Using STEM to Enrich, Motivate, and Engage Learners

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PRIMENESIA
NOUN / PRIME-NE-SIA

1: WHEN YOU ORDER SO MUCH AMAZON PRIME THAT YOU DONT KNOW WHAT'S IN THE BOX.

please
HIDE PACKAGES FROM HUSBAND
I AM **NOT** AN EXPERT!
**ESSENTIAL PLC QUESTIONS**

1. What do we expect our students to learn?
2. How will we know when they’ve learned it?
3. How will we respond when they don’t learn?
4. How will we respond when they do?
GIVE ENRICHMENT A TRY...

- Asked administrators for permission
- We talked to the grade levels that would fit into our schedule (our plan was VERY vague)
- Asked teachers to send us a list/group of students
- Started seeing groups once a week
3 OBJECTIVES FOR STUDENTS

Teamwork

Problem Solving

To Persevere
BE SURE YOU SET CLEAR EXPECTATIONS!

- No arguing
  - Teach how to disagree
- Teacher chooses groups
  (no complaining)
- Voice levels (excitement does not equal screaming)
- Ask three before me
No budget for STEM goodies?

× Try writing a grant

× Raid the Dollar Tree

× Call businesses and ASK

× Ask families and PTA for donations
  × Legos
  × Puzzles
  × Loose parts

× Utilize reusable materials
And so the challenges began!
OUR FIRST ATTEMPT
THANKFULLY IT GOT BETTER. WE DITCHED THE TECHNOLOGY AND FOCUSED ON OUR 3 OBJECTIVES.
LEGO CHALLENGES
<table>
<thead>
<tr>
<th>What to Build</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haunted House</td>
<td>10</td>
</tr>
<tr>
<td>- 4 walls</td>
<td></td>
</tr>
<tr>
<td>- 1 door</td>
<td></td>
</tr>
<tr>
<td>- 2 windows</td>
<td></td>
</tr>
<tr>
<td>Ghost</td>
<td>1</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>1</td>
</tr>
<tr>
<td>Bat</td>
<td>1</td>
</tr>
<tr>
<td>Black cat</td>
<td>2</td>
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<tr>
<td>Witch</td>
<td>3</td>
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<tr>
<td>Zombie</td>
<td>3</td>
</tr>
<tr>
<td>Skeleton</td>
<td>3</td>
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<tr>
<td>Werewolf</td>
<td>3</td>
</tr>
<tr>
<td>Vampire</td>
<td>3</td>
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<tr>
<td>Monster</td>
<td>3</td>
</tr>
<tr>
<td>Frankenstein</td>
<td>3</td>
</tr>
<tr>
<td>Graveyard</td>
<td>5</td>
</tr>
</tbody>
</table>
CODING BASICS - BINARY ALPHABET
CODING WITH BLOCKLY
TRIED TO INCLUDE DOT
OLYMPICS!!
OLYMPIC EVENTS:

Downhill Skiing

Ice Skating
MARCH MADNESS!

Team Members: ____________________  ____________________

<table>
<thead>
<tr>
<th>Trial</th>
<th>Forward (cm)</th>
<th>Launch Power (%)</th>
<th>Points Scored</th>
<th>Observations</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
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</table>

What did we learn from our experiments?
GRAND FINALE
FREE CHOICE
LET'S TALK ABOUT DASH (AND DOT)
× User/kid friendly

× Multiple Apps

× Accessories

× Price is comparable (about $150)

× Curriculum and task cards for purchase

https://twitter.com/WonderWorkshop
ONLY HAVE ONE ROBOT? NO PROBLEM!
SET IT UP AS A STATION!
IDEAS I WANT TO TRY:

× Marker Jousting
× Rube Goldberg Machine
× Story Sequencing
LET'S PLAY!
THANKS FOR COMING!

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