

Is it Alive?

Based on their observations in the natural world scientists say that living things share many characteristics.

One of these is pictured here. Fill in the missing letters below to record what that is.



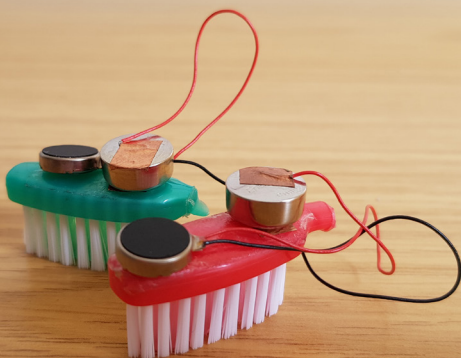
For this activity, you will need a bristlebot robot or a video of a robot.

MOV[]M[]NT

Is a robot alive?

Some non-living things also have this characteristic of living things,

Can you think of some examples?



Explore, Observe, Record

1. Make and record some observations to describe how the robot moves. Be ready to share your ideas.
2. Does the robot's movements remind you of anything else you've observed?

Biologists look for several more characteristics to decide if something is alive: They expect to observe: Growth, Sensing and responding to the environment, Nutrition (taking in food to support life) Excretion (getting rid of waste), Reproduction and Respiration.

3. Observe the robot again – is the robot alive? Can you explain your conclusion by talking about the characteristics of living things?

What does it mean to be alive?



We can't answer this question with science alone – we will need science AND religion, AND other ways of knowing!



Science helps us understand the characteristics that ALL living things share.

Religion can help us understand the purpose or meaning for each life.

We ask Big Questions when we wonder what it is like to be a person. Science can help to answer smaller questions, but we need other ways of knowing to understand what this means for our community.

The characteristics for life identified with Biology (MRS GREN) help us to identify living things. But these can look very different when observing a sunflower and a dog. Could some of these be found in non-living things?



Can a robot move or produce energy?



Thinking, making choices, and having freedom can be seen as important aspects of being alive (for humans and other animals).

Policy makers in the EU thought that autonomy (making choices independently) was the key factor in when to call robots with artificial intelligence "electronic people".

Is it enough for a robot to ACT like us, or does it also need to UNDERSTAND its actions?

Is "how much freedom you have" a good criteria for whether you are a "person"?



Many religions teach that humans have free will, and are therefore responsible for their choices.

