

**Year 8 Science Personalised Learning Checklist- Spring 2**  
**Electricity and Magnetism**

	<b>Learning Statements</b>	<b>R</b>	<b>A</b>	<b>G</b>
1	Explain how an object can become charged (Extension only)			
2	Explain why a person's hair stands on end when using the Van de Graaf generator (Extension only)			
3	Represent the components of a circuit using their symbol (bulb, cell, battery, voltmeter, ammeter, motor, speaker, wire, switch, resistor)			
4	Define "electrical conductor" and "electrical insulator"			
5	Set up and draw electrical circuits to contain specified components			
6	Define "current" and "potential difference"			
7	Describe how to measure current and potential difference and recall the units			
8	Define "series" and "parallel" circuit			
9	Describe what happens to current and potential difference in series and parallel circuits			
10	Define "resistance" and recall it's units			
11	Calculate resistance using $V=IR$			
12	Describe how resistance is caused and can change in a circuit (Extension only)			
13	Define "power"			
14	Calculate power using $P=IV$			
15	Define "magnetic force"			
16	Describe the difference between a "permenant magnet" and a "magnetic material"			
17	Define "magnetic poles"			
18	Recall what would happen when like or different poles are placed next to each other			
19	Use a plotting compass to investigate the magnetic field around a permanent magnet			
20	Describe the magnetic field around the Earth and explain how this allows us to use a compass for navigation			
21	Define "solenoid", "core" and "electromagnet" (Extension only)			
22	Explain how an electromagnet works (Extension only)			
23	State three ways that the strength of an electromagnet can be increased (Extension only)			
24	Explain how electromagnets in bells, circuit breakers and loudspeakers work when provided with a diagram (Extension only)			