Learning Journey – 7J Current Electicity

What have I done previously in my learning journey?	
Previously….	**You have learnt previously about electricity in primary school. This has involved:** • Making simple circuits and adding bulbs to them. You may have put batteries into toys and switched them on which is completing the circuit and making it work.
In this topic…	You will learn about the way electrical currents work. You will learn how to create a complete circuit and how they work. You will be able to read the current and potential difference from the circuit. You will be able to describe the difference between series and parallel circuits and the benefits of each.

We will develop our learning by studying the following each lesson:	RAG	Skills in Science checklist
7J.01 Electrical conductors • Link electrical conduction and insulation with the structure of atoms. • Set up a simple electrical circuit safety. • Carry out an investigation using conductors and insulators.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication
7J .02 Circuit Symbols • State that an electrical circuit must be complete and include a power source, wires and a component for electricity to flow. • Identify some common components of electrical circuits from the circuit symbol and explain what they do. • Draw the circuit symbols of some common components of electrical circuits.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication
7J.03 Modelling Electrical current • I can state that electrical current is measured in amperes (amps, A) • I can use a model to show how electrons move around a circuit.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication
7J.04 Modelling Electrical current part 1 • I can describe how to correctly connect an ammeter to a circuit. • I can safely set up a circuit to measure current. • I can link electric current as the flow of charge with the structure of atoms.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication
7J.05 Modelling Electrical current part 2 • I can describe how to correctly connect an ammeter to a circuit. • I can safely set up a circuit to measure current. • I can link electric current as the flow of charge with the structure of atoms.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication
7J.06 Charge • Describe electrical current as the flow of charge in a circuit. • Describe this charge in terms of charged particles: ions and electrons. • Calculate current when given charge and time.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication
7J.07 Potential Difference • state that the potential difference of a battery or cell is what causes the current to flow. • state that potential difference is measured in volts (V). • describe how changing the potential difference affects components in the circuit, in terms of current. • describe how to correctly connect a voltmeter to a circuit.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication
7J.08 Series and Parallel circuits- current • I can identify series and parallel circuits. • I can describe how electrical current splits up at a branch in a parallel circuit and add together when the branches join. • I can state that electrical current is the same in all parts of a series circuit.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication

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7J.09 Series and Parallel circuits- Potential difference • I can state that potential difference is shared between components in a series circuit. • I can describe how is a parallel circuit the potential difference is the same for each branch as the battery or the cell.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication
7J.10 Calculating resistance. • Calculate resistance when given potential difference and current.		☐ Scientific Methods ☐ Practical ☐ Number skills ☐ Application ☐ Communication

Key Vocabulary								
Current	**Flow**	**Voltmeter**	**Ammeter**	**Ampere**	**Volt**	**Potential difference**	**Cell**	**Circuit**
Parallel	**Series**	**Resisitance**	**Wire**	**Bulb**	**Charge**			

Future Learning	You will continue with Electricity into GCSE. You will make circuits how explore how resistance is affected by different elements in a circuit.
In careers	Electricity is used in a variety of careers. The obvious is an electrician so knowing how circuits work and what affects them will be a big bonus. Architects will need a knowledge of how electric currents work in order for them to plan into builds.