

Activity sheet 1

1a. Look at each part of the control system, then describe the role of each part. Add arrows to show how each part connects to the others. Label which ones provide inputs, outputs and feedback.

Role: Role: Role: Electronic Input Output device controller device Sensor Role: 1b. What do the arrows in your diagram represent? What is the importance of feedback in a control system?

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Microcontroller systems



Activity sheet 2

Sort the examples into sensors and actuators. Organise the sensors into their five categories.

Sensors

Actuators

Microcontroller systems

User input Movement/orientation User input Movement/orientation Image: Image

-2 | √

Light



Activity sheet 3

These systems all use dedicated microcontroller chips or PLCs. List at least one input and one output device each system might contain. What form of controller do they include? What are the advantages of using this type of controller?

Car automatic windscreen wipers	Smartphone
Input:	Input:
Output:	Output:
Controller:	Controller:
Advantages:	Advantages:
CNC milling machine	Injection moulding machine
CNC milling machine Input:	Injection moulding machine
CNC milling machine Input: Output:	Injection moulding machine Input: Output:
CNC milling machine Input: Output: Controller:	Injection moulding machine Input: Output: Controller:
CNC milling machine Input: Output: Controller: Advantages:	Injection moulding machine Input: Output: Controller: Advantages:
CNC milling machine Input: Output: Controller: Advantages:	Injection moulding machine Input: Output: Controller: Advantages:

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