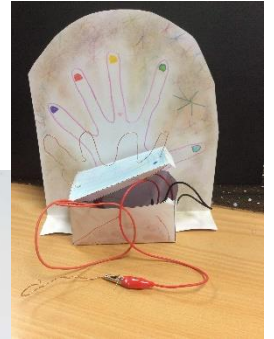
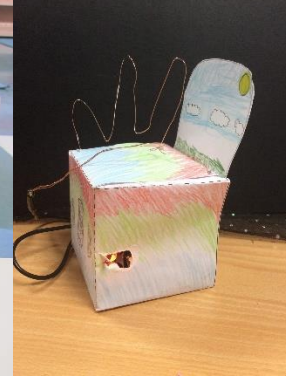
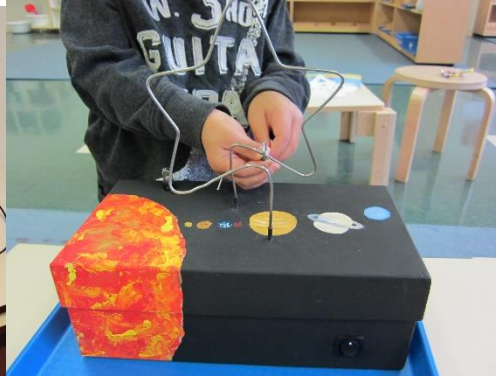
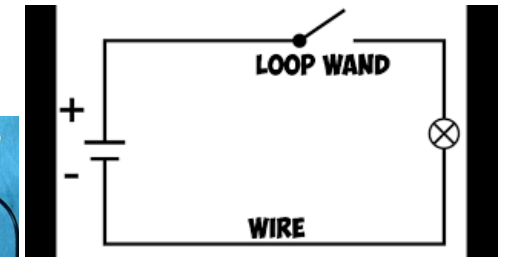
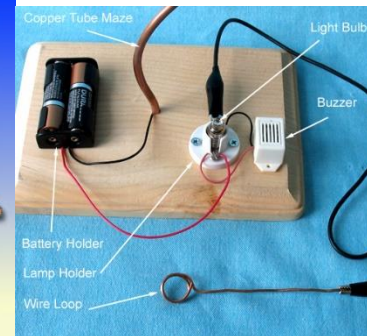
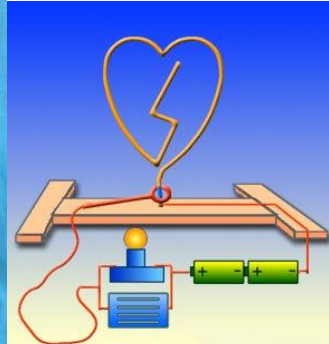
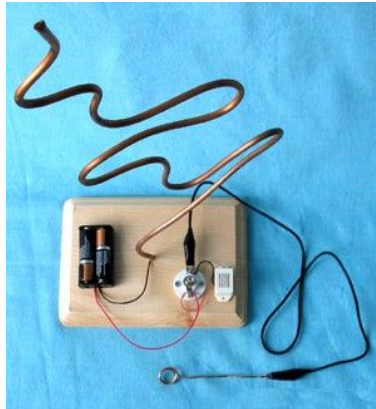
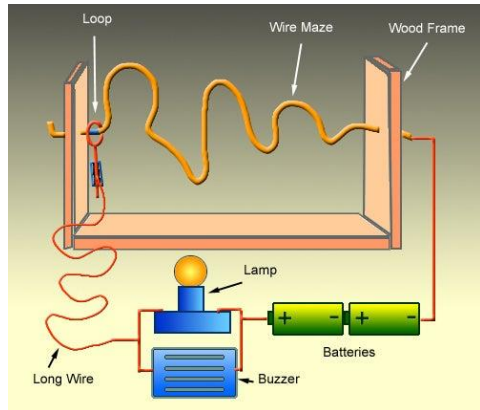


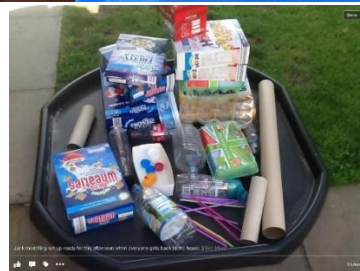
Alderman's Green Design Technology – Autumn Term 2022

Lower Key Stage 2	Year 4	
	Practical skills, techniques and technical knowledge	Context
Tools and Joining	Measure and mark accurately. Cut using scissors and wire cutters to a marked line. Join appropriately using different glues (stick, PVA) and tape	Linked Science unit -Sound. Children will need to understand how a simple circuit works and what happens when there is a break in a circuit. They will need to understand how switches work and how they create open and closed circuits. Design, Make, Evaluate: <i>To design and make a steady hand game with buzzer for a specific person</i>
Mechanisms	Create an open circuit that sounds a buzzer when it becomes a closed circuit	
Structures	Create a shell structure using 3D shapes as the base or to hide the electrical circuit with buzzer.	
Vocabulary	circuit, fault, connection, battery, battery holder, switch light, buzzer, wire, insulator, conductor, crocodile clips, input device, output device, design, make, evaluate, user, purpose, function, decision, design specification, design brief, product, evaluating	
Questions to support with planning and assessment	Developing, planning and communicating ideas: • Can they come up with at least one idea about how to create their product? • Do they take account of the ideas of others when designing? • Can they produce a plan and explain it to others? • Can they suggest some improvements and say what was good and not so good about their original design? Working with tools, equipment, materials and components to make quality products: • Can they tell if their finished product is going to be good quality? • Are they aware of the need to produce something that will be liked by others? • Can they show a good level of expertise when using a range of tools and equipment? • Do they work at their product even though their original idea might not have worked? Evaluating processes and products: • Have they thought of how they will check if their design is successful? • Can they begin to explain how they can improve their original design? • Can they evaluate their product, thinking of both appearance and the way it works? • Do they take time to consider how they could have made their idea better? Electrical and mechanical: • Do they select the most appropriate tools and techniques to use for a given task? • Do they know what an electrical circuit is and know a range of electrical components and their functions? such as a bulb, buzzer and switch. • Can they use a simple circuit? • How have they altered their product after checking it?	

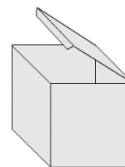
Ideas:



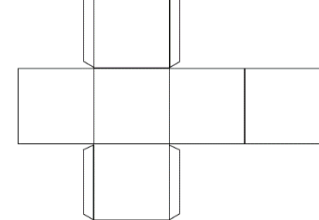
Children could bring in their own base for the game – using packaging from the recycling or they could make a base out of a 3D net.



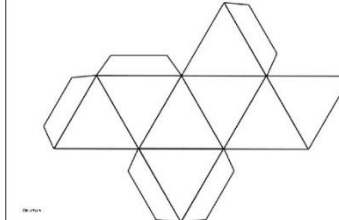
CUBE PACKAGING



CUBE NET / DEVELOPMENT



Nets for Packaging



Useful links:

- <https://www.instructables.com/Buzz-Wire-Kit/> (Have bought the parts that make this circuit i.e copper tube, copper wire, 3v buzzer, 2 x AA battery holder etc...)
- <https://www.chesswood.w-sussex.sch.uk/page/?title=Design+%26amp%3B+Technology+Knowledge+Organisers&pid=889> (Scroll down to Year 4 section with steady hand game - there is a link to a Wordwall quiz)
- <https://www.bbc.co.uk/bitesize/topics/zj44jxs> (BBC Bitesize info about electricity and circuits)
- <https://slideplayer.com/slide/16145764/> (slide share)