

Get Ready for Lift Off!

Literacy

Numeracy

Use the clues in the picture to figure out the familiar saying this rebus puzzle represents and explain the meaning of the phrase.

3. OUT
2. OUT
1. OUT

BUDGET
^

Phrase:
Meaning:

Phrase:
Meaning:

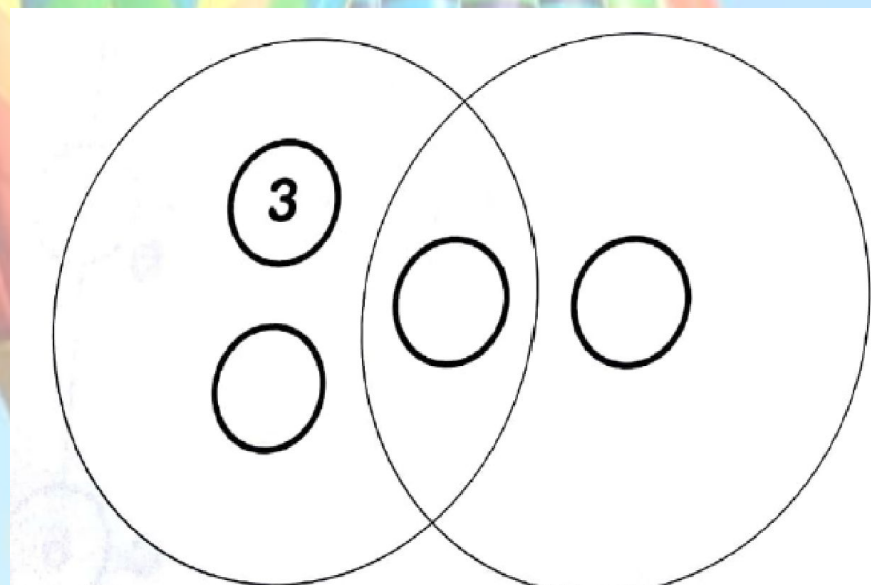
R
B O
E W
Y S
E

EMPLOY___T

Phrase:
Meaning:

Phrase:
Meaning:

Arrange the numbers 1, 2, 3, 4, so that the sum of the numbers in each large circle are the same



ELAGSE4L5 Demonstrate an **understanding** of **figurative language**, **word relationships** and **nuances** in word meaning.

ELAGSE3L6: Acquire and **use** accurately grade-appropriate conversational, general academic, and domain-specific **vocabulary**, including words and phrases that signal **spatial** and **temporal relationships**.

Learning Target: I can understand the relationships between words.

MGSE3.OA.8 Solve two-step **word problems** using the **four operations**. **Represent** these problems using **equations** with a **letter** standing for the **unknown** quantity. **Assess** the **reasonableness** of answers using **mental computation** and **estimation** strategies including rounding.

Learning Target: I can use strategies to solve problems.

Morning Mantra

**I am a special person
Growing to be great!
I am beautiful inside and out!
Today and everyday
I will learn all I can, to become
all I can
If it is to be, it is really up to
me!!**



Standard:

S2P2. Obtain, evaluate, and communicate information to demonstrate changes in speed and direction using pushes and pulls.

- a. **Plan** and **carry out** an **investigation** to **demonstrate** how **pushing** and **pulling** on an object **affects** the **motion** of the object.
- b. **Design** and **evaluate** a **device** to **change** the speed or direction of an object.
- c. **Record** and **analyze data** to decide if a **design solution works** as intended to change the speed or direction of an object with a push or a pull.

S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.

- a. **Plan** and **carry out** an **investigation** on the **effects** of **balanced** and **unbalanced forces** on an object and **communicate** the results.
- b. **Construct** an **argument** to **support** the **claim** that the **gravitational force** affects the **motion** of an object.
- c. **Ask questions** to **identify** and **explain** the uses of **simple machines** (lever, pulley, wedge, inclined plane, wheel and axle, and screw) and how **forces** are **changed** when simple machines are used to complete tasks.



Learning Target:



I can use the engineering process to investigate, innovate and solve problems.

Standard:

S8P3. Obtain, evaluate, and communicate information about cause and effect relationships between force, mass, and the motion of objects.

a. **Analyze** and **interpret data** to identify **patterns** in the relationships between **speed** and **distance**, and **velocity** and **acceleration**.

(Clarification statement: Students should be able to analyze **motion graphs**, but students should not be expected to calculate changes in velocity or acceleration.)

b. **Construct** an **explanation** from evidence to **describe** the **effects** of **balanced and unbalanced forces** on the **motion** of an object (e.g., **gravity**, **friction**).

c. **Construct** an **argument** from evidence to **support** the **claim** that larger objects require a greater force to accelerate (**inertia**).



Learning Target:

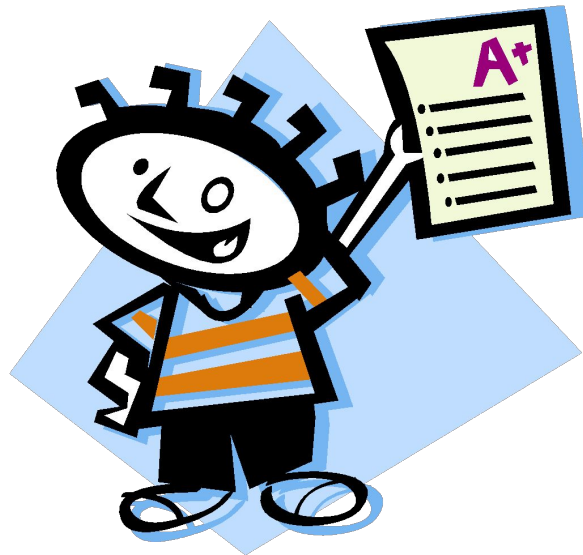


I can use the engineering process to investigate, innovate and solve problems.

Assessment of Learning:

At the end of the lesson, I will be able to:

Use the engineering design process to answer a scientific question to supported by evidence and scientific reasoning.



Engineering Design Process Rubric

	Ask	Imagine	Plan	Create	Improve
5	Student understands the scenario and the design challenge statement. Student is able to answer guiding questions asked on the engineering process contract and follow up assignment.	Student actively participates in brainstorming. Student relates ideas to science concepts learned.	Student has collaborated well with group to create one design. Design meets all specifications given in lesson.	Student has cooperated with group to create a product that matches the design created. Tests product and records data accurately on the engineering process contract.	Student changes one aspect of the design to improve. Student uses data to choose an aspect that will functionally (not aesthetically) change the design.
3	Student understands most of the scenario and the design. Student is able to answer some of the guiding questions asked on the engineering process contract and follow up assignment.	Student participates in brainstorming. Student does not clearly relate ideas to science concepts learned.	Student has collaborated with group to create one design. Design meets some specifications given in lesson.	Student has helped to create a product that does not match the design created. Tests product and records data accurately on the engineering process contract.	Student changes multiple aspects of the design to improve. Or, student does not use data to choose an aspect that will functionally (not aesthetically) change the design.
1	Student does not understand the scenario or the challenge statement. Student is not able to answer the sample questions asked.	Student does not participate in brainstorming. Student does not relate ideas to science concepts learned.	Student has not collaborated with group to create one design. Design meets some specifications given in lesson.	Student has not cooperated with group to create a product that does not matches the design created. Does not test product nor records data accurately on the engineering process contract.	Student changes no aspect of the design to improve. Student does not use data to choose an aspect that will functionally change the design or only changes an aesthetic aspect.
Total Points					

Teacher Feedback:

Your Role: Furniture Designer

- Your Task:

- Create a chair for my teddy bear ☺
- Challenge: Team whose chair can hold Tony at least...
 - 30 seconds =\$100
 - 1min - \$150
 - Can hold Donnie and Marie - \$200



- Constraints:

- 7 sheets of white copy paper (may not cut; ripping and tearing are acceptable)
- Roll of tape
- Timer, if available

S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.

a. **Plan** and **carry out** an **investigation** on the **effects** of **balanced** and **unbalanced forces** on an object and **communicate** the results.

Learning Target: I can use the engineering process to investigate, innovate and solve problems.

**So we made the
chair, now what?**



Now we have to create a claim.
What chair do we think worked
best? What did we notice
during our engineering process
that helped support our claim?
What is the science that helps
support our claim?

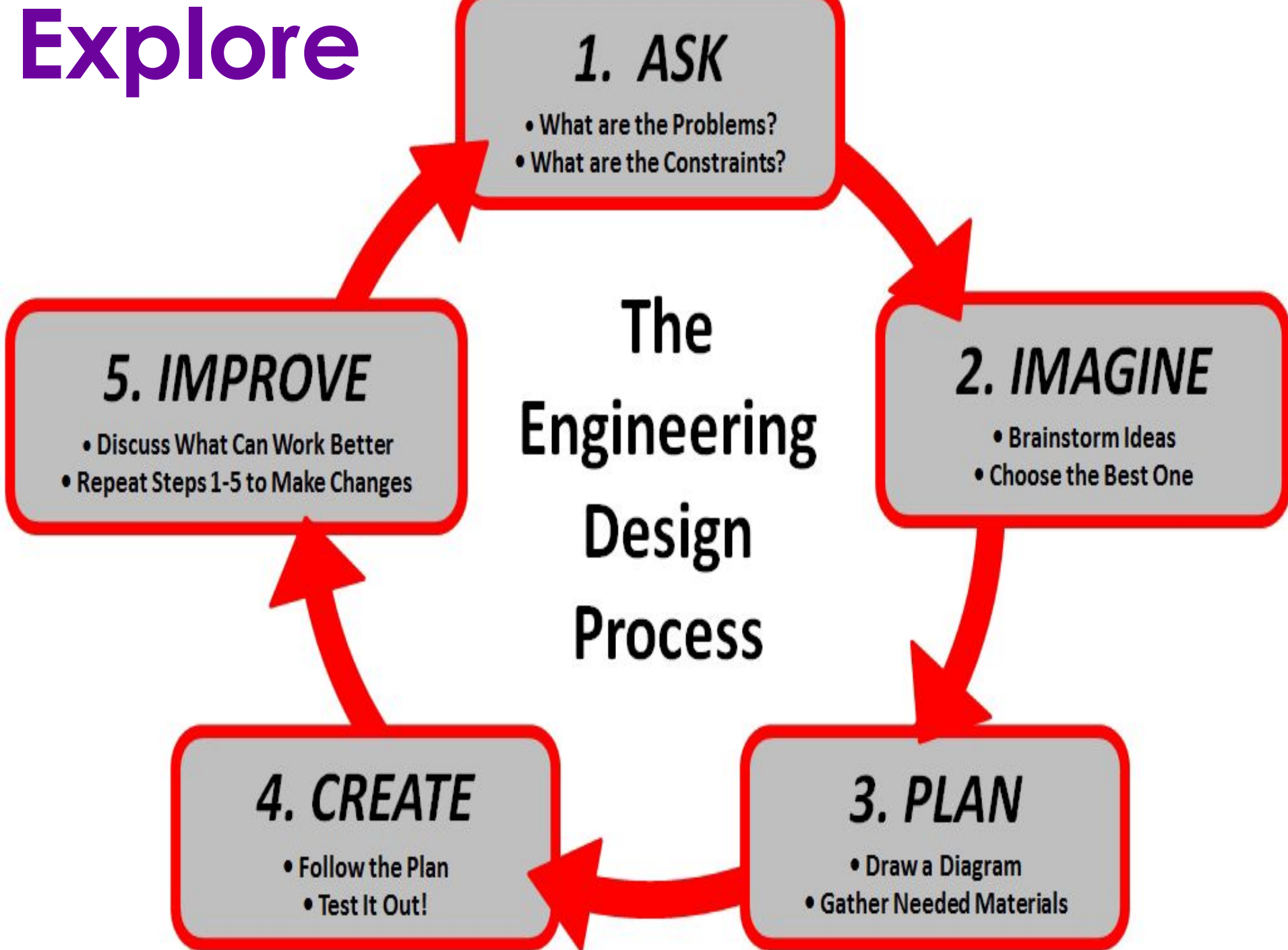


SCIENCE AND ENGINEERING PRACTICES

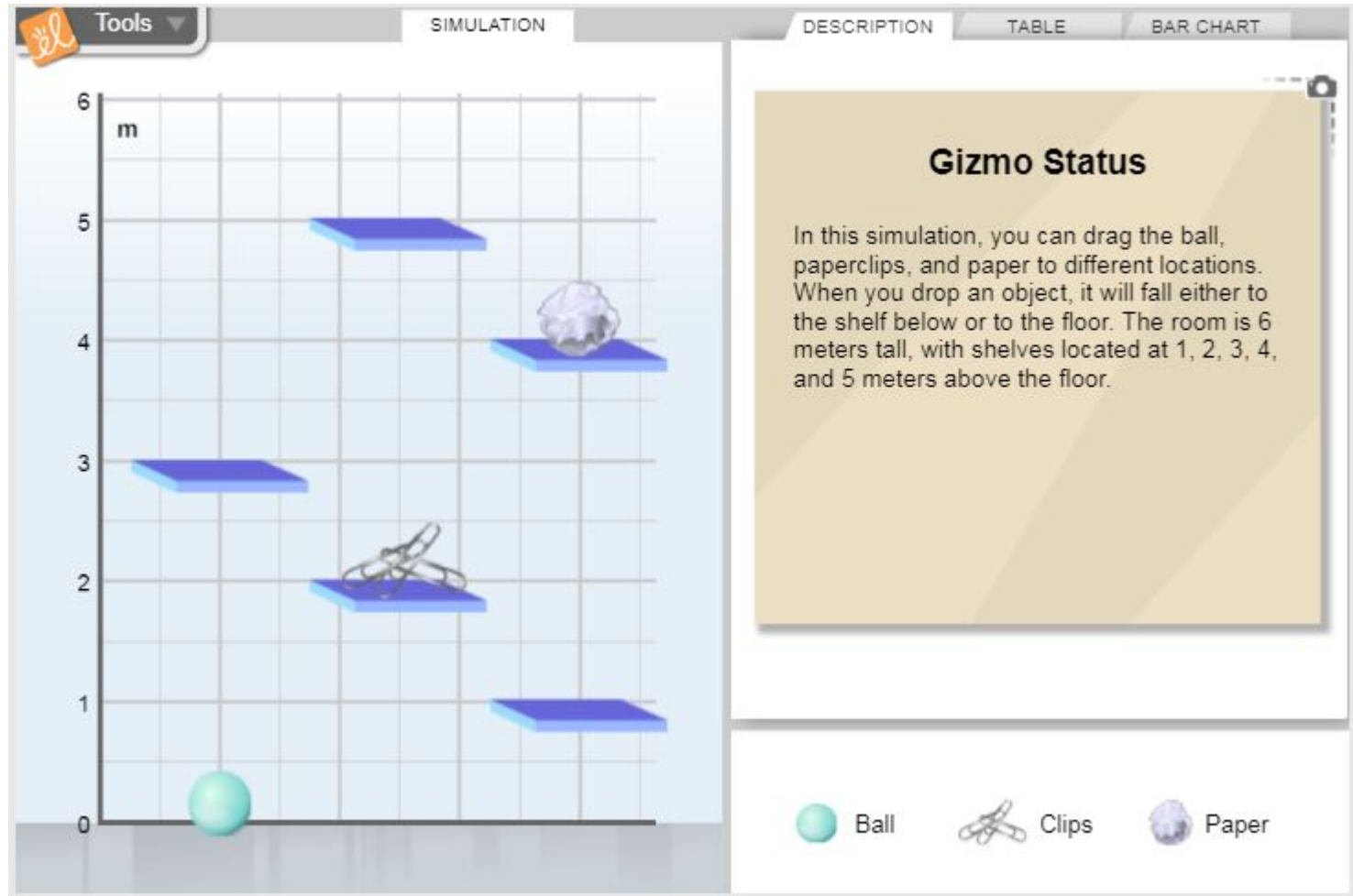


- Asking questions and defining problems
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using math and computational thinking
- Constructing explanations and designing solutions
- Engaging in evidence-based arguments
- Obtaining, evaluating, and communicating information

Explore





Explain





Potential Energy on Shelves Gizmo

Elaborate

Directions: Use the engineering design process to develop a claim to answer the scientific question.

 Task	Criteria & Constraints	 Process
Create a catapult that launches a small eraser the furthest	<ul style="list-style-type: none"><input type="checkbox"/> <u>You</u> may bring in supplies from home (try and recycle used materials!)<input type="checkbox"/> <u>You</u> must use the force of the catapult to launch the eraser (you may not throw the eraser!)<input type="checkbox"/> The catapult must be able to stand upright on its own<input type="checkbox"/> <u>The</u> catapult must touch the ground at all times when the eraser is launched.<input type="checkbox"/> You may not work on this project at home<input type="checkbox"/> It must be no larger than 1 cubic foot	<p>ENGAGE: https://www.youtube.com/watch?v=iGh_BLODpo0</p> <p>EXPLORE: Use the Engineering Design Process to create your task with materials provided</p> <p>EXPLAIN: Use the link and Science text for information. Take notes in your notebook https://tusd.learningpowerschool.com/cwilliams/cuestempresentation/cms_page/view/8263962 .</p> <p>What Science or Math Concepts help construct the best catapult? Include this information in the reasoning section of your Engineering Process Contract.</p> <p>ELABORATE: What would this device be used for today?</p> <p>EVALUATE: Include your learning about Newton's Laws of Motion in the reasoning section of your engineering design process contract.</p>

Elaborate

 Task	How does the car start & stop?	 Process
Create a balloon powered automobile that uses the force of the air exiting the balloon to move the car forward the furthest.	<ul style="list-style-type: none"><input type="checkbox"/> You may only use 1 balloon<input type="checkbox"/> You may not work on this project at home<input type="checkbox"/> It must be no larger than 1 cubic foot<input type="checkbox"/> It must have wheels that touch the ground	<p>ENGAGE: https://www.youtube.com/watch?v=iGh_BLQDp_o0</p> <p>EXPLORE: Use the Engineering Design Process to create your task with materials provided</p> <p>EXPLAIN: Use the link and Science text for information. Take notes in your notebook https://tusd.learning.powerschool.com/cwilliams/nextempresentation/cms_page/view/8264004</p> <p>What Science or Math Concepts help construct the best catapult? Include this information in the reasoning section of your Engineering Process Contract.</p> <p>ELABORATE: What would this device be used for today?</p> <p>EVALUATE: Include your learning around kinetic and potential energy in the reasoning section of your engineering design process contract.</p>

Elaborate



Why does a hot air balloon float?

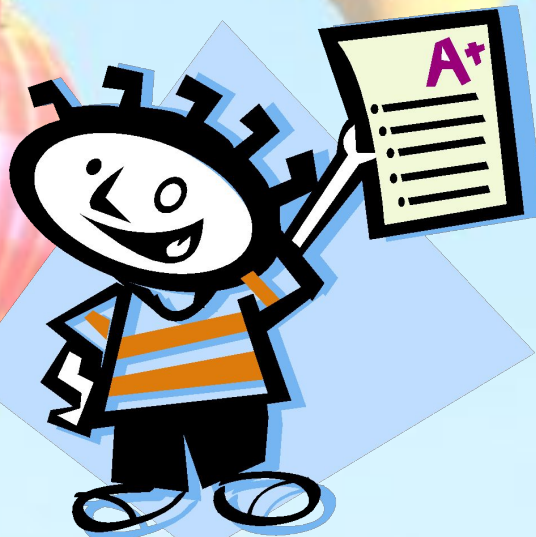


Task	Criteria & Constraints	Teacher Feedback
Design a hot air balloon that floats the highest.	<p>You must only use the materials provided</p> <ul style="list-style-type: none">• 10 pieces of tissue paper• 1 piece of construction paper• glue stick• scissors <p>You must follow safety rules at all times</p> <p>You must attach a string when competing to retrieve your balloon and help measure the height</p>	<p>ENGAGE: https://tusd.learning.powerschool.com/cwilliams/cuestempresentation/cms_page/view/8264322</p> <p>EXPLORE: Use the Engineering Design Process to create your task with materials provided</p> <p>EXPLAIN: Use the link above and Science text for information. Take notes in your notebook. What Science or Math Concepts help construct the best hot air balloon? Include this information in the reasoning section of your Engineering Process Contract.</p> <p>ELABORATE: How does understanding density affect us <u>everyday</u>?</p> <p>EVALUATE: Include your learning around density in the reasoning section of your engineering design process contract</p>

Assessment of Learning:

At the end of the lesson, I will be able to:

Use the engineering design process
to answer a scientific question to
supported by evidence and scientific
reasoning.



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Total Points					

Teacher Feedback:



Instagram

Reflect on Today's Performance:

Did I meet the target? Why or Why not?

What part of the standard do I still not understand?

How can I improve to become Fly to the Moon?

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and **carry out** an **investigation** on the **effects** of **balanced** and **unbalanced forces** on an object and **communicate** the results.
Learning Target: I can use the engineering process to investigate, innovate and solve problems.



**GoNoodle
is a website with
interactive
games & videos
that help kids focus.**

**Sign up for free at
www.gonoodle.com!**

Moment of Movement

Tech Time

20 minutes

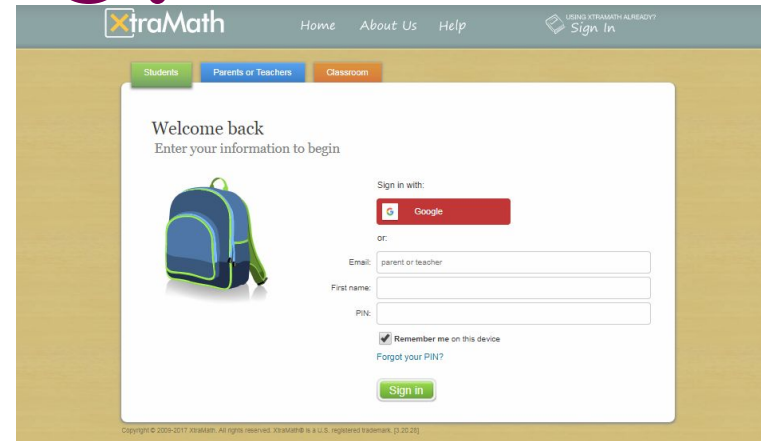
Must Do:

Join our new Gifted
Google Classroom

q97woj

Complete Google Classroom Assignments:

1. Communicate (Claim Evidence Reasoning)
2. Potential Energy Gizmo
3. Unanswered Questions of the Day



tiffanie.barner@clayton.k12.ga.us

May Do:

Class Code: BF0356

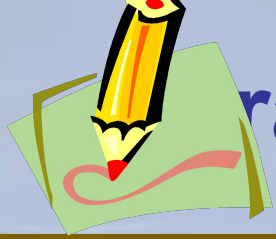


prodigygame.com

Class Code: FVCTWGK



JogNog helps students remember!



Practice Period Expectations

Contract Work/Daily 5/Daily 3



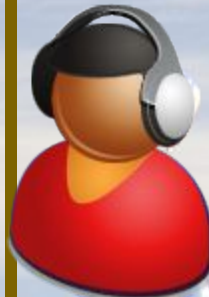
Expectations to BEGIN Practice Period:

- Choose your work area carefully
- Avoid distractions
- Move quickly to your work area and get started immediately
- Avoid making off task noises.
- Make sure your voice doesn't get louder than the music

Choose your partners

Stay in work area until

the timer sounds



Expectations to END Practice Period: When you hear the TIMER:

- Clean area quickly & quietly
- Power Up
- Wait for teacher directions

At the last rotation

- Return materials
- Go to seats

School
days



Engineering Process Contract – Teddy Bear Chair
GIZMO

YES

NO



Class Meeting

Gifted Strands: Problem Solving, Group Dynamics, Self Science



Class Meeting Agenda

- Class Announcements & Reminders
 - Barner's Best Buy after Spring Break



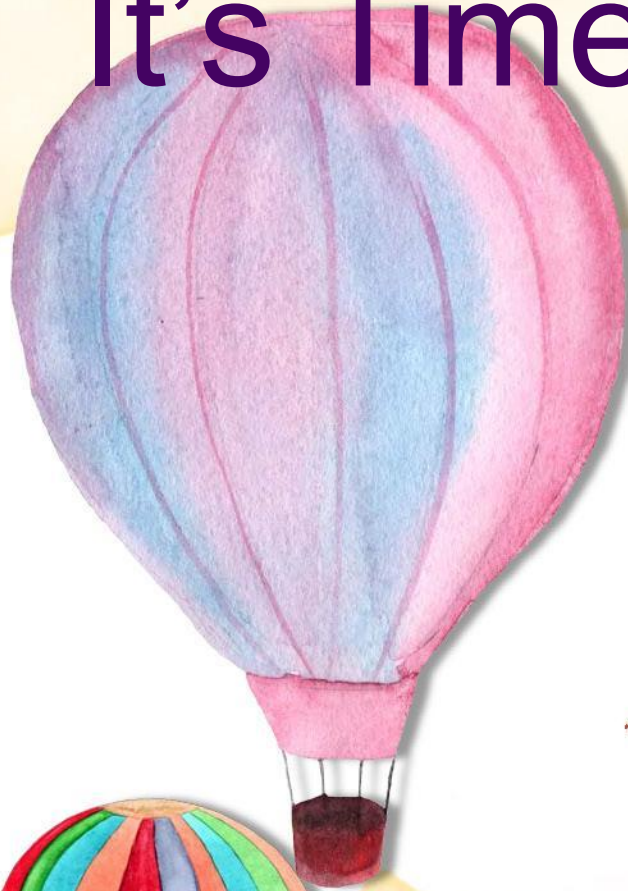
Gifted Strands: Problem Solving, Group Dynamics

Compliments and Challenges

- Compliment Box
 - Place compliments in the box
 - Write a positive note about someone in the class
 - Can be anonymous
 - **Consider S.O.A.R.**
- Challenges: **Self Science/Group Dynamics Strands**
 - Write down issues that are seen in the class
 - For example: classroom messy, people not finishing more time, excessive teasing
- ◆ **Thoughtful Thinking Ticket Drawing**

Gifted Strands: Problem Solving, Group Dynamics, Self Science

It's Time for some R&R!!



Standards:

ELAGSE4RL1: Refer to **details** and **examples** in a text when **explaining** what the text says **explicitly** and when drawing **inferences** from the text.

ELAGSE4RL3: **Describe** in depth a **character**, **setting** or **event** in a story or drama drawing on specific details in the text (e.g. **a character's thoughts, words or actions**)

ELAGSE4SL1: **Engage** effectively in a range of **collaborative** discussions (one-on-one, in groups, teacher led) with **diverse** partners on grade level topics and texts **building on other's ideas** and **expressing** their own clearly.

Learning Target: I can express and support my inferences during discussion.