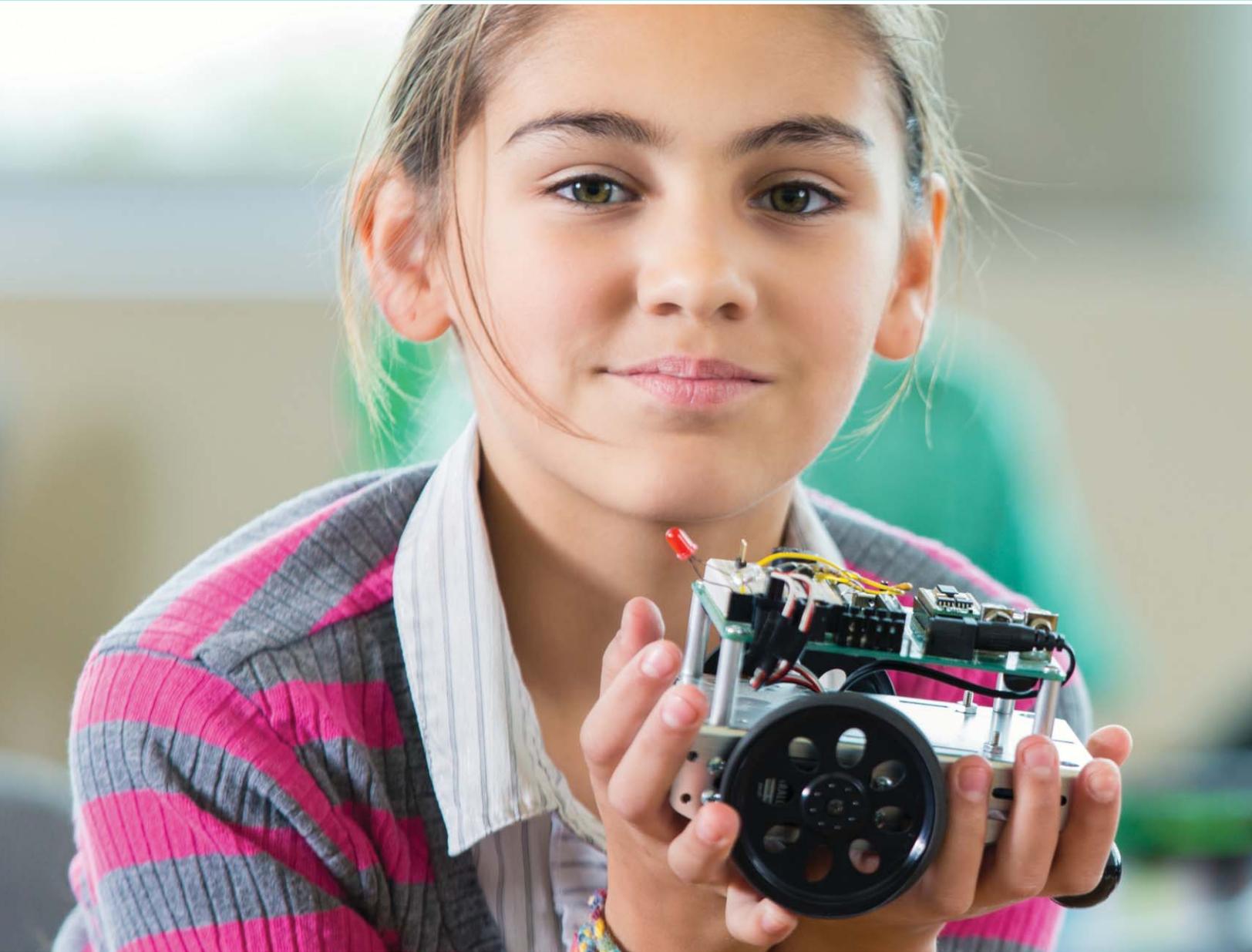


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**Trash to  
Treasure**

# **TRASH TO TEASURE**

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# GOALS AND OBJECTIVES

The purpose of Trash to Treasure Project is to solve problems in real-world contexts involving percent of a quantity. Students develop strategies to engage and convince the audience to purchase their creative invention. They also develop good communication strategies throughout the lesson while using knowledge of discount to provide opportunity to purchase items on sale. Utilizing internet as means of global communication, they demonstrate knowledge of finding percent of a number (i.e., Discount percent/increase and decrease).

First, students select one recyclable item from a selection of 10 items to create an invention. After invention is built, student will decide on sale price, select two discount percent offers from a given list, find savings and total price after each discount while announcing final sale price.

Secondly, students may review Mrs. Perry video lesson on “Finding a Percent of a Number.” Students have completed worksheets for practice and viewed newspaper clippings finding sale items.

Thirdly, students write an essay explaining their recycled item, their invention, 1<sup>st</sup> discount/savings and total, 2<sup>nd</sup> discount/ savings and total, final sale price including both discounts, describe software they used for infomercial video and what Scientific value to their invention?

Lastly, students will create infomercial to market their item while making interesting and appealing for viewer (should only last no longer than 5 minutes, i.e., iMovie trailers).

# COMMON CORE STANDARDS

**CCSSMP1: Make sense of problems and persevere in solving them.**

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals.

**CCSSMP4: Model with mathematics.**

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace.

**CCSSMP5: Use appropriate tools strategically.**

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software.

# **COURSE OUTLINE / OVERVIEW**

I was very much inspired after attending my 3rd year “Discovery Digital Leadership Training” and created my “Trash to Treasure” project. I was excited to introduce this lesson by creating a Board Builder which gave students the capabilities to explore different types of technology while learning a new concept. As a teacher, we all want our students to be engaged and learn the concept while making the learning fun. Students really enjoy this project and master the concept while applying it to real-world. At the end, I have received positive feedback from the students and parents in regards to this lesson, the technology and the hands on model.

This project will bring meaning to percent while solving real-world context. This lesson will also motivate the students as they think of ways to design and construct their invention. Students will create an iMovie infomercial of their invention giving original price, 1<sup>st</sup> discount, savings and 2<sup>nd</sup> discount with total cost and savings.

I would highly recommend this lesson for any grade level higher than 2nd grade and can be adapted to the student’s content level. This project can be used in finding percent’s as fractions and decimals, meaning of percent as a ratio and solving real world problems when modeling with mathematics.

# LESSON PLAN

**Subject: Math 6<sup>th</sup> Grade**

**Lesson: Understanding Percent's**

**Standards Addressed: MAFS.6.RP.1**

**Objectives: The student will be able understand Percents as a Ratio**

**Materials Needed: Computer, Discovery program, phone or recording device ex: iphone, android device, tablet etc., Accessories to build your invention, Recycle item list, glue, Report Questions, Report Cover and lots of creativity.**

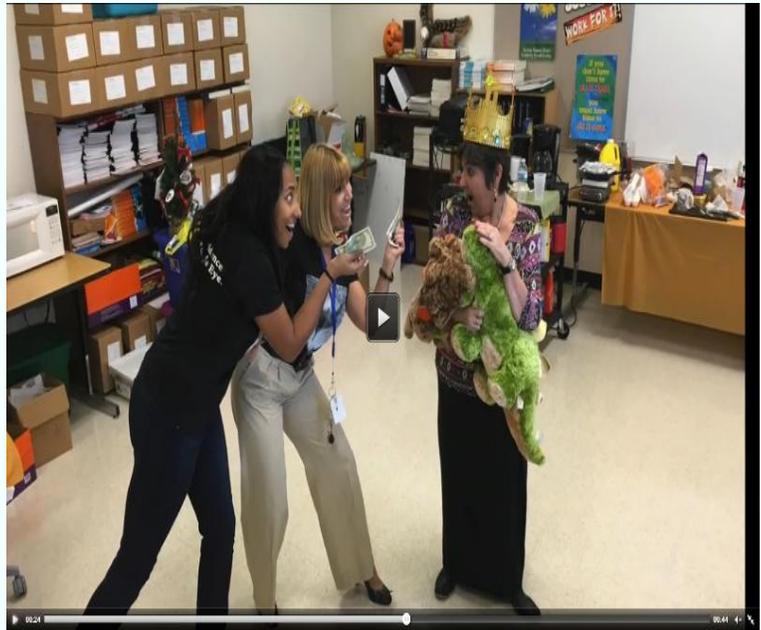
**Outline: The students will go to Discovery and open the Board Builder "Trash to Treasure."**

**<https://app.discoveryeducation.com/builders/boards/assetGuid/EB1AE25B-F0C8-AEC8-55C4-0DFF3CBE6ABE/#mode=preview>**

**Students will read their Goals and follow procedures. For review, students may view Mrs. Perry Finding the Sale Tax or Total after Tax lesson video. Afterwards, they select one recycle item from recycled list to create their invention. Using their recycle item, students may accessorize their product to meet customer needs. Next, students must select two sale discount price for their invention. Their infomercial must include original price, 1<sup>st</sup> discount, savings and total and 2<sup>nd</sup> discount, savings and total sale price.**

An essay report is required for this project, instructions of cover sheet and report questions are found under essay.

Click on the word [here](#) to view your teacher's iMovie trailer example.



Students Examples of iMovie below:



**IF YOU CALL RIGHT NOW  
YOU WILL GET 20% OFF.  
THAT'S A SAVINGS OF  
\$5.98!**



**IF YOU DOUBLE YOUR ORDER  
YOU WILL GET AN ADDITIONAL 15% OFF.  
THAT'S ANOTHER \$3.60 IN SAVINGS!**



## Activity: Found in Discovery Common Board:

<https://app.discoveryeducation.com/builders/boards/assetGuid/EB1AE25B-F0C8-AEC8-55C4-0DFF3CBE6ABE/#mode=preview>

The screenshot displays a web browser window with the URL <https://app.discoveryeducation.com/builders/boards/assetGuid/EB1AE25B-F0C8-AEC8-55C4-0DFF3CBE6ABE/#mode=preview>. The browser's address bar shows the URL, and the page title is "Board Builder". The interface includes a navigation bar with buttons for "Edit", "Preview", "Print", "Save", "Share", and "Assign". The main content area features a blue background with a pattern of red and pink hearts. A yellow banner at the top contains the title "Trash to Treasure". Below the banner is a green, jagged-edged shape containing a white box with the heading "GOALS:" and a list of five bullet points:

- Develop strategies to engage and convince the audience to purchase your item.
- Develop good communication strategies.
- Use knowledge of Discount to provide opportunity to purchase item on sale.
- Utilize internet as means of global communication (i.e. Utube) Demonstrate knowledge of finding percent of a number (i.e. Discount percent/ increase and decrease).

At the bottom of the screen, there is a "QuickList" button with the number "31" and a "List Options" button. The Windows taskbar at the very bottom shows the system tray with the time "4:05 PM" and date "8/28/2016".

# Instructions for infomercial & Video on Sale Price

**Board Builder** Edit Preview Print Save Share Assign

- Select an item and create an invention.
- After you build your invention, produce an infomercial of your product. Give your item a sale price. Select two (2) % Discount offers, find savings and total price after each discount & announce final sale price. Make this interesting and appealing to the viewer.
- Your commercial should be no longer than 5 minutes (i.e., 1 movie trailers)

*Ms. Perry*  
Finding Sale Price or Total after Tax

- find the discount or tax amount
- original price

Examples

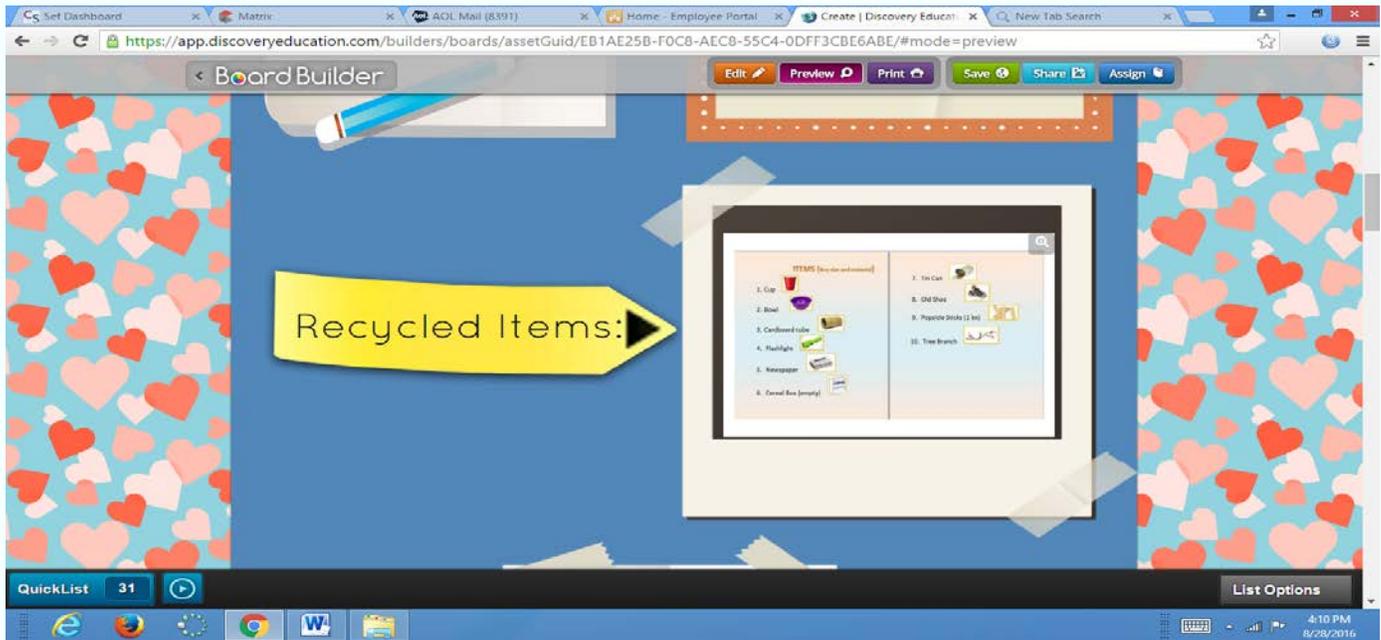
60% sale.	$15.95 - 9.57 = 6.38$
	$15.95 - 9.57 = 6.38$

8% tax

$19.99 + 1.60 = 21.59$
$19.99 + 1.60 = 21.59$

QuickList 31 List Options

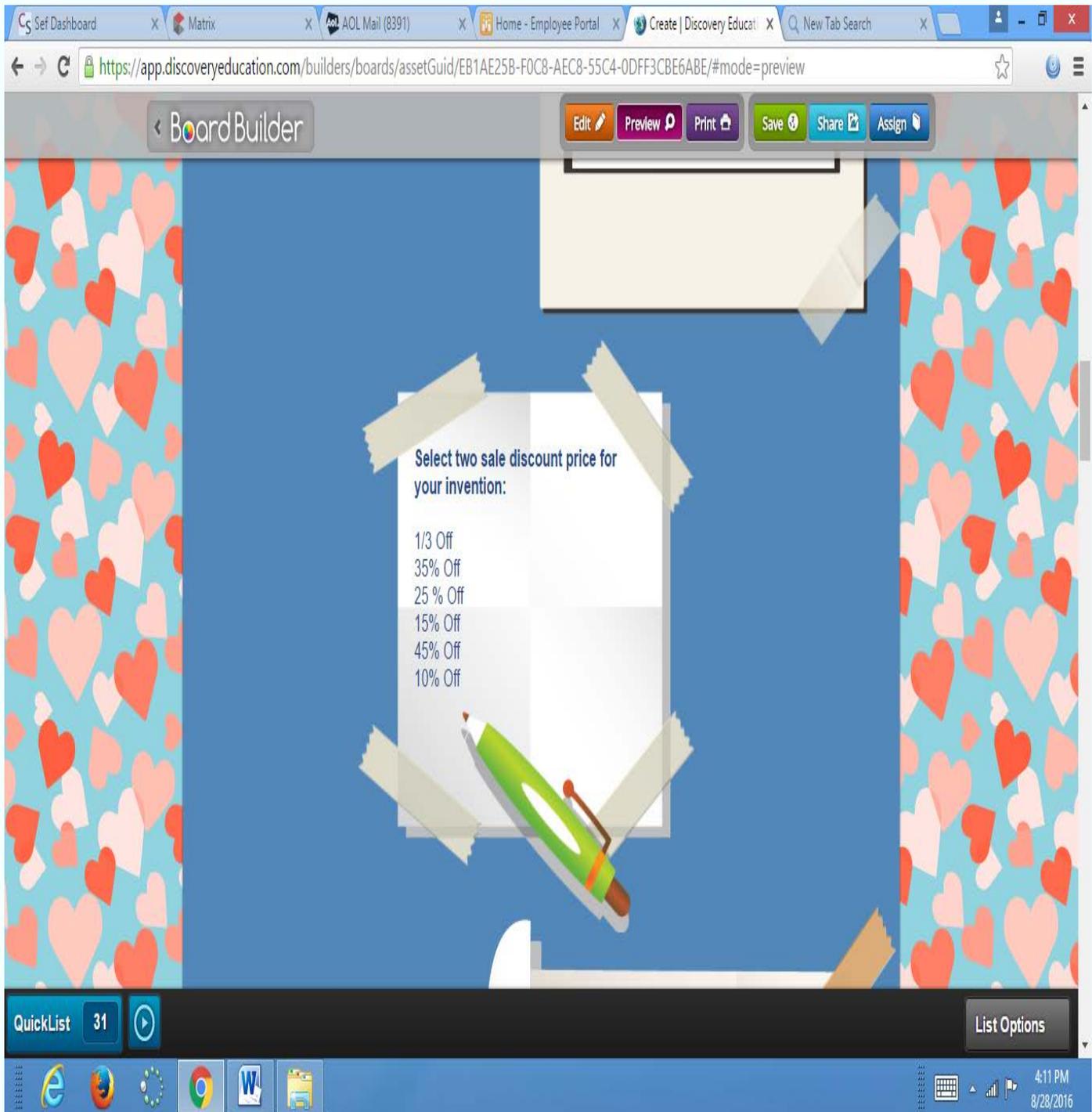
4:07 PM 8/28/2016



**ITEMS (Any size and material)**

1. Cup 
2. Bowl 
3. Cardboard tube 
4. Flashlight 
5. Newspaper 
6. Cereal Box (empty) 
7. Tin Can 
8. Old Shoe 
9. Popsicle Sticks (1 bx) 
10. Tree Branch 

After building your invention, you need to produce an infomercial of your product. Sell your item: mention the sale price, (2) Discount offers and your final sale price. Make this interesting and appealing to the viewer.



Sef Dashboard X Matrix X AOL Mail (8391) X Home - Employee Portal X Create | Discovery Educati X New Tab Search X

← → ↻ <https://app.discoveryeducation.com/builders/boards/assetGuid/EB1AE25B-F0C8-AEC8-55C4-0DFF3CBE6ABE/#mode=preview> ☆ ☰

Board Builder

Edit Preview Print Save Share Assign

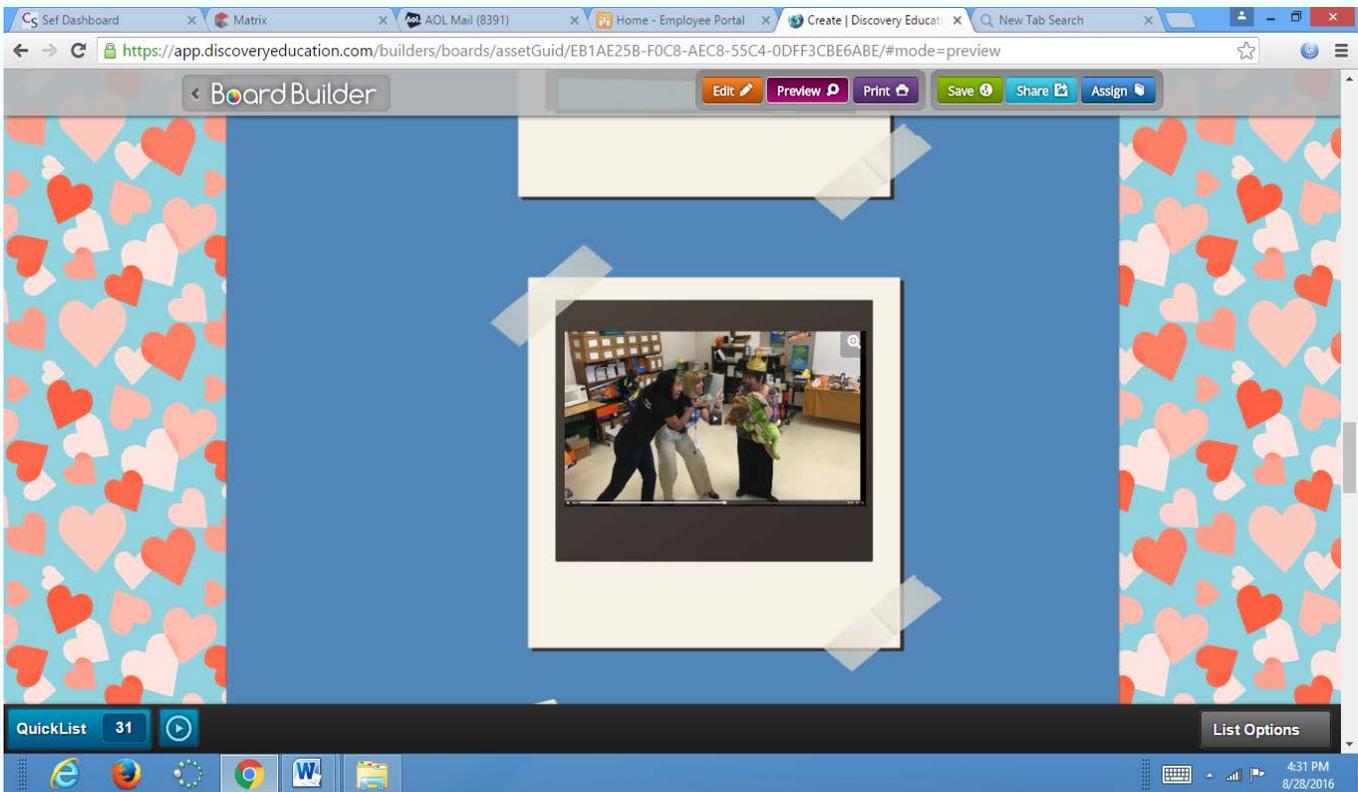
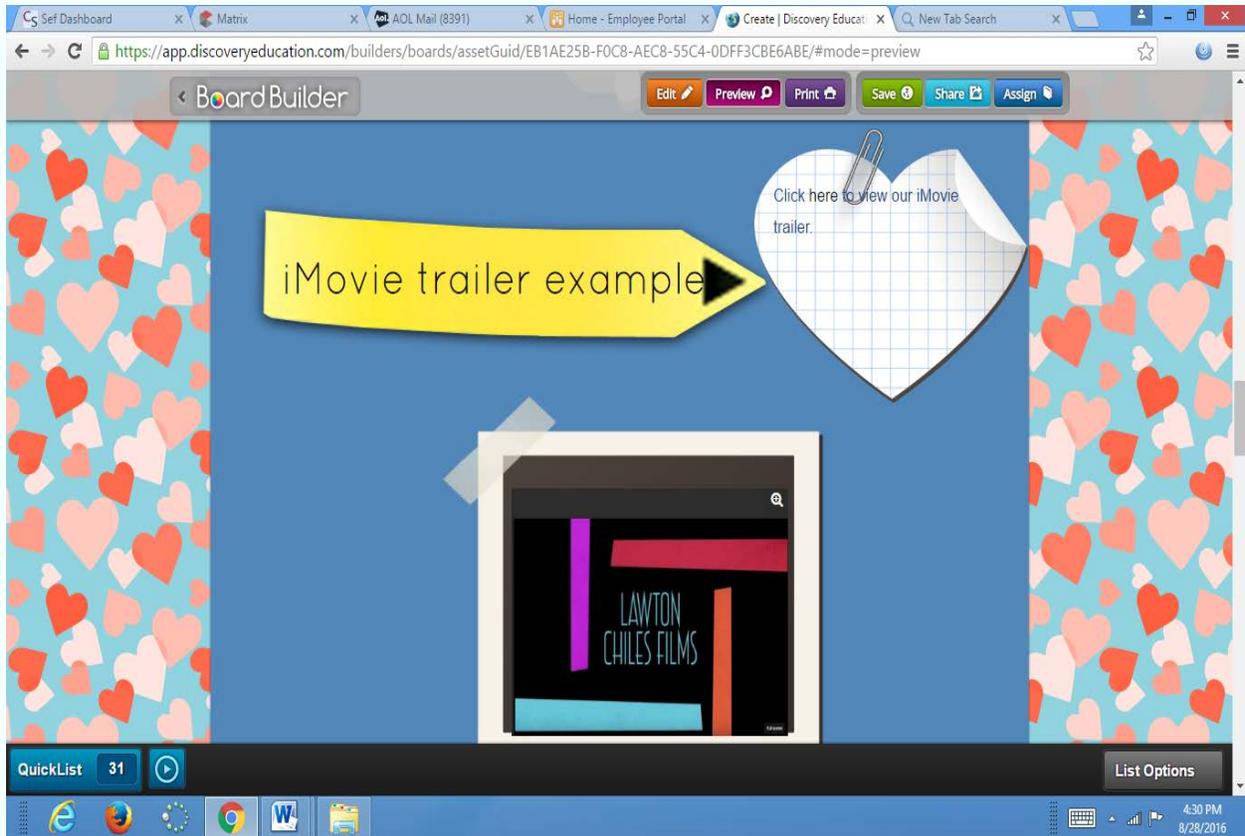
Essay

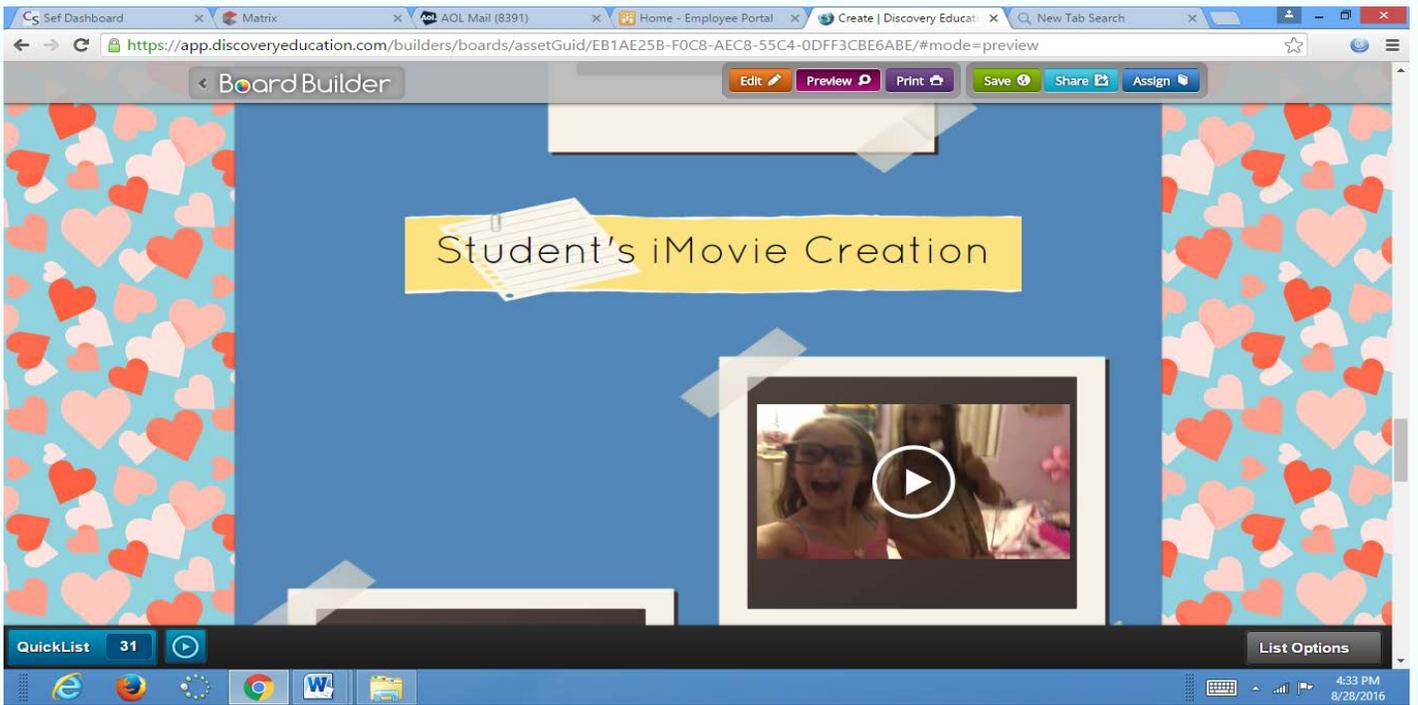
Cover Sheet: Name, Period, Date and Title:  
Trash to Treasure. Write an essay and include the following questions. 1 page min., Font: Time New Roman size 12.

- What was your recycled item?
- What was your invention?
- Price of your item
- 1st Discount, Savings & Total
- 2nd Discount, Savings & Total
- Final Sale Price including both discounts
- What Software did you use for your infomercial video?
- What is the scientific value to your invention (in other words how does your invention relate to Science)?

QuickList 31 List Options

4:29 PM 8/28/2016

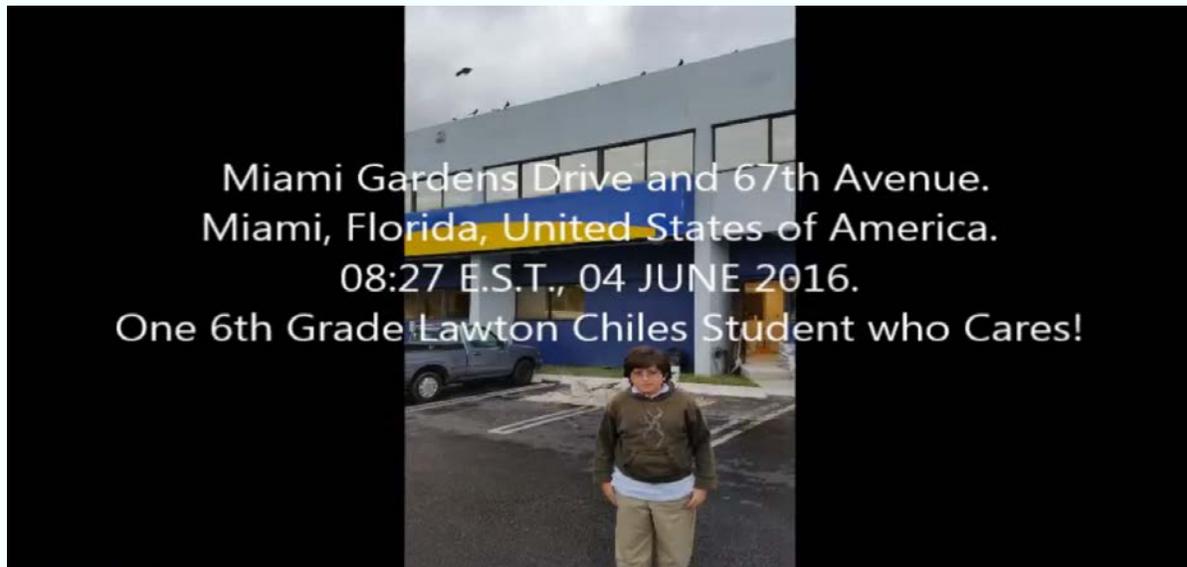




# RESOURCES

**Video from Discovery: Common Board Builder: “Trash to Treasure”, Internet, Library, Materials to accessorize invention, materials to accessorize invention, any electronic device to record ex: iphone, android phone, tablet etc. , use any app to record movie trailer, Media Center or Computer lab and Public Library if necessary.**

# STUDENT WORK SAMPLE





# **APPLY FOR AN IMPACT II ADAPTER GRANT!**

M-DCPS teachers, media specialists, counselors or assistant principals may request funds to implement an IMPACT II idea, teaching strategy or project from the Idea EXPO workshops and/or curriculum ideas profiled annually in the *Ideas with IMPACT* catalogs from 1990 to the current year, 2016-17. Most catalogs can be viewed at The Education Fund website at [www.educationfund.org](http://www.educationfund.org).

- Open to all K-12 M-DCPS teachers, counselors, media specialists
- Quick and easy reporting requirements
- Grants range from \$150 - \$400
- Grant recipients recognized at an Awards Reception

To apply, you must contact the teacher who developed the idea before submitting your application. Contact can be made by attending a workshop given by the disseminator, communicating via email or telephone, by visiting the disseminator in their classroom, or by having the disseminator visit your classroom.

Project funds are to be spent within the current school year or an extension may be requested. An expense report with receipts is required by Friday, May 5, 2017.

**APPLICATION DEADLINE:  
Monday, December 12, 2016**

Apply online at [www.educationfund.org](http://www.educationfund.org)

**For more information, contact:**

Edwina Lau, Program Director

305.558.4544, ext. 113

[elau@educationfund.org](mailto:elau@educationfund.org)



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