

# RESISTOR DECODER

## TEACHER/TUTOR NOTES & WORKSHEETS



The project will probably take one session and should be carried out before any other projects which require resistors (electronics). May be combined with Solder Practice project.

### Blackboard

#### 1. Conductors & resistors

- \* Water flow analogy
- \* Quantity of water per second is equivalent to electrical current.
- \* Pressure of water is equivalent to electrical voltage
- \* Conductors allow the free flow of water or electrical current  
Examples: copper, silver and most metals
- \* Insulators stop the flow of electricity  
Examples: Plastic, Glass, Air
- \* Resistors restrict or reduce the flow of the water or electricity.  
Examples: Water, Carbon, Special metal alloys.

2. Measure the resistance in OHMS. The higher the resistance the higher the OHMS.

3. In electronic circuits different resistances are required to make the circuit work.

4. The resistors are so small that it is not possible to mark the value of the resistance on them and therefore a colour code is used to specify them.

### Practical

1. Cut out and colour chart as specified in the instructions.
2. Determine the resistance of some resistors.

# RESISTOR DECODER



## WORKSHEET

1. Give four examples of conductors:

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2. What are the units of resistance?

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3. Determine the Resistance of various Resistors from their colour code

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4. Write a story about someone who used the wrong resistor in one of their projects and the electronics overheated

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