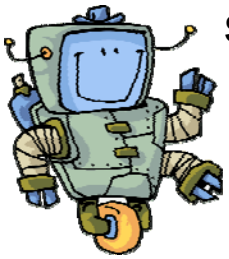

So … what is a robot?

The Canadian Space agency defines a robotic or automated system as "a machine or device that works automatically or by remote control".

How do you recognise a robot?
Although the vision of an android or other machine in a human form first comes to mind when we talk about robots, automated systems such as darkness sensing toasters or electric ranges fall under this definition. This is not something children will spontaneously think about.

Robots have 4 elements in common:

- A central processor:
  The central processing unit is the brains of the operations. It is responsible for interpreting the commands given to the robot and is responsible for controlling all the other functions
- A body that hosts its electronics or is used for transportation:
  This system is responsible for the movement of the robotic system. Some robots are fixed like those on the floor of manufacturing facilities, others have wheels or legs and feet to move them around.
- It executes programs: the central processor does the work of understanding the program and controlling all the other functions
- It has sensors to gather information about the world around it without constant human intervention. Touch, heat, light, speed, sound sensing systems can all be part of a robotic system. A special version of this kind of sensor is a vision system

Are there robots in your environment?
Here are a few examples of robotic systems:

- Darkness sensing toasters
- Electric range
- Automatic coffee pot
- Elevator
- Aeroplane on automatic pilot
- Vending machines
- Automobiles
- Space Craft
- Home heating and cooling systems (Furnace and Air Conditioner)

Image source: Grand Monde du Préscolaire on the Récit du Préscolaire Web Site
Creation: Service national du RÉCIT à l'éducation préscolaire. Translation: LEARN-RÉCIT