Full STEAM Ahead
Exploring the Engineering Design Process Through Story Deconstruction & Reengineering.

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Engineering Design Process

1. Define the Problem
2. Plan Solutions
3. Make a Model
4. Test the Model
5. Reflect and Redesign
How do you get information from a story?
Form, Coding & Structure of a Story

The FORM of a story is words.

Beginning

Middle

End

Punctuation that tells us where to stop, start, get loud, soft, speak....CODE

STRUCTURE - How we structure a story impacts how we receive information.
Yeah, so what are we going to do?

We will use the pieces of the story to reengineer the story into something else.
VARIABLES:

- We could turn it into a play.
- We could use legos to turn it into a sculpture.
- Turn it into a poem.
- We could use movement to turn it into a dance.

We will use markers and paper to turn it into a stop motion animation.
Fairy Tales

- Familiar
- Variety
- Buy In
STOP MOTION VS THE STORY

Story - all words and sometimes pictures.

Stop Motion - images and movement.

Question: How will we tell the story without the words?

Presenting the same content in a different way. Changing the structure to receive the information in a different way.
Free Exploration
What does the audience HAVE to know? (Details vs key details)
Scene 1: meet the characters, discover the setting and learn the problem
Scene 2: develop a plan, get a posse and start executing, confront the problem
Scene 3: resolution of the problem
Setting/Characters/Action - How will we show that?
What HAS to happen for each scene to end.
We are teaching formula
STUDENT SAMPLES
Deconstruction

GROUP 1 STEPS:

Step 1: The first pig meets a man
Step 2: He asks for his straw
Step 3: He gets the straw
Step 4: He builds a house

Step 5: The second pig meets a man
Step 6: He asks for his sticks
Step 7: He gets the sticks
Step 8: He builds a house

Step 9: The third pig meets a man
Step 10: He asks for his bricks
Step 11: He gets the bricks
Step 12: He builds a house
Creating the Set...
“Mrs Manning it is like we are using the Engineering Design Process…”
Creating solutions by repurposing what you already have.
THE FINAL PRODUCT
Let's apply what we have learned and make a movie.
But wait there’s more!!!

Shadow Puppets

Research

Construction

Practice

Staging

The Popsicle Boy

Members of the Library Bookends enjoyed selecting and performing this funny take on The Gingerbread Boy. We hope you enjoy their performance.
The best laid schemes...

Second semester 5th grade project was a collaboration with the ELA teacher. ELA classes were reading Chinese Cinderella. In the library we were going to break into small groups with each group designing their own original retelling with a twist. These retellings would be reconstructed as a shadow puppet play. The 5th grade groups would then perform these plays for their kindergarten buddies.

Living Literature was starting to develop a podcast based on a, “what if,” platform. Students would discuss the question, “What if______?” as it applies to endings or situations in stories that they would like to change.
EBR Librarian’s Meeting  April 8, 2020
We have explored the EDP in two distinct ways.

1. Through the deconstruction and redesign of the story.
2. Through the production/performance process.

This project (Stop Motion) can be applied to anything, not just stories. The “production” can be the production of a process.

This could be a word problem.

This could be the explanation of the lifecycle of a plant.

The possibilities are limitless.

This works in any classroom any grade level, any content.