Y3

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| **Structures: Shell Structures (boxes, nets)** |
| Context: **July Jamboree Enterprise (design packaging for a product)** | Possible ideas: **Design and make packaging for a fragile product, exploring the relationship between the shape and strength of the structure. Or design a desk tidy – structures and stability, 3d shapes.** |
| **Focus: Structures: shell structures****Objectives:*** Generating and developing realistic ideas and design criteria collaboratively and through analysis of existing products.
* Order the stages of making; selecting tools and using with some accuracy.
* Investigate and evaluate shell structures from real products.
* Construct strong, stiff shell structures.
* Test and evaluate own products against design criteria and intended user and purpose.
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| **Food: Healthy and Varied Diet** |
| Context: **Animals including Humans** | Possible ideas: **Design a Super Salad, Design healthy dips and dipper, Design a Super Smoothie** |
| Focus: **Food: Healthy and Varied Diet** **Objectives:*** Generate ideas and develop design criteria for an appealing product for a chosen user and purpose.
* Plan the main stages of a recipe, listing ingredients, utensils and equipment.
* Select from a range of ingredients to make appropriate food products.
* Carry out and record evaluations of a variety of ingredients and products.
* Know a range of appropriate ingredients, and whether they are grown, reared or caught.

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| **Textiles: 2d Shape to 3d Product** |
| Context: **Tokyo, Brazil, The Sahara** | Possible ideas: **Design and make a bag for a specific user and purpose** |
| Focus: **Textiles: 2d shape to 3d product**.**Objectives:*** Generate design criteria for an appealing, functional product for specific users.
* Produce annotated sketches, prototypes, final product sketches and pattern pieces.
* Select fabric and fastenings according to their functional characteristics.
* Investigate a range of 3d textile products.
* Test their products against the original criteria and with the intended user.

Simple Sewing Stitches Display PostersC:\Users\Perkinsg\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\71560EB1.tmp Image result for images childrens sewn bags key stage 2 |

Useful Resources:

* The Design and Technology Association website – some curriculum/skill information and free resources.
* Twinkl has some OK posters, Powerpoints and images to illustrate ideas.
* TinkerCAD: a free online computer aided design software. You need to register as a teacher and then join your class – https:/www.tinkercad.com/joinclass/4QHCRU434L6I. Probably more suitable for upper Key stage 2

Y4

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| **Mechanical Systems: Levers and Linkages** |
| Context: **History/Literacy: Ancient Egypt, The Roman Empire, Viking and Anglo Saxon,**  | Possible ideas: **design a moving history book** |
| Focus: **Mechanical Systems: levers and linkages****Objectives:*** Generate realistic ideas and use annotated sketches and prototypes to develop, model and communicate ideas.
* Select and use tools with some accuracy to cut, shape and join paper and card.
* Investigate and analyse their own and other’s products with lever and linkage mechanisms.
* Understand and use lever and linkages, and fixed and loose pivots.

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| **Electrical Systems: Simple Circuits and Switches** |
| Context: **Electricity; sound** | Possible ideas: design an alarm for a vehicles (buzzers), design a torch |
| Focus**: Electrical Systems: simple circuits and switches****Objectives:*** Use annotated sketches, cross sectional and exploding diagrams to develop and communicate ideas.
* Select and use tools with some accuracy to cut, shape, join and finish.
* Use construction materials and electrical components according to their functional properties and aesthetic qualities.
* Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.

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**Y4**

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| **Food: Healthy and Varied Diet** |
| Context: **July Jamboree Enterprise, Animals, including Humans** | Possible ideas: **design and make** **Healthy flapjacks, Healthy muffins, Savoury muffins, super smoothies,**  |
| * Focus: **Food – healthy and varied diet**.
* Generate ideas and develop design criteria for an appealing product for a user and purpose.
* Plan the main stages of a recipe, listing, ingredients, utensils and equipment.
* Select from a range of ingredients, to make appropriate food products.
* Carry out and record evaluations of a variety of ingredients and products.
* Know a range of appropriate ingredients, and whether they are grown, reared or caught.

 C:\Users\Perkinsg\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\63947C3F.tmp Image result for images a healthy flapjack |

Useful Resources:

* The Design and Technology Association website – some curriculum/skill information and free resources.
* Twinkl has some OK posters, Powerpoints and images to illustrate ideas.
* TinkerCAD: a free online computer aided design software. You need to register as a teacher and then join your class – https:/www.tinkercad.com/joinclass/4QHCRU434L6I. Probably more suitable for upper Keystage 2.