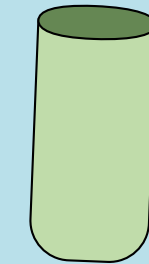
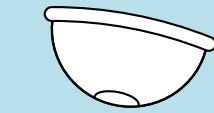
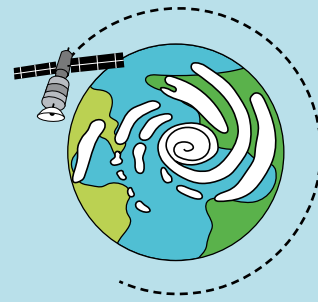


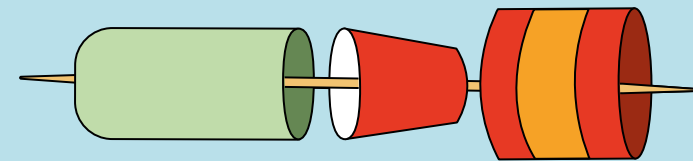
SPACE SATELLITE

A satellite is an object that orbits around a larger object in space. For example, our Moon is a natural satellite. Artificial satellites are a type of spacecraft, sent into orbit to do a job, such as taking photos of Earth.

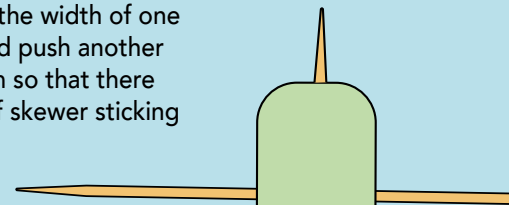


1 Design your satellite by arranging your boxes and containers into the shape you want. Many satellites are made of a sequence of tube-like shapes.

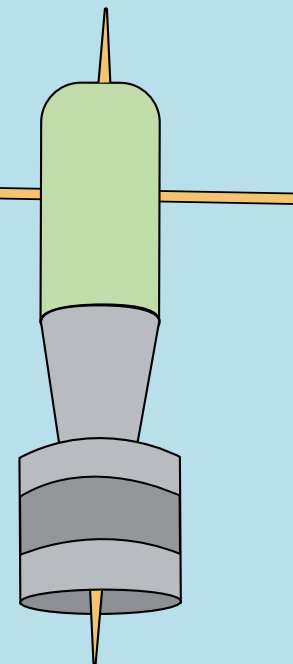
2 Use the bradawl or large needle to make holes through the middle of each container. Push a wooden skewer through them to string them together. Glue them together. Leave about 2 cm of skewer sticking out at each end.



3 Make holes through the width of one of the containers, and push another skewer through them so that there are equal amounts of skewer sticking out on each side.



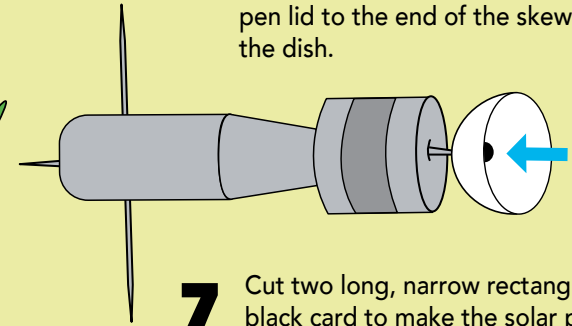
4 Paint the satellite body using paint mixed with an equal amount of white PVA glue. Satellites are usually a combination of white, black, silver, gold and grey, but you can use other colours if you like. Each part can be a different colour.



5 If you don't have a slushy cup lid to make a satellite dish, draw around a round object such as a paper cup on to the curved part of a plastic bottle. Cut out the dish shape and make a hole in the middle. Paint the dish with white paint mixed with PVA glue.



6 When the satellite dish is dry, push it on to the skewer at the end of the satellite. Glue the black bead, button or pen lid to the end of the skewer, inside the dish.



7 Cut two long, narrow rectangles of black card to make the solar panels that power the satellite. Draw a grid of lines on them using a ruler and a silver marker or white pencil (see left).



8 Carefully glue the solar panels to the pieces of skewer on the sides of the satellite, lining up the skewer with the centre of each panel.



WHAT YOU NEED

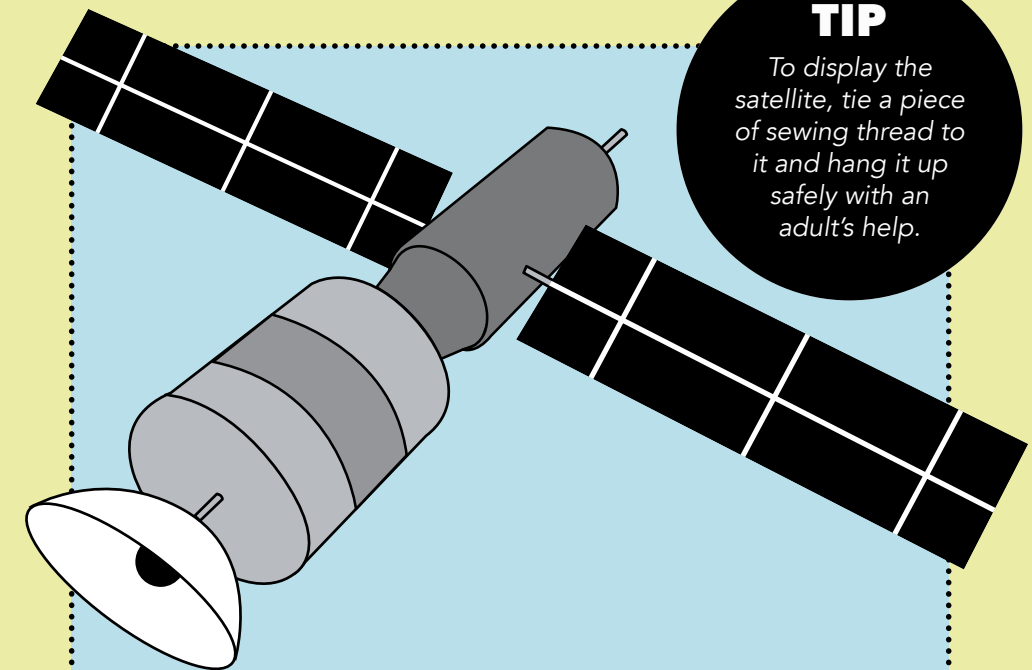
- Tube-shaped and cone-shaped containers
- A plastic dome from a slushy cup, or an empty fizzy drink bottle
- A bradawl or large needle
- Strong glue or a glue gun
- Wooden skewers
- Thick black card
- A silver marker or white pencil
- A ruler
- A black bead, button or small pen lid
- Craft paints
- White PVA glue
- Paintbrushes

THE SCIENCE BIT!

Satellites do all kinds of useful things. Some carry telescopes for studying the stars. Others transmit phone and GPS (Global Positioning System) signals around the world, or take photos and measurements of Earth to forecast the weather or detect global warming.

TIP

To display the satellite, tie a piece of sewing thread to it and hang it up safely with an adult's help.



TAKE IT FURTHER ...

The biggest satellites are space stations, where astronauts can stay and live for weeks or months at a time. You could research what they look like and try building one. You'll need a LOT of tubes!

