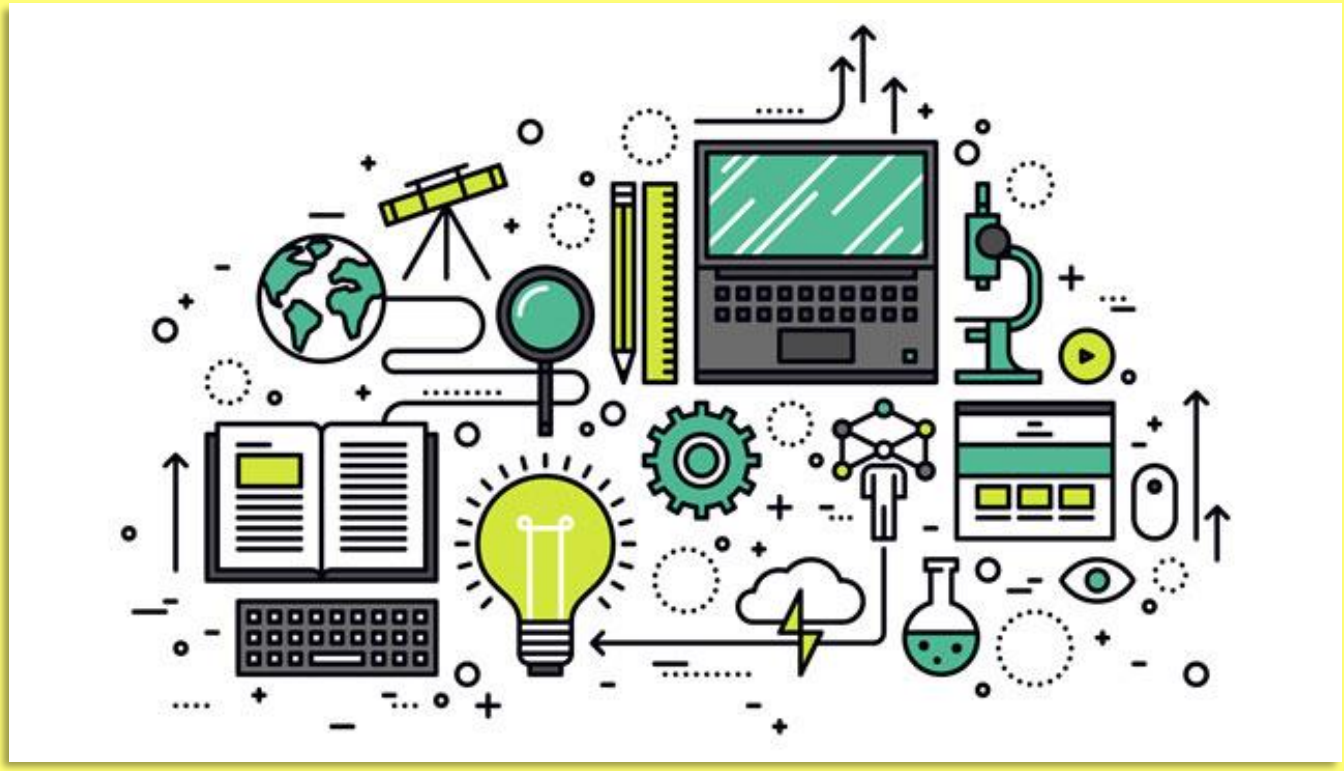
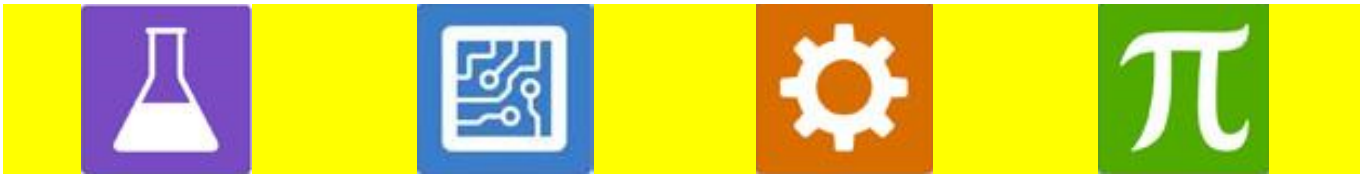
Stem

Student packet



Name _____

Section _____



STEM Vocabulary

DEFINE THE FOLLOWING:

Force:

Gravity:

Mass:

Weight:

Velocity:

Acceleration:

STEM- LUNAR LANDER

Building Background Knowledge **Working Packet**

Directions: * Watch the YouTube video included in the Powerpoint, or you can click here: https://www.youtube.com/watch?v=H9YMqx5T9Sk. After watching this video, come back to this page and answer the following questions related to the video. Complete the IXLs and use the definitions you have researched above to answer the following questions.

Respond

1. How does the mass of an object affect its gravitational pull? Do we (humans) exert gravity?

2. What is the direction in which gravity pulls us on earth? What is the direction of this force? In what direction is the opposing force of earth's pull?

3. What is the difference between acceleration and velocity? How is this related to gravity?

STEM- LUNAR LANDER

Research **Working Packet**

Group #_____ **Section: _____**
Student Name: _____
Partner's Name: _____
_____

Challenge:

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

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

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.