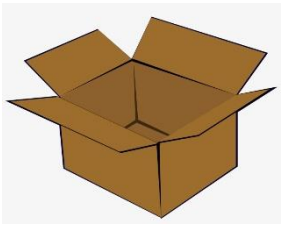
Science Activity

Spaghetti towers

Time to prepare: 5 minutes



 Please, stay safe and ask a grown up to supervise you

Resources/ things you need

- Packet of spaghetti (uncooked)
- Packet of marshmallows

What to do

1. Decide what shape you would like your tower to be. Remember that it needs to be strong so that it stays standing!
2. Use marshmallows to join lengths of spaghetti together to make the tallest tower possible. (You might start by building a simple cube and then see what you need to do to make it taller but still just as sturdy.)
3. If your tower falls down, think about why it is falling and how you could change it to make it stronger. What shapes are best to use? Could you change anything about the spaghetti or marshmallows to make it easier?

Background and the link to learning

Testing materials and structures is an important part of building things like buildings and bridges.

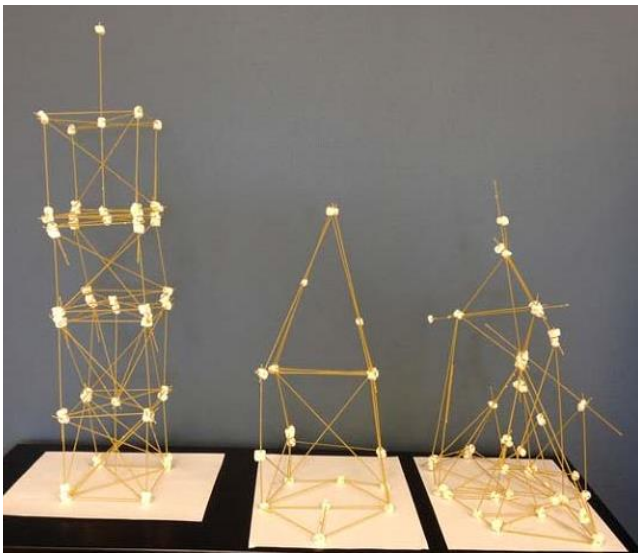
A good structure needs to be stiff and strong - that means it takes a lot of force before it bends or collapses. A tall tower will have a lot of weight pushing down on it from above, so the base needs to be stronger than the top.

Some shapes are better for building structures than others. Any shape made of more than 3 straight sides can be bent out of shape easily. Triangles cannot change shape like this so, if you make structures based on triangles instead of a squares, you can apply more force and it will still keep its shape.

To challenge yourself further:

- Instead of building a tall tower, you could try to build the strongest bridge from spaghetti and marshmallows.

Pictures



• You could limit the amount of spaghetti and number of marshmallows to make the task more difficult. • You could have a budget with which to 'buy' spaghetti and marshmallows and make the 'cost' of the tower another challenge to consider.	

Link to other similar activities – Please see build a boat, giant bubbles and material treasure hunt.