenge Level 4
Homestyler Challenge Level 4
Minecraft Challenge Level 4
Anya Herlofsky

Why Levelled Challenges Engage Students

- Inspiration-many of my challenges were inspired by student activities
- Differentiation-students will find challenge at their level
- Leveled-students get sense of accomplishment almost immediately
- Available-always available for students
- Feedback System-students receive positive feedback through email
- Application-each challenge has real life application
- Dynasty-student achievement will be on my wall...forever
- Mobile-most challenges students can do at home

Results of Levelled Challenges



Results of Levelled Challenges

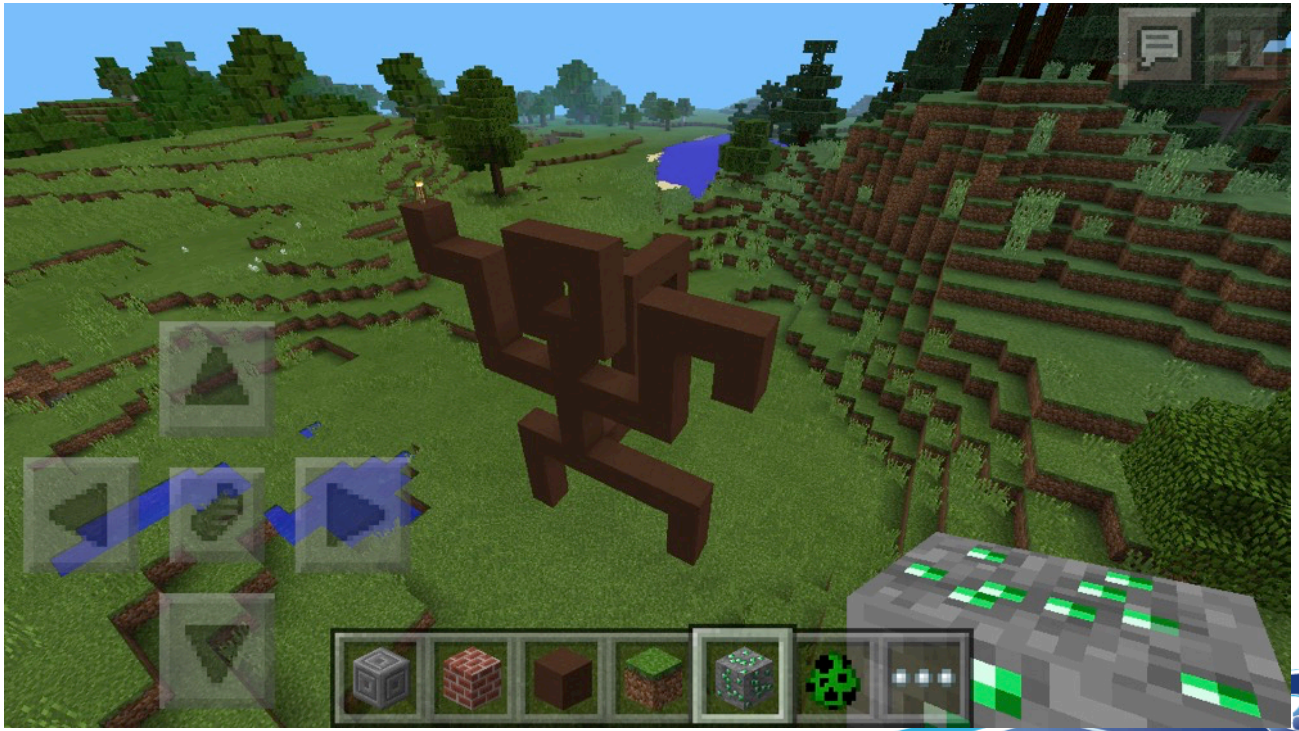
```
<html>


    <head>
<title> Ashten's website </Title>
    </head


    <body>
  <Body style="background-color:#00cc99;">
  <h1> A Simple Caption </h1>
<p> This is a work in progress. So I am not expecting people to like my website.
 If you do, good, if you don't I honestly dont care </p>
   <hr />
   <h2> More about the site </h2>
<p>In my class there is an optinal assignment called: Programing Challenge-html. And that is how I learned to
html program </P>
   <hr />
   <h2> A list of reasons why I like html programing </h2>
   <ul>
    <li> A lot of collages look for programers. </li>
    <li> Professional  programers get paid a lot of money. </li>
    <li> ITS FUN! </li>
   </ul>
   <hr />
    </body>


<html>
```

Results of Levelled Challenges



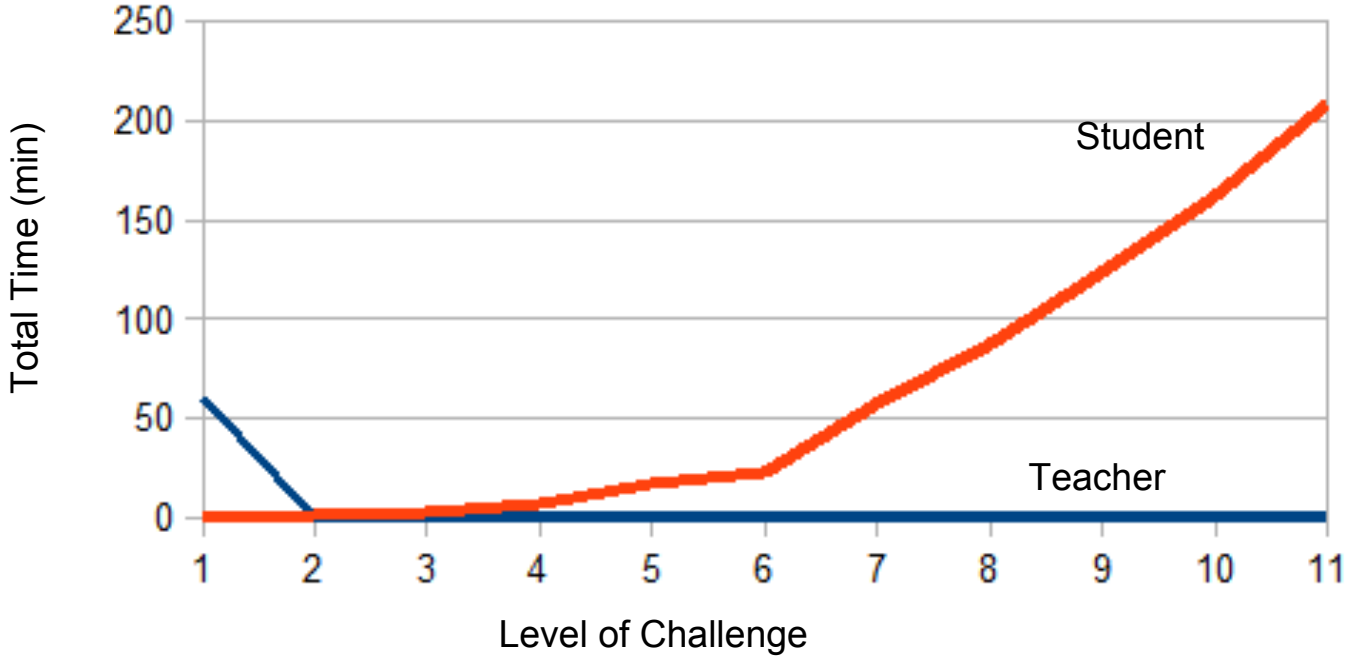
Results of Levelled Challenges

Observations on Levelled Challenges

- Increase in student interest and accomplishment
- Students doing ‘homework’ that is not required
- Students asking high level questions

- Not all students ‘buy in’
- Some students rush through class work to get to challenges
- Challenges take some time to create

Levelled Challenges: Solving Time



Creating Levelled Challenges

- Start with something you are interested in
- Or idea inspired by students
- Idea should have real life value

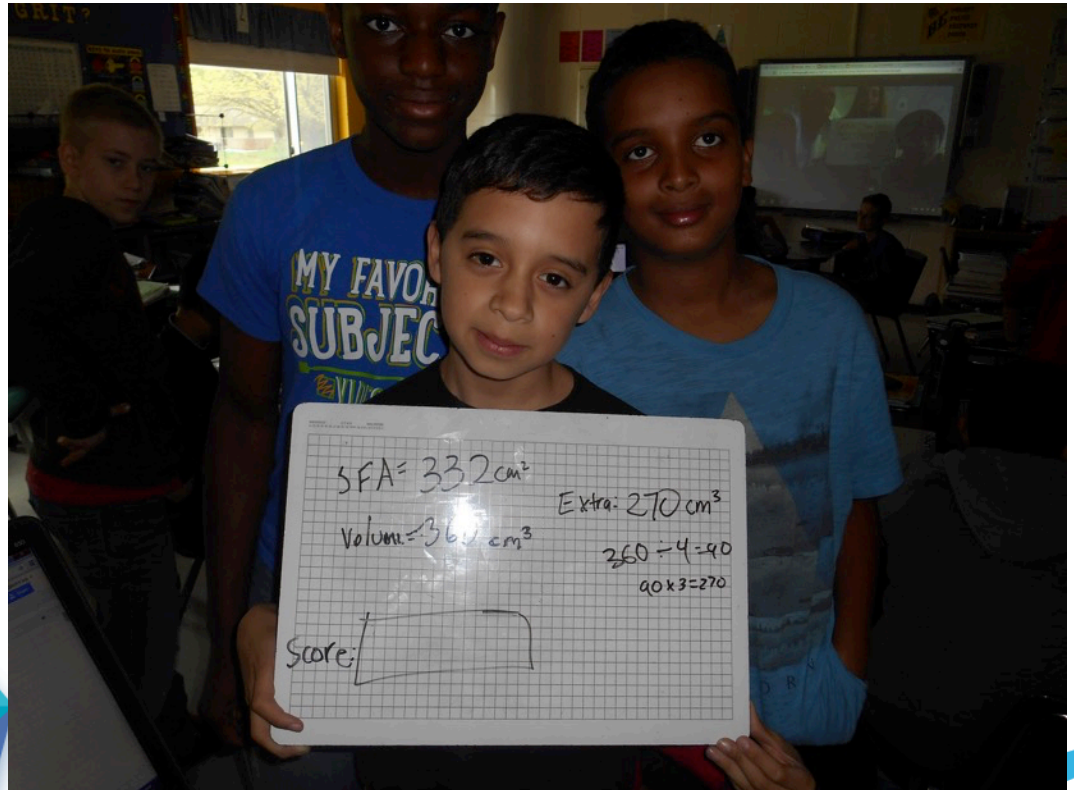
- Challenge should be hyper-detailed
- Beginning levels should be EASY, to build sense of student accomplishment
  - Level 1: Paragraph introducing topic
  - Level 2: Have student answer a question about topic
  - Level 3: Introduction to resource
- Or, alternatively
  - Level 1: Introduction to resource
  - Level 2: Teach resource
  - Level 3: Begin using resource to improve skill

Creating Levelled Challenges Continued

- Middle Levels should begin practicing the skill
- Levels should get more challenging and rigorous as they go up
- Level 4 should be initial proof of learning
- Level 7 should be proof of skill improvement
- Level 10 is final project
- Levels 8-10 should build towards final project
- Final project should be proof of skill mastery
- Final project should be something students can be proud of
- Final project should be published somewhere

- Continue dialog with students

Gamification in IB Math Classroom



This is my interpretation of Gamification used in my 6th Grade Math Classes.

Prior to Creating and Implementing

1. No previous experience.
2. Went to a tech conference and attended two sessions on Gamification.
3. Read The Multiplayer Classroom: Designing Coursework as a Game by Lee Sheldon.
4. Decided to give it a shot.

How I Got Started

1. Decided on the topic or concept
2. Lesson, Review, and Assessment?
3. Time Length
    a. Most of time have done 1 - 2 days.
    b. Two days can get long especially if students are competing

How I Got Started

4. Decided on a theme and challenge
   a. Descartesland - Role Playing - Mathematicians incorporated
   b. Defeating Disney - Role Playing - Disney inspired
   c. Our Favorites - Topical - My favorite things

How I Got Started

5. Decided on point system and create a template for keeping score

(self-elements)

a. Descartesland - 2 lives, 5 pascals (points per continuation), final level of expertise
b. Defeating Disney - collecting artifacts, final level of expertise
c. Our Favorites - most points win, point varied per level and bonuses could be found via easter eggs

How I Got Started

6. Created a game play outline
   a. Introduction page outlining game scenario
   b. Created a template for each level and decided on how many levels were desired. Usually about 6-8 levels are plenty in a two day activity.
   c. All of my examples had 6 levels.

My Drive > IB Conference Chicago 2015 > **Descartesland**

Name ↑

- Cheat Potion - Level 3 - Godel the Goblin
- Class Game Board
- Congratulations
- Introduction - Lady Hypatia is Missing
- Level 1 - Shopping with Archimedes
- Level 2 - Meeting Euclid
- Level 3 - Godel the Goblin
- Level 4 - Pythagoras' Puzzles
- Level 5 -Hippocrates the Horrible
- Level 6 - Descartesland

How I Got Started

7. Created problems for each level of game
   a. Imported from lessons, reviews, and past assessments
   b. Created different levels and assigned points
   c. Added points
   d. Included Easter Eggs, Bonus Levels, or even Cheats
   e. Included Badges, Tokens, and Artifacts

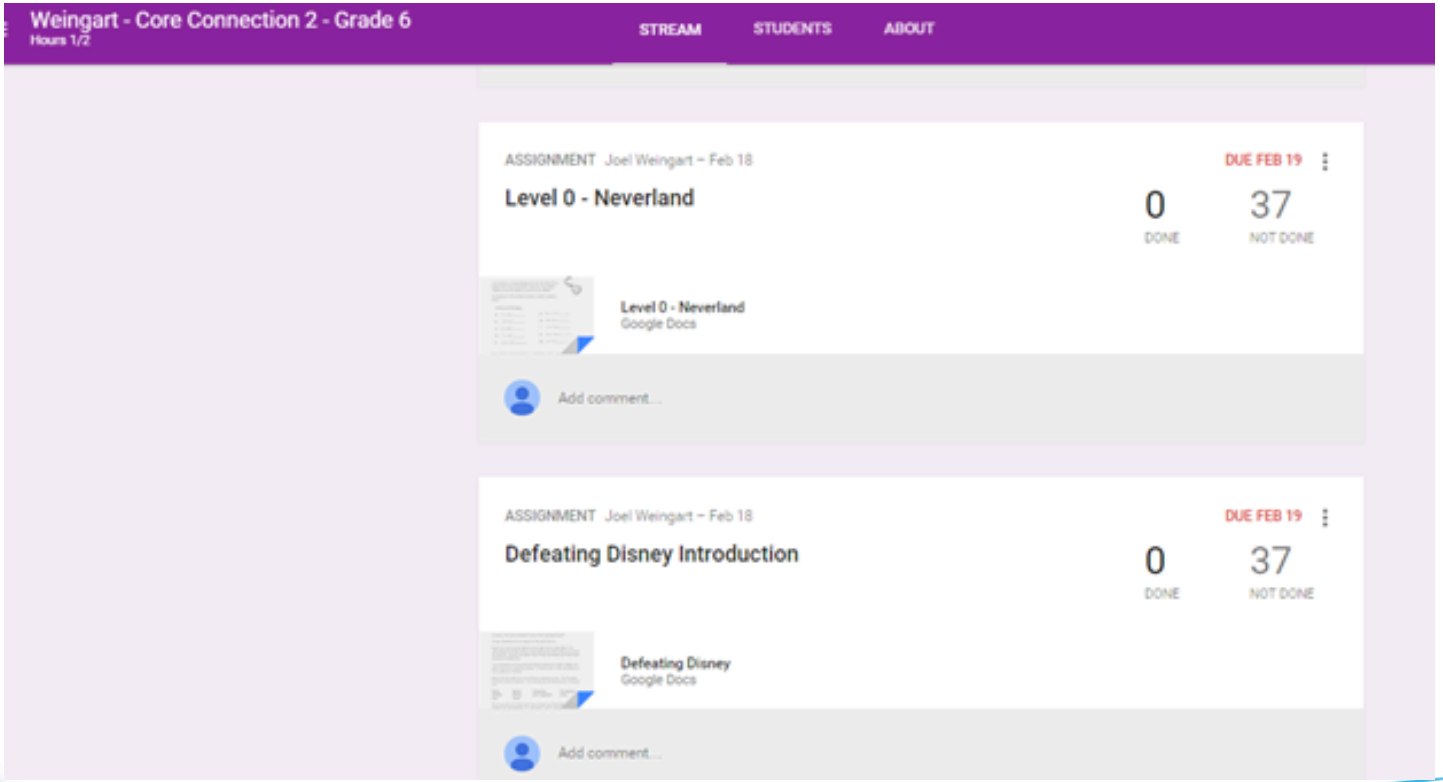
Playing the Game

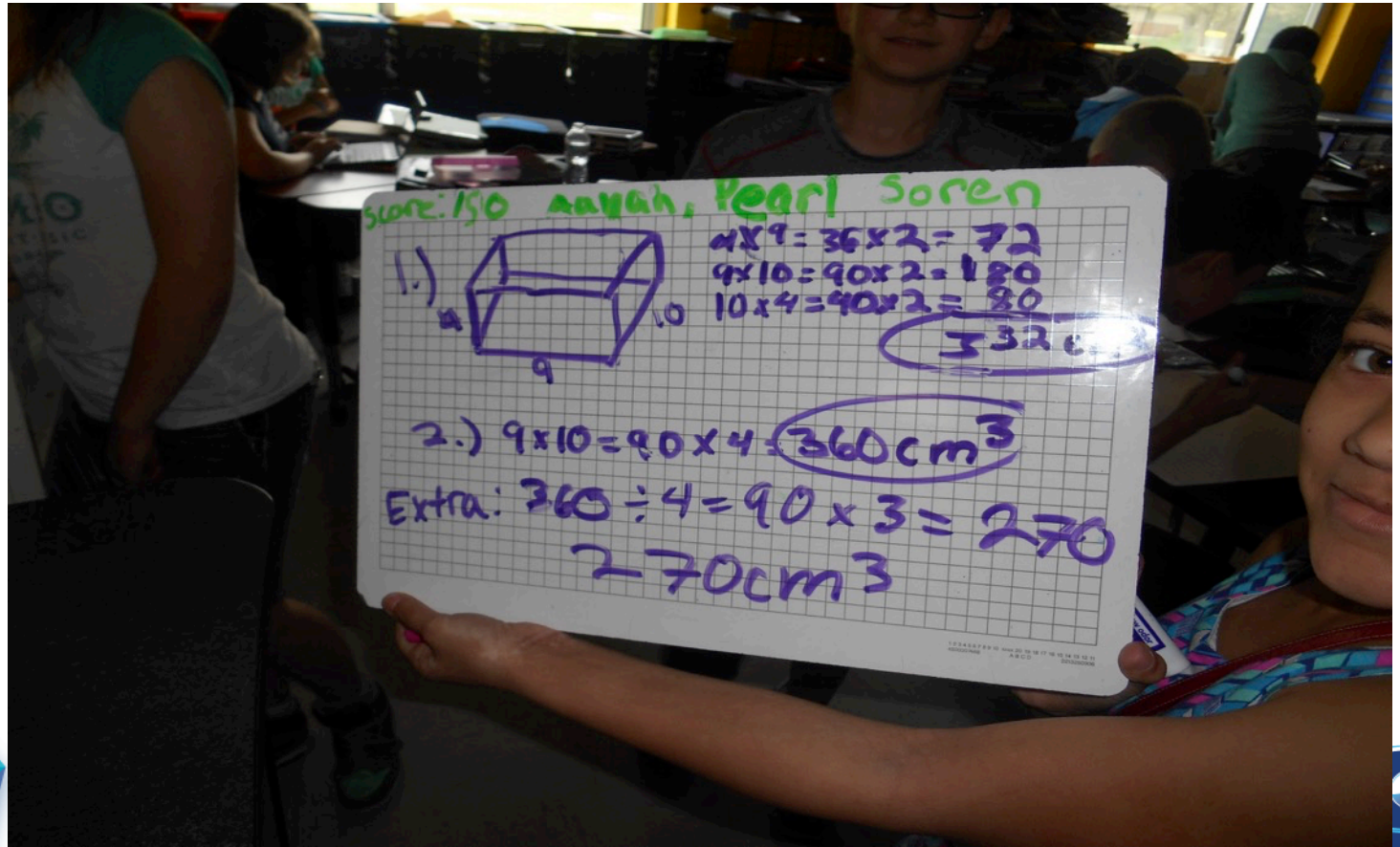
1. Introduce game and instructions for playing
2. Get groups started at same time - Google Classroom makes this easy
3. Have groups work on problem and then show answer as group
4. If answer correct input score, then send out next level.
5. Repeat
6. Above all have fun and make it fun for the students!

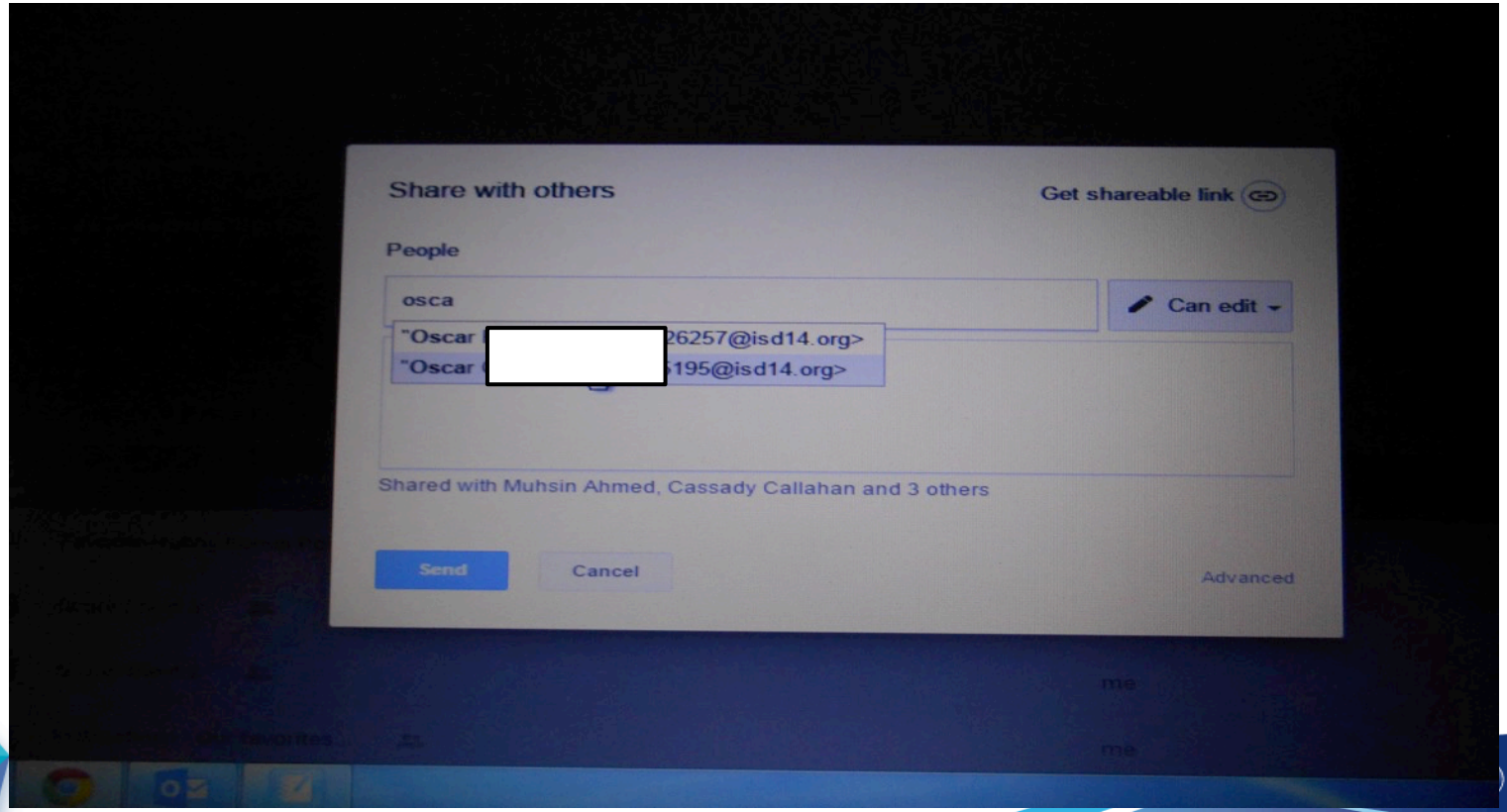
Playing the Game

Incorporated Technology

1. Google Docs/Google Classroom - placed instructions and level 1 on site, after that each group had a point person whom I shared the next level with via Google Docs


Weingart - Core Connection 2 - Grade 6
Hours 1/2
STREAM
STUDENTS
ABOUT
ASSIGNMENT Joel Weingart – Feb 18
DUE FEB 19
Level 0 - Neverland
0
DONE
37
NOT DONE
Level 0 - Neverland
Google Docs
Add comment...
ASSIGNMENT Joel Weingart – Feb 18
DUE FEB 19
Defeating Disney Introduction
0
DONE
37
NOT DONE
Defeating Disney
Google Docs
Add comment...


Score: 150 Aaliyah, Pearl Soren
1.)
9
4
10
9x9=36x2=72
9x10=90x2=180
10x4=40x2=80
332
2.) 9x10=90x4=360cm3
Extra: 360÷4=90x3=270
270cm3


Share with others
Get shareable link
People
osca
Can edit
"Oscar
26257@isd14.org>
"Oscar
195@isd14.org>
Shared with Muhsin Ahmed, Cassady Callahan and 3 others
Send
Cancel
Advanced

Incorporated Technology

2. Pictures/Videos - I had groups take selfies using ChromeBooks.

Each group included a separate answer and group points.

14

Dance vidio Dance
Games
Score: 100

Incorporated Technology

3. Uploading items - Students uploaded picture to the Google Class Site

Suggestions

1. Get excited about it!
    a. I used different names students had to address me by like Weingart the Wizard and Wreck-it Weingart
    b. Congratulate teams for increasing level of expertise or points

Suggestions

2. Be patient!
   a. Sometimes when using technology there are issues.
   b. It's new to students - they may give up more easily.
   c. Provide appropriate support but also maintain high expectations.

Suggestions

3. Reflect and modify for future use!
    a. I never did the same exact style each time.
    b. I tried to incorporate new items each time to keep them engaged.

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Gamification and Enrichment in Your Classroom - Templates

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Gamification and Enrichment in Your Classroom - Your Turn!

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