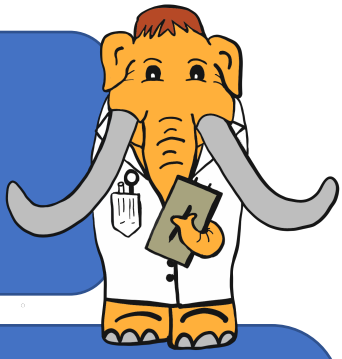
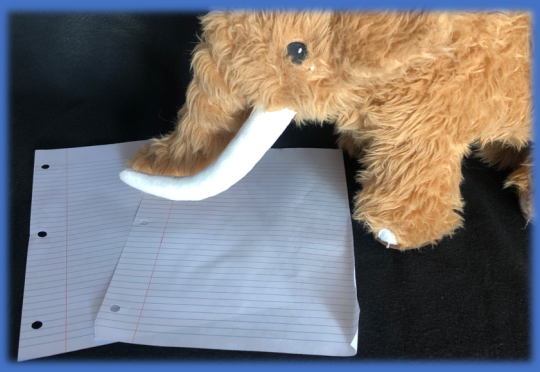
Science Saturday @ Home
The Feather Problem





Gathering Supplies:

2 Pieces of Paper
(same type and size of paper)

Why does the shape of an object change how fast it falls?

How To Steps:

1. Take two piece of the same type of paper. Leave one flat and crumple the other into a paper ball.
2. Hold both pieces out at arms length or a little higher, and drop them at the same time. What happens? Why would one fall slower than the other?

Did You Know?

When you are standing on the earth and drop a heavy rock and a light feather, the feather will slowly float to the ground while the rock just drops. Why does the feather fall slower than the rock? The earth has the same gravitational pull on both objects. So what would slow the feather or your flat piece of paper as it falls? The answer is AIR! Objects falling through air experience a force called drag. Drag is the force of the air pushing against an object as it falls. Objects with very small surface areas, like a rock, experience less drag and can fall faster. Objects with large surface areas, like parachutes, experience lots of drag which slows their fall to the ground.

What would happen to a heavy object and a feather if there was no air? Check out the NASA video of Commander David Scott doing the Hammer and Feather drop on the moon https://moon.nasa.gov/resources/331/the-apollo-15-hammer-feather-drop/ or the BBC video https://youtu.be/E43-CfukEgs to see a bowling ball and feather drop in a vacuum!

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