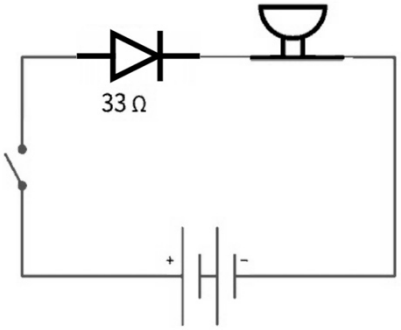
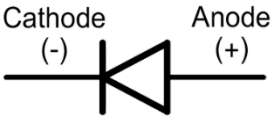
6.2 (1+2) Diodes (experiment using breadboard or crocodile clips)

Basic information and collecting ideas	The experiment provides students with the opportunity to discover the characteristics and properties of a diode and a switch. Students will also learn: ▪ to distinguish the positive and negative region of a diode. ▪ the symbol for a diode. ▪ how to draw a circuit diagram based on their experience from experiment 6.1.
Observing and documenting	The buzzer will ring only if the diode is inserted correctly. A diode has a ring on one side which indicates how to insert the diode in a circuit (e.g. ring pointing to the negative pole for current to flow). A diode allows current to flow in only one direction. A diode connected such that current flows through it is said to be **forward biased**; otherwise it is said to be **reversed biased**.  The circuit diagram to the right includes a switch, although the experiment does not include a switch as a component. Clipping respective unclipping one of the crocodile clips connects or disconnects the electrical circuit and functions like a switch.
Analysing and reflecting	Diodes allow current flow in only one direction. A diode has two terminals: the positive terminal is called the anode, and the negative terminal is called the cathode.  Current flows from the anode to the cathode and never in the opposite direction. The symbol indicates the direction in which the diode has to be inserted, i.e. the “arrow” must point to the negative pole.