Are we like robots?

JEOPARDY
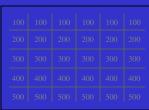
Parts of EV3	Parts of Human	EV3 Movement	Human Movement	Humans Vs. EV3	Grab Bag
►►► **F i n a l J e o p a r d y** ◄◄◄					
100	**100**	**100**	**100**	**100**	**100**
200	**200**	**200**	**200**	**200**	**200**
300	**300**	**300**	**300**	**300**	**300**
400	**400**	**400**	**400**	**400**	**400**
500	**500**	**500**	**500**	**500**	**500**

Parts of EV3
100

Name the part of the EV3 which understands its program and follows it.
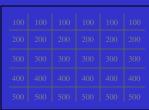
Question

Q: What is the EV3 computer brick?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Parts of EV3
200

Name the part of the EV3 that allows it to move

Question

Q: What are the motors?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Parts of EV3
300

Name the part of the EV3 that reads input from the surroundings
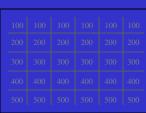
Question

Q: What are sensors?

Parts of EV3
400

Name the part of the EV3 that transmits signals between the EV3 computer brick and the sensors

Question

Q: What are the wires?

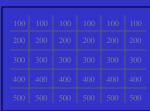|					
100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Parts of EV3
500

Describe the two different kinds of sensors

Question

Q: What are those that just detect the presence of a stimulus and those that can detect amounts of a stimulus?

Parts of Human 100

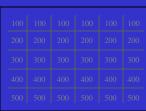This is the part of the human body which commands the rest of the body

Question

Q: What is the Brain?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Parts of Human 200

This part of the human body allows us to move
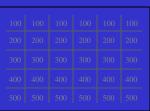
Question

Q: What are the muscles?

Parts of Human 300

Give an example of a sensor in your body

Question

Q: What is anything involved with the five senses, temperature, etc?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Parts of Human
400

This is what transmits signals between your brain and the sensors and muscles in your body

Question

Q: What is your nervous system?

Parts of Human 500

About this many muscles are required for you to walk

Question

Q: What is 200?

EV3 Movement 100

This is where the EV3 gets the information that it needs to move

Question

Q: What is from its program?

EV3 Movement 200

In order to move the robot, the robot's motors have to perform this kind of motion

Question

Q: What is rotation?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

EV3 Movement
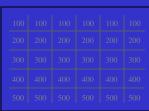# 300

Name a situation in an EV3 program that would cause a robot to stop

Q: What is the duration of the movement coming to an end?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

EV3 Movement
400

Name three different types of durations you can give the movement of your robot

Question

Q: What are unlimited, rotations, seconds, and degrees ?

EV3 Movement 500

Name two benefits of using a ear train to move a wheel

Question

Q: What are increases in power or speed, or the linear displacement of motion?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Human Movement 100

This is where a human gets the information that it needs to move

Question

Q: What is the brain?

Human Movement 200

In order for you to move, your muscles have to do this

Question

Q: What is contract?

Human Movement 300
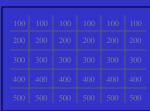
These are the two main muscles involved in the bending of your elbow

Question

Q: What are your biceps and triceps?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Human Movement 400

Your muscles move your bones by pulling on these, which attach to bones

Question

Q: What are tendons?

Human Movement 500
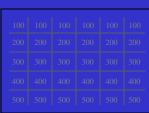
If your elbow is bending, this action has to occur for it to stop

Question

Q: What is contraction of your triceps?

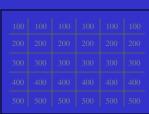| 100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Human vs. EV3
100

Signals that travel through the wires of an EV3 travel though this part of the body in humans
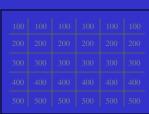
Question

Q: What is the nervous system?

Human vs. EV3 200

The touch sensor of an EV3 is like this part of a human

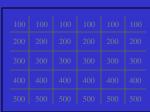**Question**

Q: What is the skin or any area sensitive to touch?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Human vs. EV3
300

The sound sensor of an EV3 is like this part of the human body
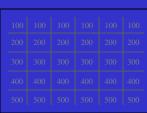
Question

Q: What are ears?

Humans vs. EV3
400

The light sensor of an EV3 is like this part of a human
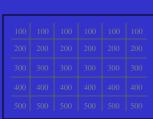
Question

Q: What are the eyes?

Human vs. EV3
500

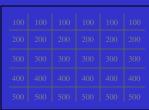This is the main difference between how humans and robots decide to do something

Question

Q: What is the fact that humans can think about actions while the EV3 reads its program?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Grab Bag
100

This is the name of the type of robot that we program

Question

Q: What is a bevelbot?

Grab Bag
200
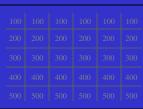
If the circumference of a wheel is 8 centimeters, how far would a taskbot move if made to go for 13 rotations?
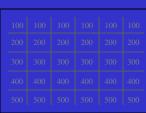
Question

Q: What is 104 centimeters?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Grab Bag
300

Give an example of a type 2 sensor

Question

Q: What are many?

Grab Bag
400
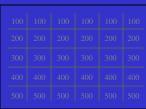
This is the major quality seen in Disney's WALLE robot that we are unable to give to our robots
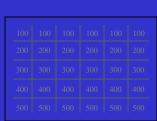
Question

Q: What is the ability to think?

Grab Bag
500

The ultrasonic sensor works by sending out a signal and judging how long it takes for that signal to come back. This is very similar to a process called echolocation performed by several animals. Give an example of one such animal.

Question

Q: What are dolphins, bats, toothed whales, certain species of shrews and oilbirds?

100	100	100	100	100	100
200	200	200	200	200	200
300	300	300	300	300	300
400	400	400	400	400	400
500	500	500	500	500	500

Final Jeopardy

List the steps involved in a person hearing a sound, then walking toward it.

Question

Q: Question HERE?