

WHAT ARE WE INVESTIGATING?

Can you build a container to protect your egg or chip so that it doesn't crack when you drop it?

MATERIALS:

- Hard Boiled Egg/Pringle or other Chip/Uncooked Spaghetti
- Cardboard
- Tape
- Tissue Paper/Notebook Paper/Construction Paper
- Cotton Balls
- Bubble Wrap/Packing Peanuts
- Fabric
- Scissors
- Strive Academy's Engineering Design Process Handout (found at www.striveacademy.org)
- Pencil or Pen

EXTENSION:

- * Try this variable - use the same container but try different foods in it to test.
- * Try this variable - build a container out of just paper and tape and build another container out of just plastic and tape. See which one works better.
- * Try this variable - drop the same container from different heights and see if height affects your food breaking or not.

Don't Crack the Egg/Chip!

DIRECTIONS:

1. Gather all your materials. Our materials are just suggestions - feel free to add other things too!
2. On your handout (found at www.striveacademy.org), fill in the title of your experiment (Don't Crack the Egg/Chip!).
3. On your handout, fill in your hypothesis. You want to answer the question: Can I build a protective container around my egg or chip so that when I drop it, it doesn't break?
4. On your handout, draw a sketch of what your protective container will look like. Don't forget to show your egg/chip inside! Feel free to use color and label your materials.
5. Using your materials, build a protective container for your egg or chip. Don't forget to put your egg or chip inside as you build around it!
6. Under "Data Collection/Observation", draw a picture of your final protective container. Feel free to use color!
7. Stand on top of a chair (ask your parents for help), hold your container up high, and countdown from 10. At the end of your countdown, let go of your container.
8. Open your container and inspect your egg or chip.
9. Under "Results", draw a picture of what your egg or chip looks like after you have dropped it.
10. Answer the "Analysis" questions on your handout:
 - How did your egg or chip compare before and after you dropped it?
 - Which material do you think helped protect your egg or chip the best?
 - Which material do you think was not good at protecting your egg or chip?

**** Try the extension activities on the first page for more fun! ****