E7.1

UNIT E7 · WORKSHEET

Microcontrollers in everyday products

UNIT PROGRESS

Core BUILD THE BASICS

C1 **State** three parts inside a microcontroller. [3]

C2 **State** one commercial use of a microcontroller. [1]

C3 **State** what a microcontroller uses to decide what to do. [1]

C4 **State** two outputs of a washing machine. [2]

C5 **State** two inputs of a washing machine. [2]

C6 **State** one transport use of a microcontroller. [1]

C7 **State** one industrial use of a microcontroller. [1]

Stretch GO FURTHER

S1 **Explain** why a microcontroller is used in a washing machine rather than separate logic gates and timers. [2]

S2 **Describe** how a microcontroller controls a set of traffic lights. [2]

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S3 **Describe** one advantage of a microcontroller in a vending machine, linked to the product. **[1]**

S4 **Complete** the sub-system diagram for a hand dryer. **[3]**



S5 **Explain** why fewer parts makes a product cheaper to manufacture. **[2]**

Exam Ready QUALIFICATIONS SCOTLAND STYLE

E1 A microcontroller controls a ferry ticket barrier. **State** the input and output devices. **[2]**

E2 **Describe** one advantage of the barrier program being reprogrammable. **[1]**

E3 A snow cannon at Cairnloch (fictional) is controlled by a microcontroller. **State** one input and one output device. **[2]**

E4 **Describe** one advantage of being able to reprogram the snow cannon controller. **[1]**

Total: 27 marks. Use the Data Booklet. Show your working and give units.