

COSMIC CATCH!

The Ball & Cup is a traditional toy found in many cultures around the world. Soon it will be found in space! Astronauts aboard the shuttle are going to try to use the ball and cup in orbit. Make your own ball and cup for use on Earth, and then predict what the astronauts will have to do in space to get the ball to land in the cup!

You will need

blunt-tip scissors	plastic tablespoon
masking tape	small paper cup
ruler	piece of string (about 60 cm long)
Ping-Pong ball	

1 Place the Ping-Pong ball inside the cup. The cup should be just slightly larger than the Ping-Pong ball. If the cup is taller than the ball, trim it down until the ball just fits in the cup. The smaller the cup, the more challenging your toy will be.

2 Tape the bottom of the cup to the bowl of the spoon as shown. Tape one end of the string to the Ping-Pong ball and tie the other to the handle of the spoon at a point near the cup. Wrap the string around the spoon handle until the ball and cup are about 30 centimeters apart.

3 Hold the handle with one hand and let the ball hang down. With a swinging motion, make the ball swing up and into the cup. It must stay in the cup and not bounce out.

4 If you can't get the ball into the cup, make the string shorter by wrapping more of it around the handle. If it gets too easy, make the string longer.



The Astronaut Challenge:

Once you can catch the ball, think about how you are using the toy. Can the astronauts use it the same way in space? What would happen if they did? How should they get the ball into the cup? Is this toy easier or harder to use in space? Hint: Think about how the toys worked in space.