

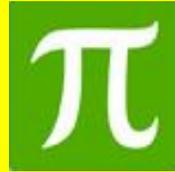
Stem

Student packet



Name _____

Section _____



STEM Vocabulary

Force:

Mass:

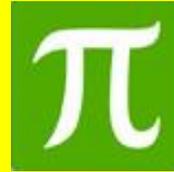
Weight:

Gravity:

Action Force:

Reaction Force:

Balanced Force:



STEM – Stick Bridge Simulation

Building Background Knowledge

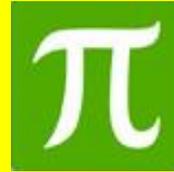
Working Packet

Directions: Watch the assigned YouTube videos and do the assigned IXL. After watching the assigned videos, respond to the following questions below.

Respond

1. When you stand on the earth, you are not pulled down through the crust. You are applying a force on the earth just by standing on it. Considering forces, what is the most likely reason you do not sink through the Earth nor go flying into space?

2. Provide 3 examples of scenarios where you can observe forces that are “balanced.” Explain why these forces are balanced.



STEM – Stick Bridge Simulation

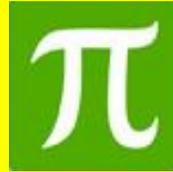
Research	Working Packet
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Group # _____	Section: _____
Student Name: _____	
Partner's Name: _____	

Challenge: Create a popsicle stick bridge using only the sticks, glue, and/or tape, that is able to supporting increasing 1-, 2-, and 3-lbs. weights without collapsing.

Research

(Sources: **Science Notebook, Elevate Science Textbook, and/or Discovery Education.** Note the **sources** you used, including **page numbers, titles, and/or links** in the provided space below.)



Group # _____

Section: _____

Student Name: _____

Partner's Name: _____

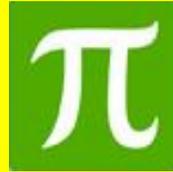
Give your project a title:

Design the Prototype

(Create a labeled diagram of your prototype.)

Materials

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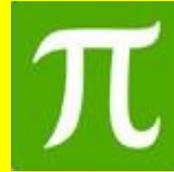


Group # _____ Section: _____

Student Name: _____

Partner's Name: _____

Test your Prototype - Collect your Data



Group # _____

Section: _____

Student Name: _____

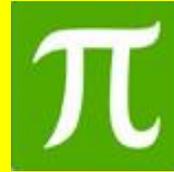
Partner's Name: _____

Improve the Prototype

(Re-design your Prototype. Create a labeled diagram of your improved prototype.)

Materials

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Group # _____

Section: _____

Student Name: _____

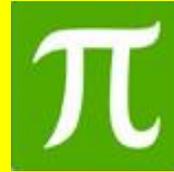
Partner's Name: _____

Reflection Questions

1. In what way did you improve your prototype?

2. Do you expect the improved prototype to pass the challenge?
Why?

3. What did you learn? Discuss your success or lack of success and reasons for it.



Make a Movie – Use (*iMovie, Keynote, Flip, Canva, etc.*) to create a video/presentation following the instructions below. Share the movie or presentation on **Seesaw**.

Instructions: Record and submit a video of yourself and your team answering the following questions:

1. What was the title of your project?
2. What was your project about?
3. What were your findings during the research?
4. Which materials did you use from the available ones?
5. Did your prototype pass the challenge?
6. Why did your prototype pass or did not pass the challenge?
7. A. If YES to question #5, skip question #7!
B. If NO to question #5, what changes did you make to your prototype? Did it pass the challenge after you improved it?
8. What would you like the next STEM project to be on?
9. Add pictures and video that you recorded during the project in your presentation.

