

BUILD:

Exploring Gravity: Parachute, Egg Drop Challenge

CHALLENGE: **Parachutes** are used to land objects and people, slowly and safely to the ground after being dropped from soaring heights. They are made of cloth or other lightweight materials and create air resistance. This helps objects float slowly and safely to the ground. Parachutes are most commonly used as emergency escape devices, or for adventurous sports like skydiving! Can you build a parachute out of household materials that will gently land an egg safely to the ground?

BIG IDEA: Did you know that gravity is what keeps us grounded and not floating away into space? Earth's gravity also determines that when an object goes into the air, it will eventually come back down to the ground. Before you start creating, try comparing the difference in time it takes for a light object, and a heavy object to hit the ground. For example, drop a piece of paper and a metal fork at the same time. Which one falls to the ground faster? One will fall faster than the other!



Materials:

1 egg (hard boiled is best and less messy) or a 1 small toy if you don't have an egg.

Plastic grocery bag – for parachute body

If you can't find a bag, you can use tissue paper, a coffee filter or a paper towel

String or yarn, pipe cleaners, shoe laces, etc – to attach parachute body and basket together

Small plastic cup or paper or foil to create a basket to hold your egg or small object

Tape

Hole punch or scissors

INSTRUCTIONS:

1. Collect materials from around your house to create your parachute.
2. Cut a circle out of the grocery bag
3. Cut your string into four even pieces, each one about 12 inches long.
4. Make a small hole on four corners of the circle and tie a piece of string to each hole.
5. Make a "basket" to hold your egg with paper, foil or use a plastic cup.
6. Use scissors or a hole punch to puncture holes in the basket you created.
7. Tie the other ends of the strings to your basket. Be sure the strings aren't tangled!
8. Drop your parachute from mid-air and watch it carry your egg safely to the ground!



Want to know more?:

https://youtu.be/Ab_g5sLoXoY - Playtime with Parachutes

<https://youtu.be/mfZu4fzrylY> - History of a Parachute

WE WANT TO SEE & SHARE YOUR CREATIONS!

Send us a picture or video by January 4, 2021 and be entered into a drawing for a gift card! Three ways to share:

1. Tweet us using the hashtag #aBitofSTEM
2. Text us at 314-285-9663
3. Use this google form and we'll show off your creation. [Submit Here](#) (tinyurl.com/STLsubmit)

For more challenges visit: STEMchallenges.wustl.edu