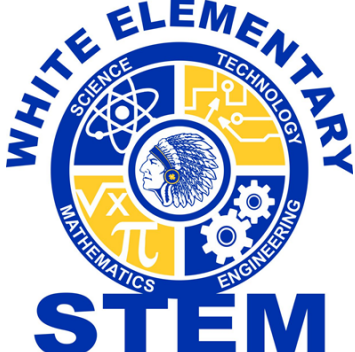


<p><u>Lesson Title:</u></p> <p>Gingerbread Investigation</p>	<p><u>Grade Level:</u></p> <p>Kindergarten</p>	
<p><u>Essential Question:</u></p> <p>How do we collect data? How do we compare data? How do things sink/float? How do you inform/explain in your writing/drawing? How do you measure with non standard units? What is chronological order? How can you tell how many? What is tall/short (height)?</p>		
<p><u>Standards:</u></p> <p><u>Science Standards:</u></p> <p>SKP1. Obtain, evaluate, and communicate information to describe objects in terms of the materials they are made of and their physical attributes c. Plan and carry out an investigation to predict and observe whether objects, based on their physical attributes, will sink or float.</p> <p>SKP2. Obtain, evaluate, and communicate information to compare and describe different types of motion. a. Plan and carry out an investigation to determine the relationship between an object’s physical attributes and its resulting motion (straight, circular, back and forth, fast and slow, and motionless) when a force is applied. (Examples could include toss, drop, push, and pull.) b. Construct an argument as to the best way to move an object based on its physical attributes.</p> <p><u>Math Standards:</u></p> <p>MGSEK.CC.5 Count to answer “how many?” questions.</p> <p>MGSEK.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.</p> <p>MGSEK.MD.1 Describe several measurable attributes of an object, such as length or weight</p> <p>MGSEK.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference</p> <p>MGSEK.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</p> <p><u>Other Content Standards:</u></p> <p>SSKH3 Correctly use words and phrases related to chronology and time. d. First, last, next</p> <p>ELAGSEKW2: Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.</p> <p>ELAGSEKRF1: Demonstrate understanding of the organization and basic features of print</p>		
<p><u>Technology Integration:</u></p> <ul style="list-style-type: none"> - Brainpopjr videos on non standard units of measurement and data collection leading up to the activity day. 	<p><u>Career Connection:</u></p> <ul style="list-style-type: none"> - What kind of career/job would you need to know how to measure? What kind of career/job would you need to know how to vote and count votes? What kind of job/career would you need to know how to build things like towers and why is it important to build them well? 	
<p><u>Engineering Challenge:</u></p> <p>Gingerbread Races – students will build a boat using tin foil. The boats need to make it across the “river”. Students use the straw to create wind that blows the boats across.</p> <p>Gingerbread Tower – Students will build the tallest tower using only gingerbread men and the play dough. The tallest tower wins.</p>	<p><u>Materials:</u></p> <p>Can the Gingerbread Man Swim? – gingerbread men, bowl of water, response sheet, chart paper, pictures for class graph;</p> <p>Gingerbread Boat Races – gingerbread man for each boat, container of water, tin foil, straws; Gingerbread Exploration- gingerbread man for each student, candy, container of water, response sheet.;</p> <p>Gingerbread Tower – small gingerbread man cookies, gingerbread play dough</p>	

Lesson Procedures

- Since the beginning of school we have been teaching/learning how to count to answer how many.
- There has been math lessons this school year discussing greater than and less than, more and less, comparing numbers.
- There are skills in the STEM activities that have not been introduced to the students yet, so in order to prepare them for the activities and the things they will be doing we will lead up to our activity day with the following lessons:
- Day 1 – Introduce measurement with a brainpop jr video about non standard measurement and completing a measurement activity using non standard units of measurement. (in STEM journals)
- Day 2 – Introduce data collection discussing tally marks (collecting data) and comparing data (graph it). (In STEM or SS journal)
- Day 3 – Read “ The Gingerbread Man” book, completed story elements activity (character, setting, problem, solution).
- Day 4 – Make Gingerbread Playdough needed for STEM activity on the activity day. Each class will need enough to construct their towers. The students assist in measuring the ingredients and combining them together. This activity exposes students to a more rigorous upper grades standard of standard units of measurement.
- Day 5 – STEM activity day. There will be 4 STEM rotations set up. Each teacher will have a STEM station set up that the classes will rotate to. There will be parapro assistance and some parent volunteers in each room.
- Station 1- Can the Gingerbread Man Swim?
- Station 2 – Gingerbread Boat Races
- Station 3 – Gingerbread Exploration
- Station 4 – Gingerbread Tower