

NAME _____

CLASS _____

DATE _____

What is a Robot?

DIRECTIONS. Follow the procedure for completing this lab. Be sure to fill in all data tables, and answer the conclusion questions when you are finished.

What does it take to be a robot? Control.

For a machine to be classified as a robot, it has to have control. Whether it's doing a repetitive task or a dangerous job, a robot is something that has a job to do and exercises control over getting that job done.

To determine if an object has control or not, evaluate these 5 characteristics.

BODY – a physical form of some type

INPUT – how a machine get information from its environment, usually through a sensor

PROGRAM – a set of instructions that tell the machine how to act has to follow

OUTPUT – the action that the machine takes

BEHAVIOUR – what the machine actually does

For example, a telephone is a machine, but is it a robot? A telephone is a physical object that you can pick up (**body**). You press buttons on the dial pad (**input**) and the telephone matches those numbers to a telephone number based on rules set by the telephone company (**program**). Then the phone dials the number you gave it (**output**) and connects you to someone on the other line that you can talk to (**behavior**).

So according to our 5 characteristics, a telephone has control and it can be considered a robot.

What other everyday robots do we take for granted? Apply the 5 characteristics of control and decide if these objects can be classified as robots or not.

Label each box with a **Y** for yes or a **N** for no.

Object	Body	Input	Program	Output	Behavior	Am I a robot?
Toaster						
Radio						
Smoke alarm						
Bar code scanner						
Kettle						
Lawn mower						
CAT scanner						
Alarm clock with spring						
Radio alarm clock						
Washing machine						
Microwave						
Automatic doors						
CD player						
Sewing machine						
Alarm system						
Computer						
TV remote control						
Vacuum cleaner						
Car						
Cheese grater						