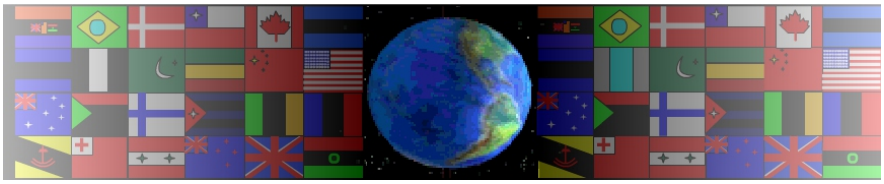
WHAT ARE CAPACITORS?

On behalf of The World Association of Technology Teachers

W.A.T.T.

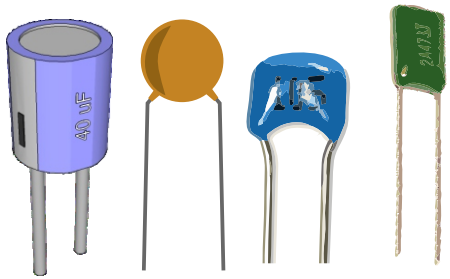


World Association of Technology Teachers

This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

WHAT ARE CAPACITORS?

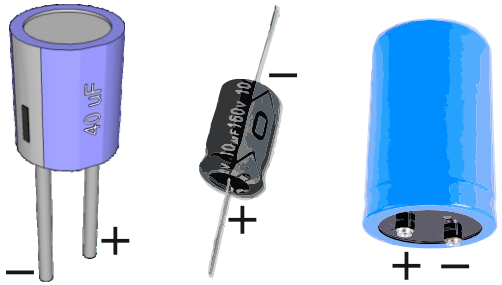
INTRODUCTION - CAPACITORS



Capacitors are components that are used to store an electrical charge. They are often used in timer circuits. A capacitor may be used with a resistor to produce a timer. Timers are found in a large range of electronic devices

Sometimes capacitors are used to smooth the current in a circuit, as they can prevent false triggering of other components such as relays.

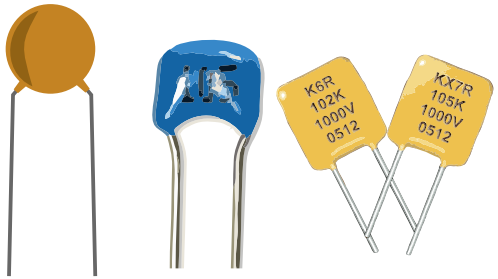
ELECTROLYTIC CAPACITORS



Electrolytic capacitors are 'polarised', which means they have a positive and negative lead and must be positioned in a circuit the right way round (the positive lead must go to the positive side of the circuit).

They have a much higher capacitance than non-electrolytic capacitors.

CERAMIC CAPACITORS



Non-electrolytic capacitors usually have a low capacitance compared to electrolytic capacitors.

They are not polarised (do not have a positive and negative lead) and can be placed anyway round in a circuit.

They are normally used to smooth the current (flow of electricity) in a circuit, so that the circuit works without faults occurring.

1. In general, why are capacitors often found in circuits.? *3 marks*

2. How do electrolytic and ceramic capacitors differ ? *4 marks*