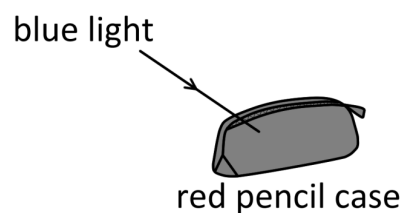
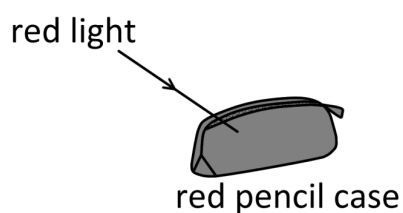


Name:

Class:



A student looks at a red coloured pencil case in different coloured lights.
The figure below is a diagram of her experiment.



She looks at red pencil case with red light. The case appears red.

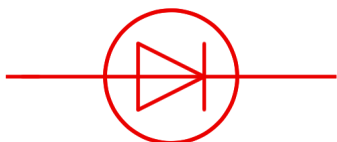
i. What colour does the red pencil case appear in blue light? **Black.**

ii. Explain your answer.

An answer that includes **one** of the following:

- The pencil case would look black because blue light is absorbed by red case.
- The pencil case would look black because red case only reflects red light.
- The pencil case would look black because red case absorbs all colours except red.
- The pencil case would look black because no/little light reflected from case.

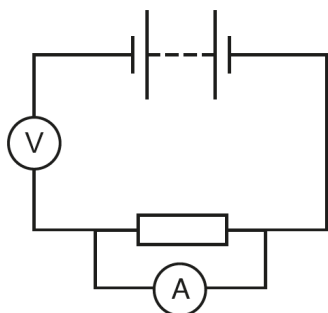
Draw the electrical symbol for a diode.



Draw the electrical symbol for a variable resistor.



A student sets up a circuit to find out the resistance of an unknown resistor. The student makes three mistakes in their circuit. Look at the circuit diagram of their experiment.



i. Calculate the charge that flows when a current of 2.5 A flows for 30 seconds.

$$\text{Charge} = \text{current} \times \text{time}$$

$$\text{Charge} = 2.5 \times 30$$

$$\text{Charge} = \mathbf{75\ C}$$

ii. Write down the **three** mistakes the student makes.

The voltmeter is in series.

The ammeter is in parallel.

One of the cells is connected the wrong way round.