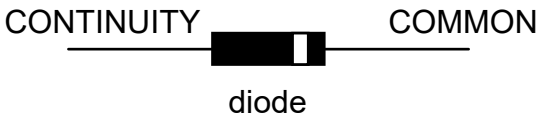
Investigation of a silicon diode.

(a) Connect the diode between the CONTINUITY and COMMON terminals using crocodile clip leads See the diagram below.



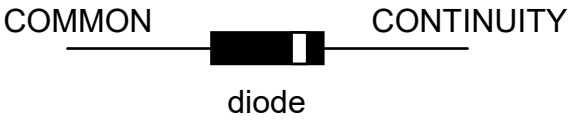
What do you hear?

……

(b) What does this tell you about the resistance of the diode?

……

(c) Connect the diode the other way round to Squeekie.



What do you hear?

……

(d) What does this tell you about the resistance of the diode?

……

(e) To see just how large the resistance of the diode is, swap the CONTINUITY setting on Squeekie for the INSULATION setting. What do you hear this time?

……

(f) What does this tell you about the resistance of the diode?

……

(g) Complete the following sentences.

When a diode is connected one way round in a circuit its resistance is …….

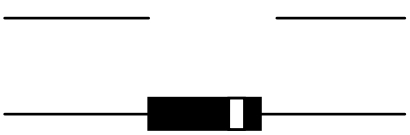
When a diode is connected the other way round in a circuit its resistance

is …….

Further investigations.

(h) By using books or the Internet for research:-

(i) draw the electrical symbol for a diode next to the picture of the diode in the space below. Make it the same way round.



diode

(ii) Label the leads correctly using the words ANODE and CATHODE.

(iii) State the source of your information.

……

……

(j) Remember that the the CONTINUITY and INSULATION terminals of a Squeekie are positive and the COMMON terminal is negative.
Complete the following sentences.

When the anode of a diode is positive and the ……. is negative, the diode

conducts electricity and has a …… resistance.

When the …… of a diode is negative and the cathode is ……..,

the diode does not …… electricity and has a very …… resistance.

(k) Use the Internet or books to find three uses for diodes. List them below.

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