

# Cycle 6 Electronics

<b>My Expected Grade</b>				
<b>Teacher Assessed Grade (circle)</b>				
SBE	BE	E	AE	SAE
<b>Comment:</b>				

Grade		Prior Knowledge	New Knowledge
8 - 9	I can... <ul style="list-style-type: none"> <li>• Recall and explain previous learning in response to broad questions in an assessment.</li> <li>• Can teach others how to critically analyse and evaluate existing products to communicate and develop their own ideas.</li> <li>• Confidently teach others to work with a range of tools, materials, equipment, components and processes with precision following health and safety.</li> <li>• Can effectively teach others different processors, input and output components and explain how they work.</li> <li>• Understand regulations and teach others how to effectively dispose of electrical components.</li> <li>• Successfully create own circuits using a soldering iron and 2D symbols correctly and can problem solve others mistakes.</li> </ul>		
6 - 7	I can... <ul style="list-style-type: none"> <li>• Recall and explain previous learning in response to broad questions in an assessment.</li> <li>• Skilfully analyse and evaluate existing products to communicate and develop their own ideas.</li> <li>• Confidently work with a range of tools, materials, equipment, components and processes with precision following health and safety.</li> <li>• Identify all processors, input and output components and understand how they work.</li> <li>• Understand how to effectively dispose of electrical components.</li> <li>• Successfully create own circuits using a soldering iron and 2D symbols correctly.</li> </ul>		
4 - 5	I can... <ul style="list-style-type: none"> <li>• Analyse and evaluate existing products to communicate and develop their own ideas.</li> <li>• Work with a range of tools, materials, equipment, components and processes with some precision following health and safety.</li> <li>• Identify some input and output components</li> <li>• Successfully create own circuits using a soldering iron and 2D symbols correctly.</li> </ul>		

*Tick when you think you are able to define the meaning of the keyword*

KEYWORDS	PCB	Anodising	Positive
WWE	Processors	LED	Voltage
Input	Output	Circuits	

## LEARNING TOOLS

**Challenge!**

Can you add more keywords you have covered?



Lesson	Content	Completed?	
		Y / N	EFFORT
1	<ul style="list-style-type: none"> <li>Identifying input and output circuit components</li> <li>Programmable components</li> <li>Materials used in circuits</li> <li>Voltage &amp; power outlets</li> <li>Creating successful circuits on TinkerCAD</li> </ul> <p><b>Homework:</b> Research and label the diagram of the soldering iron. (pre-learning worksheets)</p> <p><b>Challenge:</b> Watch the following video and explain the soldering process step by step using notes, sketches and product examples. <a href="https://www.youtube.com/watch?v=6rmErwUSE-k">https://www.youtube.com/watch?v=6rmErwUSE-k</a></p> <p><b>Further Challenge:</b> List 5 health and safety rules for using a soldering iron.</p>		
2	<ul style="list-style-type: none"> <li>Planning of circuits with symbols &amp; problem solving</li> <li>Soldering iron demo (pre-learning from homework)</li> <li>Practical—Making circuits</li> <li>Pair &amp; share</li> </ul>		
3	<ul style="list-style-type: none"> <li>Practical—Making circuits</li> <li>H&amp;S demo/reminder</li> <li>Pair &amp; share</li> </ul> <p><b>Homework:</b> Research and watch the video to explain how electrical products must be disposed of. <a href="http://www.electricalsafetyfirst.org.uk/guides-and-advice/electrical-items/recycling-electrical-items/?gclid=Cj0KEQjw9r7JBRCj37PltTskaMBEIQAKTzTfKvzQPF3lWnD3fBdT0BXeJxGk7PMYiH57ofZaH2W8_waAgOj8P8HAQ">http://www.electricalsafetyfirst.org.uk/guides-and-advice/electrical-items/recycling-electrical-items/?gclid=Cj0KEQjw9r7JBRCj37PltTskaMBEIQAKTzTfKvzQPF3lWnD3fBdT0BXeJxGk7PMYiH57ofZaH2W8_waAgOj8P8HAQ</a></p> <p><b>Challenge:</b> Research and explain what WVE stands for and what this regulation means.</p> <p><b>Further Challenge:</b> Explain two advantages of using rechargeable batteries instead of disposable batteries</p>		
4	<ul style="list-style-type: none"> <li>Practical—Finalising circuits and lamp</li> <li>Testing</li> <li>H&amp;S demo/reminder</li> <li>Self assessment</li> </ul>		
5	<ul style="list-style-type: none"> <li>Disposal of electrical products</li> <li>Anodising and finishes for PCB's</li> <li>Revision for End of Cycle Exam</li> </ul> <p><b>Homework:</b> You must prepare to re-take the Electronics skills test set at the start of this cycle. You must choose which revision resources you will need in order to prepare for the assessment.</p> <p><b>Challenge:</b> Consider what type of questions might be on the assessment and practise answering them.</p> <p><b>Further Challenge:</b> Write your own markscheme for the questions you have created—self assess your own skills to highlight areas of strengths &amp; weaknesses.</p>		
6	<ul style="list-style-type: none"> <li>End of cycle assessment: skills test—retake of initial starter test to monitor progress.</li> <li>End of project review—peer and self assessment.</li> </ul>		



### New Learning made.

List three or more subject specific information you have learnt in this project.

- .....
- .....
- .....
- .....
- .....
- .....
- .....

### Why are we learning about electronics?

You are learning electronics so that you:

- ◆ Develop your skills of logical and abstract thinking, workshop skills and practising health and safety with new materials.
- ◆ Develop, communicate, record and justify design ideas using electrical components.
- ◆ To understand how everyday products work and explain how they can be modified to improve the environment.

