

Activity Mission X: Robotic Arm



TIME NEEDED **30** minutes

This activity can be used towards
requirement 5

DID YOU KNOW?

Robotic arms are important machines to help people work on Earth. They are also important for astronauts working on the International Space Station as they are used to lift heavy items including Astronauts themselves! The main robotic arm on the International Space Station is called Canadarm2. It has 7 joints and can move up to 116,000 kg of space station equipment.

Astronauts can even be attached to the arms to move them around to different parts of the station.

European Space Agency Astronaut Tim Peake trained to use Canadarm2. During his mission he controlled it from the International Space Station, capturing a capsule of supplies called The Dragon.

You will need:

- images and videos of
robotic arm below

Items to make a robotic
arm:

- lolly sticks
- string
- chopsticks
- plastic cups
- glue

Instructions

1. Ask Scouts to hold a book, or similar, straight in front of them, without moving their arm, for one to two minutes. Tell them to stop if it feels uncomfortable.
2. Then, discuss how difficult it was to not move and keep their hand steady. Explain that this is why robotic arms are used, both on Earth and in space (for where they were specially designed).
3. Show Scouts images of robotic arms being used in space below.
4. Divide Scouts into Patrols or small groups, and explain that their challenge is to build a model of a robotic arm using the materials provided. They will then use it to pick up an item such as a ping pong ball or rubber.





Tim Peake training on a robotic arm
CREDIT: Tim Peake

Robotic arm activity
Dust and Sand
CREDIT: Tim Peake

