The Gingerbread Man, the Goat and the Wolf have reached the river and need to get to the other side. The boat however is broken.

Can you mend the boat and then work out how to get everyone across? There are some rules that need to be followed to make sure no one gets eaten in this activity!

TO DO:

1. Build the boat: Build a boat out of plasticine (or a sheet of tinfoil) to carry as much weight (coins) as possible. Use the plasticine/tinfoil to make a boat shape that floats on water. Then load it up with coins. What is the most amount of coins your boat can carry? You only have a fixed amount of plasticine/tinfoil, so keep adjusting it, changing the shape and improving it. How many coins did you manage? Could you challenge someone to a competition, using the same amount of plasticine. Can you beat their number of coins?

2. Cross the River: Write down the steps to get the gingerbread man, the wolf and the goat across the river safely. There are rules below that you need to follow.

FOR THE BOAT YOU WILL NEED:

- Selection of coins
- Golf ball sized piece of plasticine / playdoh or a sheet of tinfoil
- Sink or bowl of water
- Print out of the ‘rules’ for crossing the river
- Something to represent a wolf, a goat, a gingerbread and the river.
(These could be building blocks and a piece of paper for the river.)
Gingerbread Man Activity

Rules to be Followed for the Crossing-the-River Puzzle:
The boat has a captain. He can only carry one person across the river at once. You have a goat, a wolf and a gingerbread who all need to cross. Can you use the following to work out the steps to get everyone safely across the river? Who will go first, who do you have to bring back? Don't leave some of these characters together on the bank of the river, or someone might get eaten! Read the rules VERY CAREFULLY!

1. The captain can only carry one passenger or less
2. The goat will eat the gingerbread if left alone together
3. The wolf will eat the goat if left alone together

STEM in the Story:
Why not listen to the story again. Are there any words you do not understand? How about the word Apprentice? Could you find out what that means?

Talk to your Little Engineers About:
How to improve the boat to carry more coins.
How can you work out the logic problem – is there a clear way to find out the right steps?

Why Not Think About:
Having a competition with two or more people to see whose boat can carry the most coins? Make sure each person has the same amount of plasticine and coins or it will not be a fair test!

Need inspiration? Then look at our STEM Ambassadors examples!

Follow on Activity:
Have a look for some other logic problems or brain teasers. Use your problem solving skills to work out some puzzles or even get stuck into a particularly tricky jigsaw. Engineers need to be very logical when solving problems and pay attention to detail. For example engineers need to make sure that all the traffic lights at a busy junction don’t go green all at once! Could you be a programmer or a safety engineer, using your problem solving skills to keep everyone safe?

Take Care:
In all of these activities please make sure you are working safely. Please have fun but supervise your children to make sure your environment is safe and you take care with any craft equipment or materials you are using. Engineers and Scientists always do!

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