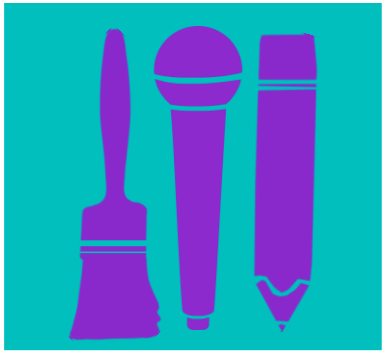
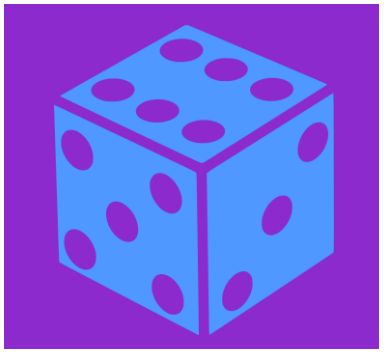
SPIRIT OF INNOVATION

STEAM RESOURCES

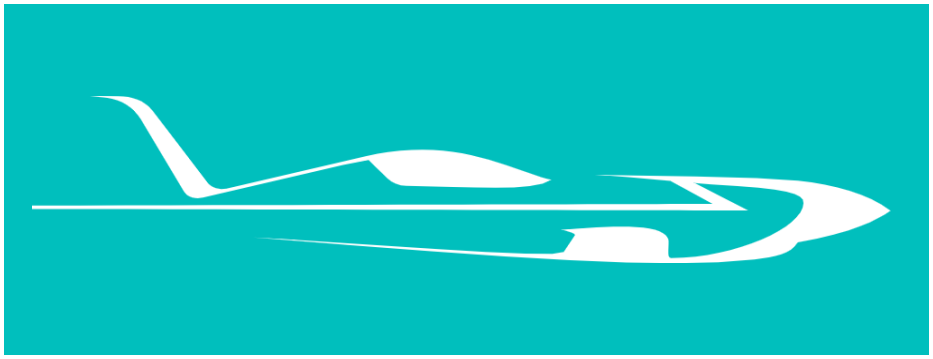


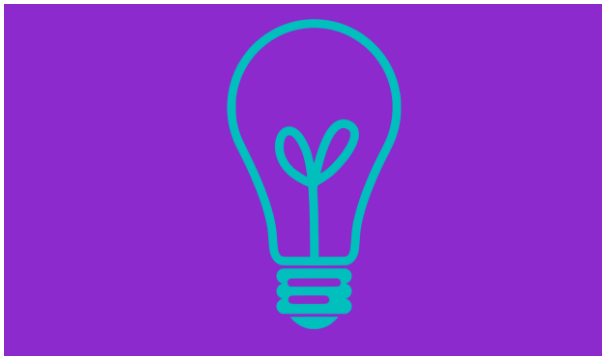


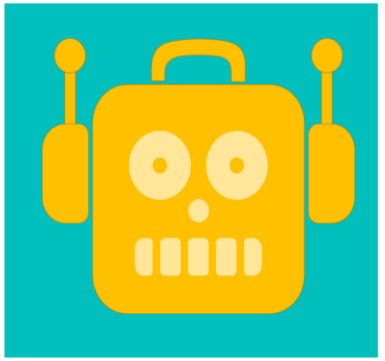
Spirit of Innovation

Year Three

Data Collection - Weather

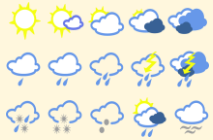






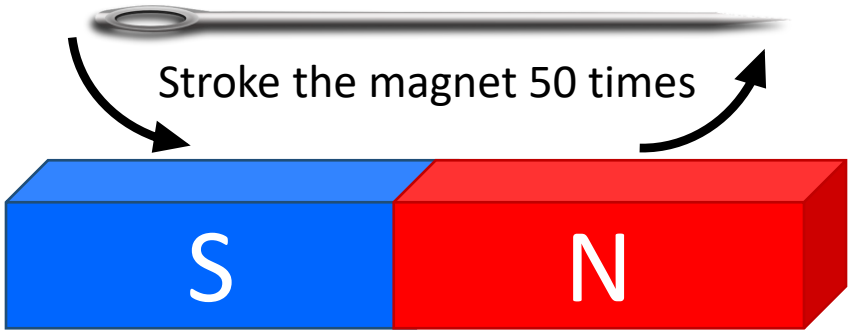
Spirit of Innovation
STEAM Resources

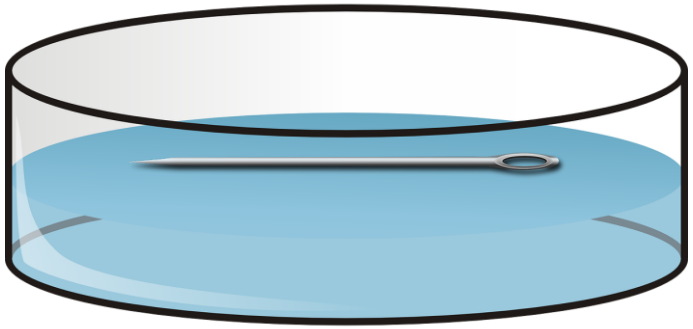
Year Three
Technology
Data Collection - Weather

	Monday	Tuesday	Wednesday	Thursday	Friday
Day's Weather Forecast					
Rain Fall (mm)					
Wind Direction					
Wind Speed					

How to make a compass

Materials:
Bar magnet
Steel needle
Small dish
Water



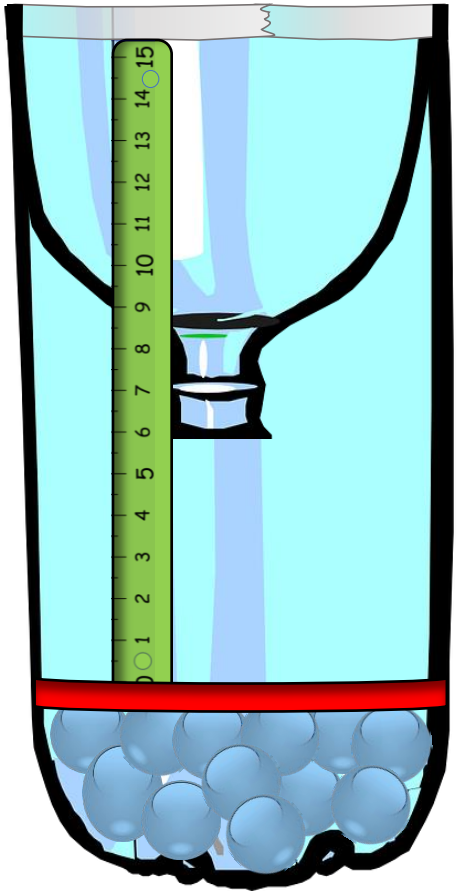


Method:
1. Fill a small dish with water.
2. With the needle pointing towards north over the bar magnet, stroke the magnet in this circular motion 50 times .
3. Place the needle carefully on the top of the water – to let it rest on the surface tension

How to make a rain gauge

Materials:

A two-litre plastic bottle
A sharp knife or sharp scissors (for an adult to use)
Coloured tape
Sticky tape
A Permanent Marker
A Ruler
Water
Small pebbles/marbles



Method:

1. Get an adult to carefully cut the top of the bottle off at the wide part just below where it begins to get narrow.
2. Place some pebbles or marbles in the bottom of the bottle—this will help it from getting blown over, if it's windy.
3. Turn the top of the bottle upside down—make sure that there is no cap on it! This will act as a funnel. Place it in the bottom part of the bottle, pointing downward. Line up the cut edges and tape together, so the top part is held firmly in place.
4. Stick a long piece of coloured tape to make a straight vertical line from the top edge of the bottle to the bottom.
5. Use a marker pen to draw a line on this piece of tape just a little above the top of the pebbles. This will be the bottom of your rain gauge, mark it with 0 cm.
6. Put the ruler against the vertical tape so that the 0 cm line lines up with the bottom mark. Then mark every centimetre to the top of the bottle.
7. Set the bottle on a level surface and pour some water in until it reaches the bottom mark - 0 cm.
8. Your rain gauge is now ready to go!

How to make a windsock

Materials:
Plastic cup/Yoghurt pot
String
Plastic bags
Sticky Tape
Blu Tack
Scissors

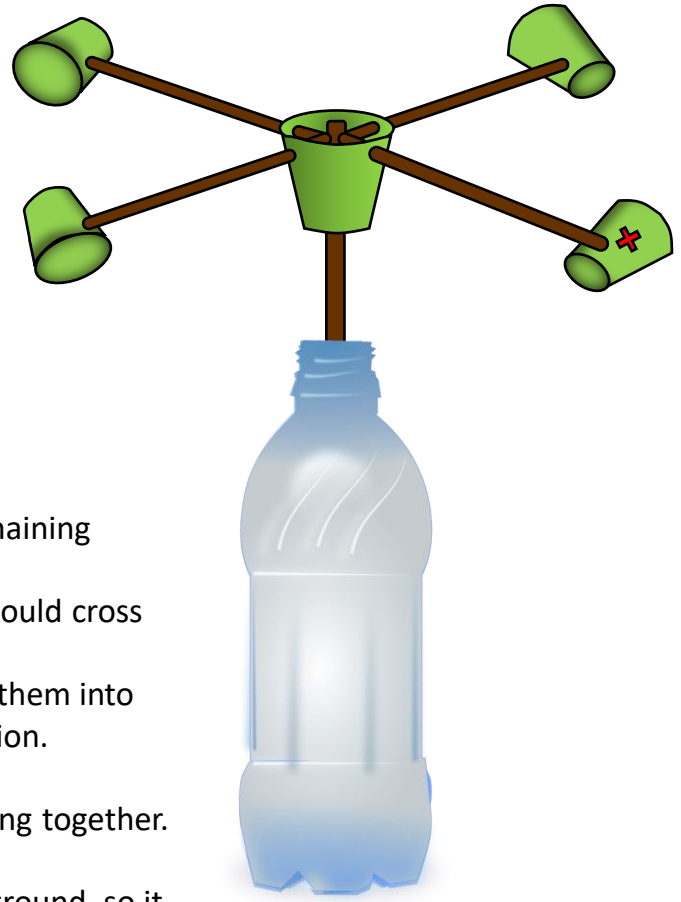
Method:

1. Cut the plastic bag into thin strips
2. Stick these strips around the edge of the plastic cup/yoghurt pot.
3. Carefully pierce a hole through the bottom of the plastic cup/yoghurt pot (hint: use a ball of Blu Tack and a sharp pencil or pair of scissors)
4. Thread both ends of the string through this hole
5. Knot the end a secure in place with sticky tape.
5. Begin testing!

How to make an anemometer

Materials:

5 small paper cups/yoghurt pots
Hole punch
Scissors
Sticky tape
3 thin wooden dowels
Empty water bottle
Stopwatch



Method:

1. Use the hole punch to make a hole in the side of each of the 4 paper cups or yoghurt pots.
2. Mark one of the cups with an **X**
3. Use the hole punch to make 4 holes spaced evenly around the rim of the remaining cup/yoghurt pot. This will create the centre of the anemometer.
4. Slide two of the wooden dowels through the holes in the centre cup. They should cross over in the middle.
5. Insert the ends of the dowels into the holes of the other cups and then tape them into place. Making sure all or the cups/yoghurt pots are all facing the same direction.
6. Take the remaining dowel and make a hole in the bottom of the centre cup.
7. Push the dowel up until it meets the other pieces of dowel and tape everything together. This will create your rotation axis.
8. Put the centre dowel into an empty water bottle. Secure the bottle into the ground, so it stands up in strong winds
9. Begin testing!

These resources have been brought to you by

ROLLS ROYCE

PIONEERS OF POWER