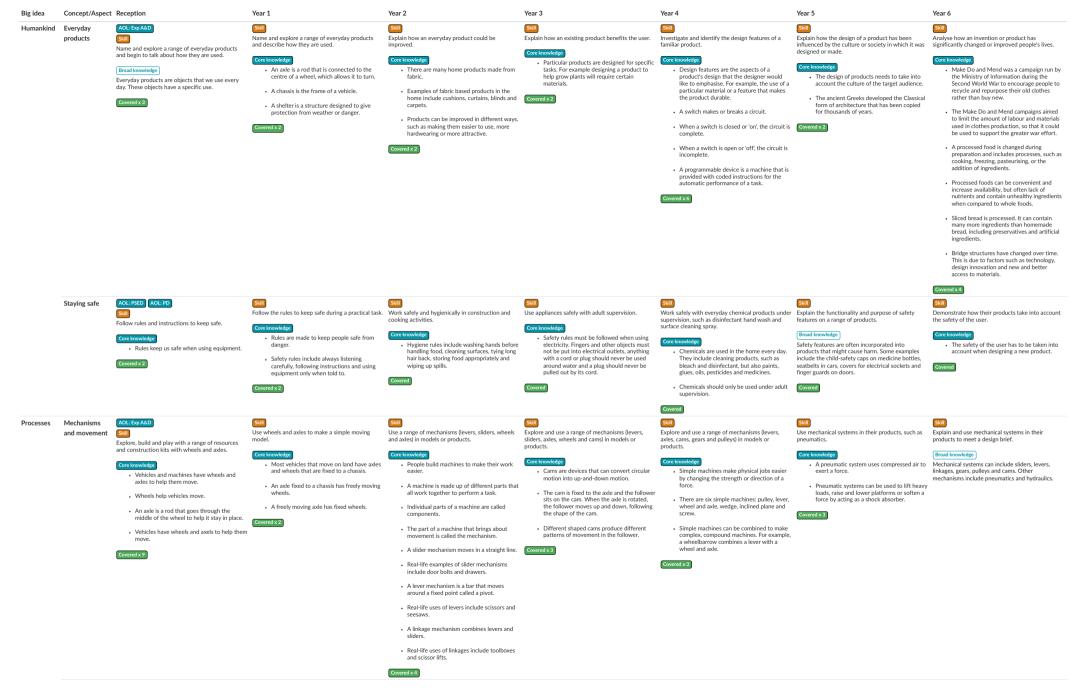
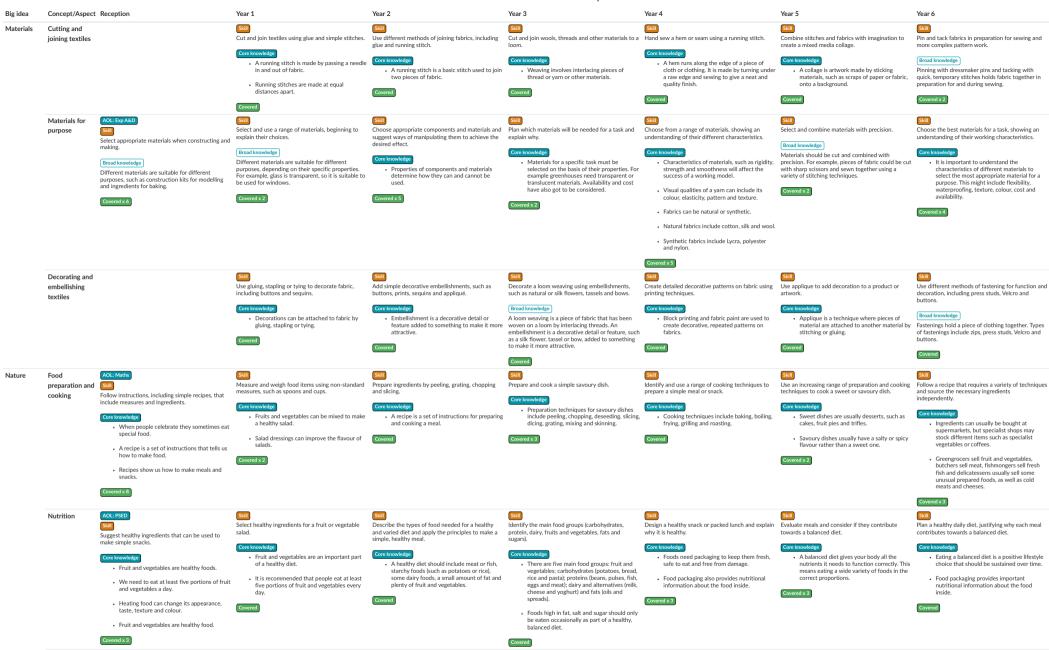
# Halebank 2023-2025



	Concept/Aspect	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Electricity	(AOLC Exp A&D) State Udentify products that use electricity to make them work. Core knowledge • Microwaves, toasters and blenders are machines. Machines need power to make them work. Covered	Identify products that use electricity to make them work and describe how to switch them on and off. (Broad inowkedge) Electricity is a form of energy. Many household appliances use electricity, such as kettles, televisions and washing machines. They can be switched on by completing the circuit to allow the flow of electricity or off by breaking the circuit to prevent electricity from flowing. This can be a switch on the appliance or a wall socket switch.	Create an operational, simple series circuit. (Broad knowledge) A series circuit is made up of an energy source, such as a battery or cell, wires and a bulb. The circuit must be complete for the electricity to flow.	Incorporate a simple series circuit into a model. (Broad knowledge) An electric circuit can be used in a model, such as a lighthouse. It can be controlled using a switch.	Incorporate circuits that use a variety of components into models or products.  Broad inowidge Components can be added to circuits to achieve a particular goal. These include bulbs for lighthouses and torches, buzzers for burglar alarms and electronic games, motors for fairground rides and motorised vehicles and switches for lights and televisions.  Covered	on/off switch, or by a variable resistor that can adjust the size of the current in the circuit. Real-life	lamps, buzzers and motors) and use programming control their products. Broad knowledge Computer programs can control electrical circuit
eativity	Generation of	AOL: Exp A&D	Skill	Skill	Skill	Skäll	Skill	Skill
	ideas	Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences. Corr insolvidge • It is important to share resources and communicate our ideas in order to get on with others.	Create a design to meet simple design criteria. Core knowledge    A product or project is usually guided by a set of design criteria. The project or product must meet the design criteria to be successful. Covered x-4	Generate and communicate their ideas through a range of different methods. (Broad knowledge) (deas can be communicated in a variety of ways, including written work, drawings and diagrams, modelling, speaking and using information and communication technology. [Covered x3]	Develop design criteria to inform a design. Core Inowledge	Use annotated sketches and exploded diagrams to test and communicate their ideas. Core howledge . Annotated sketches and exploded diagrams show specific parts of a design, highlight sections or show functions. They communicate ideas in a visual, detailed way. Covered x4	Use pattern pieces and computer-aided design packages to design a product. Core towoledge Computer-aided design (CAD) is the use of specialised computer software to design objects. CAD designs can also be made into objects using 3-D printers.	Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways Core knowledge I deas can be communicated in a range of ways, including through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
		Covered x 30					Covered	Covered x 2
	Structures	ACL: Exp ASD Solution: Construct simple structures and models using a range of materials. Core knowledge A bridge is a structure that allows people and vehicles to cross over an open space. There are lots of different types of puppets. Some puppets have moving parts. There are lots of different types of puppets including finger puppets.	Constructures, models or other products using a range of materials. Core knowledge	Explore how a structure can be made stronger, stiffer and more stable. Core knowledge    Structures can be made stronger, stiffer and more stable by using cardboard rather than paper and triangular shapes rather than squares. Covered x3	Created or frame structures using diagonal struts to strengthen them. Core Innowclege Descriptional Struts reate triangular shapes within a frame structure. Adding diagonal struts to a frame structure adds strength and stability.	Protopy shell and frame structures, showing wareness of how to strengthen, stiffen and structures wareness of how to strengthen, stiffen and structure them. <b>Core Innovteden</b> • A prototype is a mock-up of a design that not be full size or made of the same materials. <b>Covered</b>	Build a framework using a range of materials to support mechanisms.     Core howedge     export, stiffness and stability can be created by using triangular shapes to create by using triangular shapes to create the using traneworks, columns to support, stratework and voterlapping brickwork patterns.     exponent and systems can work together to perform a function.     exponent mechanisms in a machine.     Evered x3	Select the most appropriate materials and frameworks for different structures, explaining what makes them strong.  Core Innowledge    Strength can be added to a framework buing multiple layers or changing its share using multiple layers or changing its share and so are used in architecture to provid support and stability.  Covered x 2
	Use of ICT	AOL: Exp A&D	Skill	Skill	Skill	Skill	Skill	Skill
		Use digital devices to take digital images or recordings of their creations to share with others. Broad Inowledge Digital devices can be used to share information about creations with others.	Use design software to create a simple plan for a design. (Broat how/dege) Computer-aided design is when computers are used to help design products. It has advantages over paper design in that it will show how finished products will onco. Different colours and textures can also be trialled.	Use design software to create a simple labelled design or plan. (Broat knowledge) Computer software can be used to help design or plan a product. Advantages include identifying and solving problems before the product is made and experimenting with different materials and colours. Labels can be added to designs for clarity.	Write a program to make something move on a tablet or computer screen. (Broad knowledge) A program is a set of instructions written to perform a specified task on a computer.	Write a program to control a physical device, such as a light, speaker or buzzer. Core knowledge Remote control is controlling a machine or activity from a distance. Computers can be used to remotely control a device. Covered x2	Link a physical device to a computer or tablet so that it can be controlled (such as changing motor speed or turning an LED on and off) by a program. (Bread knowledge) Equipment and devices can be controlled by pressing buttons on a control panel, such as on a washing machine or microwave.	Use a sensor to monitor an environmental variable such as temperature, sound or light. Core Inowledge A Many devices that we see in our homes an elsewhere use programmable sensors that monitor environmental variables, such as light, sound, movement and temperature. Covered x2
Investigation	Investigation	(AOL: PD) State Choose and explore appropriate tools for simple practical tasks. Core knowledge • There are different ways to join materials together. • Sewing is stitching things using a needle and	Select the appropriate tool for a simple practical task. Core knowledge   Some foods need to be prepared before eating.  Peeling, slicing, chopping, grating, tearing or mashing are different methods of preparing foods.	Select the appropriate tool for a task and explain their choice. Core choices Core choices Tools have characteristics that make them suitable for specific purposes. For example, a knife is good for cutting food because it has a sharp metal edge. Covered x 4	Use tools safely for cutting and joining materials and components. (Broad innowledge) Specific tools can be used for cutting, such as saws. Wood can be joined using glue, nails, staples, or a combination of these. Safety nuelse must be followed to prevent injury from sharp blades. These rules include using a bench hook to keep the wood still, using a jurior thacksaw with a stiol arip and	Select, name and use tools with adult supervision. Broad knowledge Useful tools for cutting include scissors, craft knives, junior Acksaws with pistol grip and bench hooks. Useful tools for joining include glue guns. Tools should only be used with adult supervision and safety rules Covered	Name and select increasingly appropriate tools for a task and use them safely. Broad knowledge There are many rules for using tools safely and these many vary depending on the tools being used. For example, someone using a chiesl should chip or cut with the cutting edge pointing away from their body. All tools should be cleaned and put away after use, and should not be used if they are loose or cracked.	Select appropriate tools for a task and use them safely and precisely.  Core knowledge  Deconstructing garments identifies how they are made, the materials used and their properties.  Hand stitches include running stitch, bland stitch and whip stitch.
		thread.	Covered		working under adult supervision.			Covered x 2
		Covered x 11	Covered		Covered x 4		Covered	Covered x 2
	Evaluation		Covered Talk about their own and each other's work, identifying strengths or weaknesses and offering support. Core converge  • A strength is something that is good about a piece of work. • A weakness is an area that could be improved. Covered x 3	Explain how closely their finished products meet their design criteria and say what they could do better in the future. Core theoworkge A finished product can be checked against design criteria to see how successfully it has been made or to evaluate how well it works. Improvements can then be planned. Covered x 4	Covered x 4 Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account. Core Innowledge Asking questions can help others to	their products could be improved, acting on their own suggestions and those of others when making improvements. Crocknowledge - Evaluation can be done by considering whether the product does what it was designed to do, whether it has an attractive appearance, what changes were made during the making process and why the changes were made.	Skill Test and evaluate products against a detailed design specification and make adaptations as they develop	Skill Demonstrate modifications made to a product a
	Evaluation	Covered x 11 (ACI: Exp A&D Coll Adapt and refine their work as they are constructing and making. Broad knowledge Recognise that it is possible to change and alter their designs and ideas as they are making them.	identifying strengths or weaknesses and offering support. Core knowledge • A strength is something that is good about a piece of work. • A weakness is an area that could be	their design criteria and say what they could do better in the future. Core knowledge • A finished product can be checked against design criteria to see how successfully it has been made or to evaluate how well it works.	Covered x 4 Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account. Core Inowledge Asking questions can help others to evaluate their products. For example, asking someone whether the materials selected helped achieve the purpose of the model.	their products could be improved, acting on their own suggestions and those of others when making improvements. Core knowledge • Evaluation can be done by considering whether the product does what it was designed to do, whether it has an attractive appearance, what changes were made during the making process and why the	Son Test and evaluate products against a detailed design specification and make adaptations as they develop the product. Core Innovedge Testing a product against the design criteria will highlight anything that needs improvement or redesign.	Composition of the series of steps are constrained to product result of ongoing evaluation by themselves and others. Core knowledge An iterative process starts with requirements and continues by creating product, testing it, and revising it before creating a better version. The iterative process is a series of steps are repeated, improving the product by constrained and the product of the prod



•	Concept/Aspect	AOL: World	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Yrigins of food	Covered x 2	Sort foods into groups by whether they are from an animal or plant source.  Core Inowledge  a Goal Core from animals, such as meat, fish and dairy products.  b Gome come from plants, such as fruit and vegetables.  Covered	Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables). Core Inowledge • Food comes from two main sources: animals and plants.	Identify and name foods that are produced in different places.  Broad knowledge The types of food that will grow in a particular area depend on a range of factors, such as the rainfall, climate and soll type. For example, many crops, such as potatoes and sugar beet, are grown in the south-east of England. Wheat, barley and vegetables grow well in the east of England.	Identify and name foods that are produced in different places in the UK and beyond.	Describe what seasonality means and explain some of the reasons why it is beneficial.	
	Compare and contrast	AOL: Exp ASD Solid Describe what, why and how something was made and compare with others.	two products.	Covered Still Compare different or the same products from the same or different brands.	Still Explain the similarities and difference between the work of two designers.	compare two or more products.	compare results.	Still Create a detailed comparative report about t more products or inventions.
		Broad knowledge Aspects of designing and making can be compared with others, including inspiration for making a product and the tools and techniques used.	Core howledge • Two products can be compared by looking at a set of criteria and scoring both products against each one. Covered x 2	Core invokedge A brand is a name, term, design, or symbol identifying a seller's products or services. Covered	Core knowledge • Work from different designers can be compared by assessing specific criteria, such as their visual impact, fitness for purpose and target market. Covered	Core knowledge • A comparison table is an organised way to compare products. Covered x 3	<ul> <li>Core howokdge</li> <li>Evaluations can be made by asking product users a selection of questions to obtain data on how the product has met its design criteria.</li> </ul>	Core knowledge Products and inventions can be com using a range of criteria, such as the on society, ease of use, appearance is value for money. Covered x4
Significance S	ignificant leople	Corrected x 34         ALL: Exp ASD         Som         Explore significant products.         Core Involvedge         A. Scarecrow is a model of a person dressed in crops to frighten birds away.         Covered x 2	Bill Describe why a product is important. (Broad knowledge) The importance of a product may be that it fulfils its goals and performs a useful purpose.	<text><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></text>	Stor Describe how key events in design and technology have shaped the world. (Proad knowledge) Key inventions in design and technology have changed the way people live. Covered	Deplain how and why a significant designer or inventor shaped the world.     Core Inowksign		Skill           Present a detailed account of the significance favourite designer or inventor.           Core knowledge           • Significent engineers have improved, people's lives and trade through their
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