Space

Remote Learning Lesson

April 28, 2020

Hello fourth graders! We hope you are ready for a hands-on day of learning in TAG! Today you will become **engineers** as you use the design process, also known as the engineering process, during an egg drop! You might be thinking, what does this have to do with our Space unit? Well, there are engineers at NASA that are designing rovers to land on Mars. They have to use the design process and take many factors into consideration when designing their rovers. What will they be made of? How will they land them on Mars safely? How will gravity, or the lack there of, affect their landing? How will the surface of Mars affect the landing?

You can learn about the next Mars rover, Perseverance, here. Did you know that a seventh grader named it? He did! He won a contest that NASA held for naming the rover. Watch a video about the seventh grader who came up with the name Perseverance here!

Our EQ for this lesson is: How might we use the design process (similar to the engineering process) to protect an egg from a 5' drop using only three materials?

If you haven't seen Mrs. Waller's egg drop video from April 21st on the Colt News Network, please watch it here.

Then, talk to your family and see if they can spare an egg. If not, you may design and build your container and then drop your egg at a later date. Or, you may choose another fragile item instead of an egg to drop. For example, a water balloon would work well, but please don't use your family's fine china. 😉

Use the design/engineering process as you plan and create a way to protect an egg (or another fragile item) from a 5' drop. What's the design process or engineering process? Watch this video to learn how some students used it to solve a problem at the grocery store.

Looks like fun, doesn't it?

Next, follow the steps on our Design/Engineering worksheets. You'll see them below, just keep scrolling.

If you'd like to upload a picture of your engineering worksheets or photos of your final design, we'd love to see them. Or, you could upload a video of your actual egg drop. You can share them with us in your Seesaw journals or in your MS Teams folder. Or, you can just tell us about your successes and or challenges during our next Teams meeting.

Have fun designing engineers!

The Design or Engineering Process

What **problem** am I trying to solve? _____

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Brainstorm possible solutions. Circle the one you think is the best.

Plan: Draw and label your best idea. Gather materials. Remember, you may only use 3 different materials!

Create and test, making modifications along the way!

Drop your egg (or fragile item) from a 5' height.

Brainstorm changes to **improve** your creation.

Reflect: What went well? What would you do differently next time?_____

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