Year 6 Design Technology

Steps to knowing… Year 6							End Point statement
~~Which prod~~ucts include gears and pulleys? What materials and components have been used in the products? What are the input, process and output of the systems?	How do gears and pulleys work? How can they work in combination?	How can I use pulleys to alter the direction and speed of rotation? AND/OR How does the size of the driver gear affect the speed of the follower gear? What effect does the number of teeth on the gear have? How can I make a working electrical circuit? (Link to Year 4 Science, DT in Y4/5)	What research can I carry out in order to create a design specification for my product? What knowledge and skills do I need to be able to design and make a good quality product? How can I record my ideas to explain to others how my design meets these criteria? (annotated sketches and prototypes)	How can I communicate my design decisions through detailed annotated drawings from different views/exploded diagrams. How can I plan the making of my product considering the skills, tools techniques and materials I will need? (Do I need to allocate jobs in a team?)	What techniques have I demonstrated to ensure that I have created a well finished product that matches the intended user and purpose (safe electrical circuit, gears and pulleys which work smoothly and successfully, well finished wood/metal etc)? What changes do I need to make if the product is not fulfilling my design specification?	How will I test the success of my product? Does my product meet the needs of the user? Does it fulfil its purpose? Is it innovative?	Mechanical systems - Design, make and evaluate a purposeful mechanical system using pulleys or gears. Explore combinations of gears and pulleys to create working moving models.

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		How can I measure, mark, cut, shape and join materials securely?					
What are the features of successful products that combine shapes (consider functionality/user/purpose/components)?	Which designers have influenced fabrics and products significantly?	What do I notice when I disassemble products? How have products been strengthened and stiffened? How have parts been joined? What fastenings are used and why?	What research can I carry out in order to create a design specification for my product? What knowledge and skills do I need to be able to design and make a good quality product?	How can I use annotated sketches/diagrams from different perspectives and CAD to share my plans and ideas? How can I use paper to create a 3D mock-up of the design I want to produce? How can I refine my design using CAD to develop patterns and design prints?	What techniques have I demonstrated to ensure that I have created a well finished product that matches the intended user and purpose (joining sides, tacking, starting and finishing stitches, fastening)? What changes do I need to make if the product is not fulfilling my design specification?	How will I test the success of my product? Does my product meet the needs of the user? Is it appealing and does it fulfil its purpose? Is it innovative?	Textiles - Design, make and evaluate a purposeful product using joined fabric shapes. Develop stitches to include more than one type for joining and embellishment and include a means of fastening eg Velcro, ties and buttons.
What is meant by culture?	What are the key ingredients needed to make a	How do I measure out, cut, shape and	How can we make a design brief and design	How can I show a clear plan for the steps,	Can I select the utensils and equipment	Does my product meet the design	Food - Design, make and evaluate a food product which celebrates

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How do particular products take into consideration personal/cultural preferences, a healthy diet and meet dietary needs? Do particular products use locally sourced, seasonal or organic ingredients?	particular product? Where and how have they been produced? *Include the work of a renowned chef who promotes culture.*	combine ingredients? *e.g. knead, beat, rub and mix ingredients.* How can I follow a recipe effectively and safely, including the use of a heat source?	specification for the purpose and user that celebrates culture? How can I show a range of innovative ideas that celebrate culture and that will meet the design specification, including annotated sketches?	ingredients, utensils and equipment needed?	correctly and measure and prepare the ingredients to make my product?	brief and design specification? How can I include the views of others? Is there anything I might do differently next time?	culture. Demonstrate knowledge of how to use utensils (including heat sources) to prepare and cook food. Understand about the source of different food products. e.g. pasties, scones

Vocabulary
mechanical system, electrical system, pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, motor circuit, switch, circuit
NC Links