



Try these fun **Fairy-tale** science experiments at home with your own children. Aimed at the 3 – 7 age range but fun for all. Read the story first to give context. Easy peasy and fun!

## Design a raft for The Three Billy Goat's Gruff

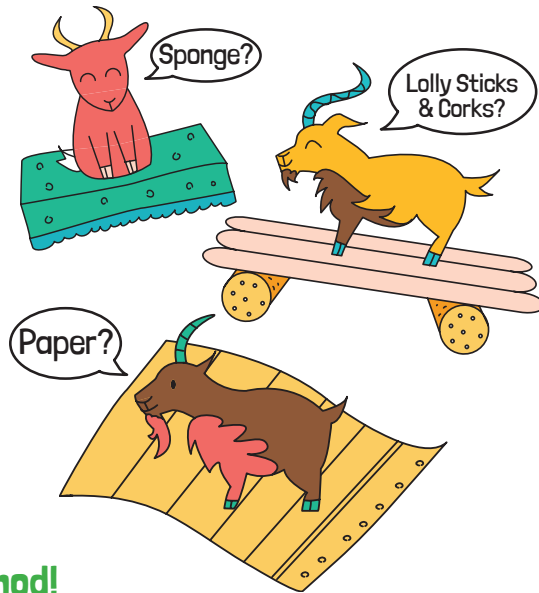
Read the story or retell it in your own words. Present the problem to your child/ren – the Three Billy Goat's Gruff need you to design them a raft to cross the stream so they don't have to cross the bridge. What materials will you use?

### Materials!

- Kitchen sponge    Corks
- Glue/Double sided tape    Paper
- Kitchen roll    Lolly Sticks
- Toy Goat (we used our Playmobil Animals.)
- Washing up bowl (rectangular type ...or sink/bath!)

I think that \_\_\_\_\_ will be the best material because \_\_\_\_\_

I think that \_\_\_\_\_ will sink.



### Method!

Using the different materials and a washing up bowl, or a sink, carry out your investigation.

😊 The best raft material was \_\_\_\_\_ 😞 The worst was \_\_\_\_\_

Ask your children to explain WHY they think this happened.

### Extra Activities!

- Use a straw to blow the boats across a calm surface of water, what happens when you blow gently and then with more force?
- Does the boat move faster if you blow the air close to the boat or far away?
- Can you use the straw to create waves across the water?

GRR! THEY GOT AWAY!



## Make a bridge for The Gingerbread Man

Read the story or retell it in your own words. Help the Gingerbread man escape from the wicked fox by building him a bridge!

### Materials!

- LEGO    Lolly sticks    Sticks
- Straws    Paper    Card
- Scales    Anything else you want to test!

I think that the best material for the bridge will be \_\_\_\_\_ because \_\_\_\_\_



### Method!

Build rests for your bridge, we used LEGO, but you could use cardboard or anything else that would work.

1. Place your materials you want to test on the rests and add some weight.
2. Add more weight until the bridge breaks.
3. Observe what happens.
4. Repeat for your next material.

### Things to think about!

Make sure you use the same weight to test each bridge. Each bridge should be roughly the same size to make it a fair test. Can you record the weight at which each bridge first starts to bend and the weight at which it breaks completely?

I found out that \_\_\_\_\_ because \_\_\_\_\_

A collaboration between





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# Jack and The Beanstalk

Read the story or retell it in your own words.  
Can you help Jack to grow his beanstalk?

## Materials!

- A broad bean seed
- Jar
- Kitchen roll or a napkin
- Water

I think that plants need \_\_\_\_\_  
and \_\_\_\_\_  
and \_\_\_\_\_  
to grow.



## Method!

1. Swirl a small amount of water around the jar.
2. Fold your napkin or kitchen roll and place in the jar. ( we made the kitchen roll very slightly damp also )
3. Place the bean seed in the jar resting on the napkin.
4. Spray some water on the bean every few days.

The bean should start to grow roots after a few days, this is called germination.

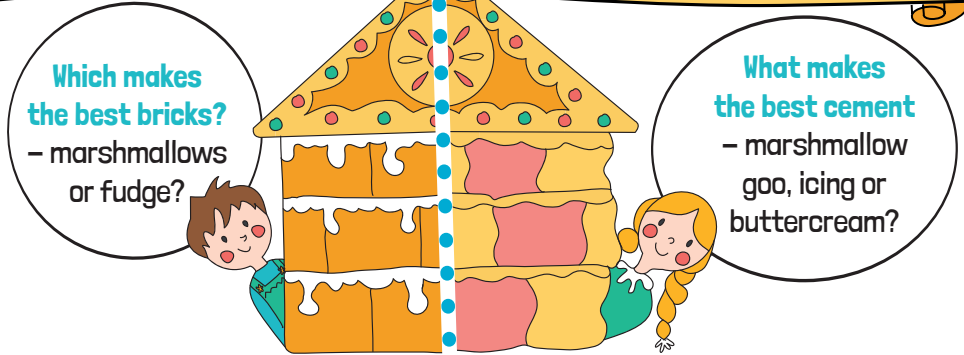
## What did you find?

I found out that \_\_\_\_\_ because \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(We kept one bean in the dark and one in the light, both germinated and grew into small bean plants. This shows that light is not necessary for germination.)

# Make Your Own Witches House! – Hansel and Gretel

An experiment which looks at the properties of different sweetie type materials!  
Read the story or retell it in your own words. Can you make your own sweetie house?



I think that \_\_\_\_\_ will make the best bricks  
because \_\_\_\_\_  
I think that \_\_\_\_\_  
will make the best cement because \_\_\_\_\_

## Method!

1. Try a variety and combinations of these materials and leave overnight to harden, see which makes the best wall.
2. Complete your house with roof tiles made from either biscuits or chocolate thins!

## What did you find?

I found out that \_\_\_\_\_ because \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_