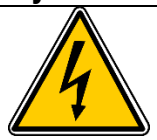
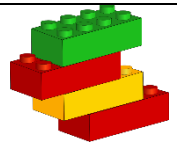
Eastwood Village Primary School
Upper KS2 – Design Technology Skills

Generate, model and communicate Ideas

1. Develop their ideas – through annotated sketches, cross-sectional and exploded diagrams, prototypes, and pattern pieces.
2. Generate ideas through use of computer-aided designs.
3. Develop their own design criteria and specification and use these to inform their ideas.
4. Carry out research, using surveys, interviews, questionnaires and web-based resources.
5. Identify the needs, wants, preferences and values of particular individuals and groups.
6. Make design decisions, taking account of constraints such as time, resources and cost.

Evaluating existing and own work

1. Investigate and analyse a range of existing products.
2. Ask who, when, where and how questions about existing products.
3. Discuss whether products can be recycled or reused.
4. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
5. Evaluate their ideas and products against their original design specification.
6. Understand how key events and individuals in design and technology have helped shape the world. (Famous inventors).

Electrical systems	Computing	Using tools	Textiles	Construction	Food	Mechanism
						
<u>Deign</u> Design controllable products. i.e. buggy using diagrams and ideas from existing work. .	<u>Deign</u> Design and generate ideas through use of computers.	<u>Deign</u> Design an outdoor product. i.e. Design catapults. Modelling ideas and how to improve making methods.	<u>Deign</u> Design and create an annotated sketch using textile materials.	<u>Deign</u> Design a structure using a design criteria .i.e. den, shelters. Make design decisions that take account of the availability of resources.	<u>Deign</u> Investigate food and healthy eating. Preparing food- create a recipe. Different ways eggs can be cooked. Bread recipes. Fishcakes. Food preparation skills.	<u>Deign</u> Design a working mechanism using a design criteria that include: gears, pulleys, cams, levers and linkages.

Make: Creating an electronic billboard. Make a controllable buggy with the help of these resources. Order the main stages of making. Use techniques that involve a number of steps.	Make Using sensors and applications to build products: circuits, lights. Use controls to make a functional product. Use techniques that involve a number of steps.	Make Perform practical tasks- Selecting tools to use. Making outdoor products, tools needed. Using cutting, shaping, joining and finishing accurately. Explain their choice of tools and equipment in relation to the skills and techniques they will be using. Apply a range of finishing techniques, including those from art and design, with some accuracy. Produce appropriate lists of tools, equipment and materials that they need.	Make Use a range of materials and equipment to make a product using soft materials: Cushion, teddy, puppet, t-shirt and blanket. Assemble, join and combine materials and components with some accuracy. Formulate step-by-step plans as a guide to making.	Make Make a structure using a range of construction materials. Measure, mark out, cut and shape materials and components with some accuracy. Testing suitable materials. Exploring materials- advantages and disadvantages. Formulate step-by-step plans as a guide to making. Demonstrate resourcefulness when tackling practical problems.	Make Use the basic principles of a healthy and varied diet to prepare and cook savoury dishes using a range of cooking techniques. Formulate step-by-step plans as a guide to making. Adapt and change recipes so it changes the appearance, taste, texture and aroma.	Make Make a moving product: Make a moving toy. Look at fairground rides and how they work. Order the main stages of making. Demonstrate resourcefulness when tackling practical problems.

Technical knowledge Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Understanding of electronic components	Technical knowledge Understanding of computing to program, monitor and control their products.	Technical knowledge Building a structure. Exploring materials and equipment. Tool/equipment safety.	Technical knowledge Testing materials for suitability. Material investigation- how can they be used. Using textile tools. Know that a 3D textiles product can be made from a combination of fabric shapes.	Technical knowledge Building strong structures. How they are strengthened. Exploring architecture. Structure tests. Know how to make strong, stiff shell structures.	Technical knowledge Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Farm to fork. Which food is farmed or grown. Know that food ingredients can be fresh, pre-cooked and processed. Know that a recipe can be adapted by adding or substituting one or more ingredients. Know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate. Know that to be active and healthy, food and drink are needed to provide energy for the body.	Technical knowledge Describe and label mechanisms. How to use a range of mechanisms- gears, pulleys, cams, levers. Look at mechanisms in detail.

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