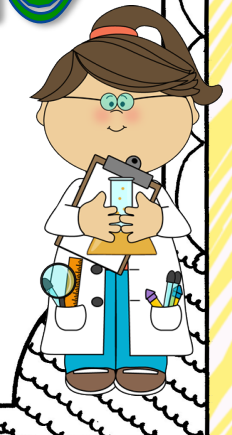


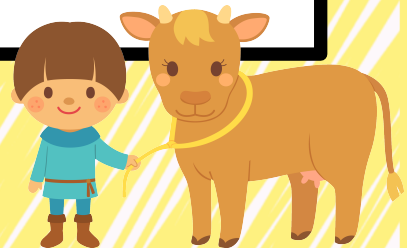
More
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Grades 3-5

Fairy Tale STEM Jack and the Parachute

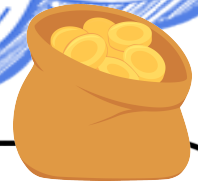


Build a parachute to help Jack
escape the giant!





Jack and the Parachute!



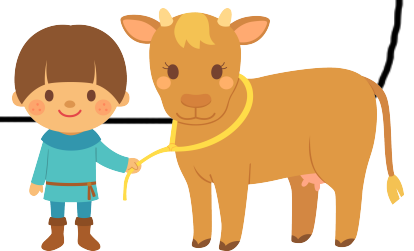
Oh no! Jack has done it again. He can't resist magic beans, and he is once again being pursued by the giant. The giant, having learned from past mistakes, has lined the beanstalk with barbed wire. Jack needs another plan of escape. That's where YOU come in.

Your task: Build Jack a parachute to help him escape the giant.

Requirements:

- *Your parachute must be made from some type of paper product.
- *Be sure to include string or some other way to attach the parachute.
- *You must attach your parachute to "Jack" yourself.

***Goal:** Your parachute should hold Jack in the air longer than the control drop.



Name _____ Date _____



Jack and the Parachute



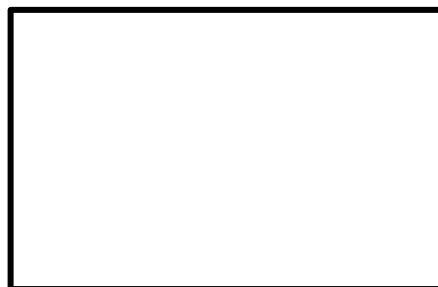
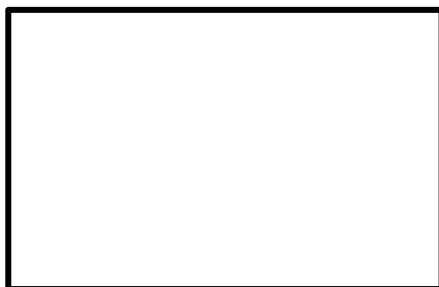
Plan:

I plan to build my parachute out of _____
because _____
_____.

Sketch a diagram of your parachute.

Be sure to label your diagram.

Record the materials you used:



A control is a test before you actually experiment. Nothing has been changed or added. In this case, you will be dropping Jack without a parachute. (Poor Jack!)

Control: Drop Jack from a designated height.

Jack's fall time without parachute _____

It is important to repeat experiments whenever possible. This way you know your results are true and not just a one-time occurrence.

Test: Drop Jack from the same height as your control experiment.

	Trial 1	Trial 2	Trial 3
Time			
Difference from Control			

Analyze Data: Find the difference between the control drop time and each of your trials. If your trials are a longer time than the control, this means your parachute worked! Report your findings below:

Reflection: Think about what was and was not successful about your parachute. If you were to create another parachute. What would you do differently? What would you keep the same?





Jack and the Parachute Teacher Guide



Suggested Time Frame:

5 minutes to explain

5 minutes to plan on paper and discuss with group (without materials)

20 minutes to construct parachute

20 minutes to test parachutes

*have students complete form while others are testing

You will need :

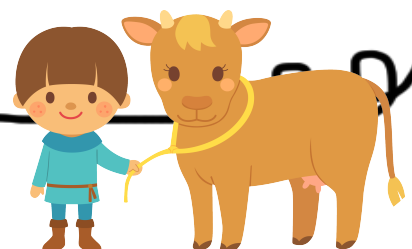
- a high place to drop parachutes from (an outside balcony, the top of the slide, etc...)
- small action figure, Lego man, figurine, etc... to be "Jack"
- timer with milliseconds
- assortment of parachute materials

Material Ideas :

- copy paper
- newspaper
- paper bags
- coffee filters
- paper towels
- paper plates
- tissues
- string
- rubber bands
- dental floss

Notes:

- To test the parachutes, first drop "Jack" without a parachute and time how long it takes for him to hit the ground. (You will definitely need a timer with milliseconds for this.)
- Then, drop Jack with parachute from the exact same spot and time. The goal is for Jack to stay in the air longer than he did without the parachute.
- Extension Ideas: You may choose to pose it as a competition: **Who can keep Jack in the air the longest?** Or you may have a target on the ground and test: **Which parachute gets Jack closest to the target?**





coffee filter
+ yarn



tissue paper
+ dental floss

Example Parachutes:

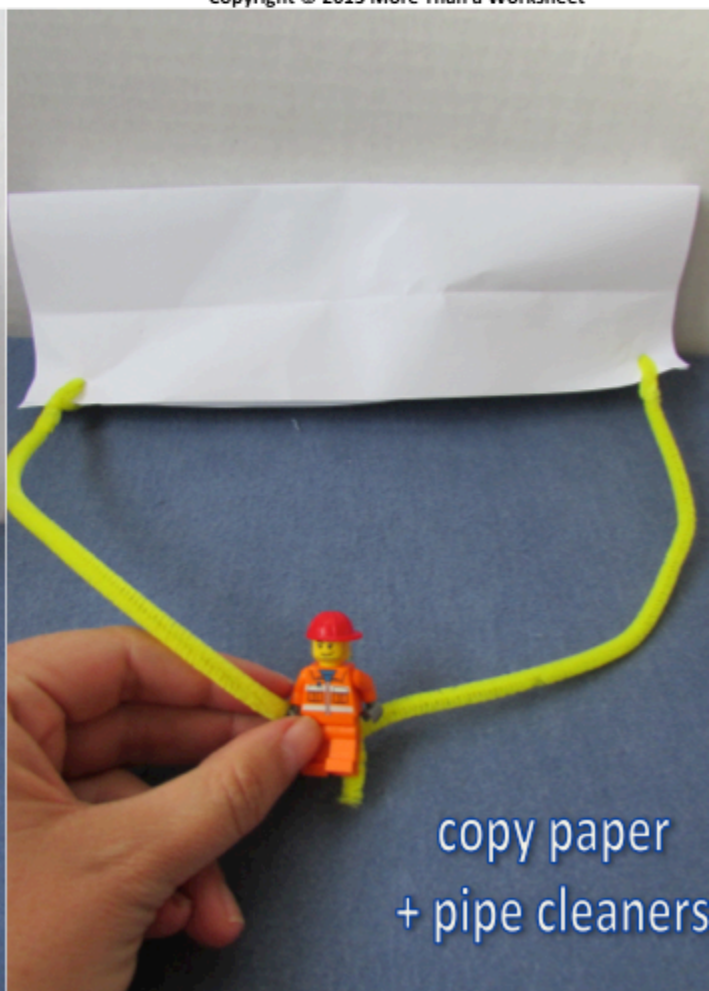
Note:

These pictures are for your use as a teacher. I recommend NOT showing the pictures to students beforehand. When they see a picture, they are likely to imitate what they see. If you just set them free, they will be much more creative and inventive!

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newspaper
+ yarn



copy paper
+ pipe cleaners

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Many Thanks!

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