

DT Knowledge Organisers

Summer Two - 2024



Hanslope Primary School

Design Technology Knowledge Organiser

Year 1 - Food (Preparing fruit and vegetables including cooking and nutrition requirements for KS1)

Overview:

Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.

Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of the eat well plate.

Know and use technical and sensory vocabulary relevant to the project.

What key vocabulary will I learn:

fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients



National Curriculum Links:

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

How does this link to my future learning?

Year 2 - Food (Preparing fruit and vegetables including cooking and nutrition requirements for KS1)

What steps will I follow to create my final product?

- Research where food comes from and the different sources
- Discuss the different food groups and their sources.
- Taste the different foods and which ones we like best
- Prepare the food using different utensils.
- Cook the food in different forms.
- Eat our food!

Health and Safety

-Remove any jewelry and tie back long hair.

-Wear an apron and roll up your sleeves.

-Wash your hands with hot water and antibacterial soap.

Washing your hands should be done before, during and after preparing food.

Use different chopping boards and knives for raw meat & other foods.

Check that food is cooked right the way through.

Check the dates on food, and check for allergies of those eating.

Make sure that you clean up properly after yourself.

Year 2

No DT this term.

Year 3

No DT this term.



Hanslope Primary School

Design Technology Knowledge Organiser

Year 4: Structures (shell structures)

Overview:

You should already know that structures are things that are built for a purpose, for example to support something or hold something.

-Shell Structures are structures with a solid outer surface (which may be curved or flat) and a hollow inner area.

-Shell structures can serve many different purposes. Often, they are used to protecting, containing and/or presenting (e.g. packaging).

-Some examples of shell structures are food packaging, tunnels, helmets, drinks cans, and boats.

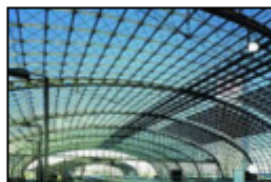
-A rounded outer surface is particularly strong, because it spreads forces throughout the whole structure, which means every part of the structure supports only a small part of the load.

How does this link to my future learning?

- Structures (strong frame structures)- (Year 6)

What key vocabulary will I learn:

Structures	Font
Shell Structures	Durable
Packaging	3D Nets
Purpose	Tabs
Forces	Folding/Layering
Style	Corrugating/ Ribbing



National Curriculum Links:

- Design, make and evaluate products.
- Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures

What steps will I follow to create my final product?

Designing:

Shell structures may be used to contain things.

-The structures need to be able to take the weight of their contents.

-Consider the 3-D shapes that are most appropriate for this purpose: cubes, cuboids, prisms, are all possibilities.

-Remember, curved shell structures are effective at spreading weight evenly.

Shell structures may be used to protect things.

-The materials used are important for protecting interior contents. Some shell structures can be shaped to fit their contents, protecting them from movement and damage (e.g. egg cartons).

-Shell structures can be stiffened through folding, layering, corrugating, ribbing or lamination.

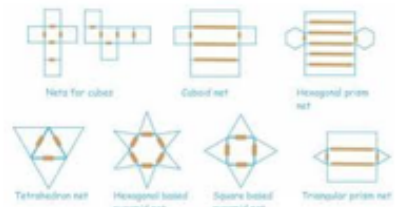
Making:

-Nets can be used to make 3D products.

-Scoring is the process of marking a sheet to make it easier to fold.

-Outer edges of the net can be cut out (apparatus depends on material).

-Tabs are additional strips on the net that can be scored and folded to make a surface for sticking vertices together.



Evaluating: How well does your structure work? Does it meet its purpose? How did you make your shell structure strong and durable? How could you make it more stable? Which materials did you use? Why did you make these choices? How does you product protect and contain? How could it do this more effectively?

Health and Safety

-Remove any jewelry and tie back long hair. Keep belongings clear.

-Wear an apron where necessary and roll up your sleeves.

-Walk safely and calmly around the classroom/ workshop.

Keep your work area and floor area clear – regularly tidy up to avoid accidents.

Follow the teacher's cutting/ machinery instructions carefully.

Make sure that you are wearing the correct equipment for tasks, including safety goggles.

Should you need to move around with sharp objects, hold them appropriately.

Report and clean all spillages & other potential hazards.



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Year 5: (combining different fabric shapes)

Overview and prior learning

Combining Different Fabric Shapes

Textiles are flexible materials woven from fibres

-In your prior learning, you should have learnt that textiles are used to make clothing, sheets, towels, linen, carpets, rugs and a wide variety of other products. There are a wide range of textile fabrics.

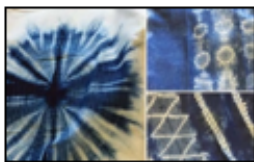
-You should already know how to join fabrics in a number of ways, including using a range of sewing techniques.

-Textiles designers and makers can use stitches and other techniques (e.g. embroidery, tie dye) to add to the aesthetic appeal of their product.

-They can also add a number of features to improve the product's functionality, for example by adding a range of fasteners (e.g. clasps, ties, buttons, zips, studs, toggles and Velcro).

What key vocabulary will I learn:

Textiles	Fasteners
Sew/ Stitch	Embroidery
Aesthetics	Cross Stitch
Functionality	Stem Stitch
Stitch	Chain Stitch
Tie Dye	Satin Stitch



National Curriculum Links:

- Design, make and evaluate products
- Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures

How does this link to my future learning?

- To design make and evaluate products in KS3
- Technical knowledge: understand and use the properties of materials and the performance of structural elements to achieve functioning solutions

What will I know by the end of this unit?

Design:

Designers of textile products need to think about the purpose (what does it do?) and the user (who will use it?)

Fabrics -Different fabrics have different properties (characteristics) which make them good for different purposes. For example, some materials are good insulators (keep things warm/cool, e.g. wool/fleece), others are waterproof/resistant (e.g. laminated fabrics, PUL, TPU, leather), whilst others are eco-friendly (e.g. organic cotton, linen). Consider will help you to meet the purpose and audience of your product.

Joining – In addition to the stitches that you have previously learnt, you should plan to use a range of further stitches (see below) can be used to sew and shape curved edges, and to decorate your product.

As a part of the design process, you should be able to sketch and annotate different ideas. You should also be able to plan the main stages of making, using either a checklist, a storyboard, or a flowchart.

Evaluating: How does your textile look? Would your user like it? Why or why not? How could you improve the way it looks? Are your attached fabrics secure? How did you achieve this? Which type of stitch did you use? How could fabrics be joined more securely? Which materials did you choose? What fasteners did you use? Why? Does your product perform its purpose well? Why or why not?

Making:

You should use a wider range of stitches and decorations.

Cross Stitch – A popular form of embroidery stitching in which two diagonal lines are stitched to create an 'X' shape. This form of stitching can be easily used to create patterns and pictures.

Stem Stitch – The stem stitch creates a thin outline which can be curved. It uses diagonal stitches running closely beside the prior stitch.

Chain Stitch – Chain stitches create a thick, textured line. It uses looped stitches to form a chain-like pattern.

Satin Stitch – Satin stitches are often used to fill in shapes. Shapes can be outlined with other stitches before the satin stitch is used to fill the shape.

Health and Safety

-Remove any jewelry and tie back long hair.

-Walk safely and calmly around the classroom/ workshop.

-When using a needle, keep your fingers well clear. Use a thimble where available.

-When you are not using your needle, keep it in the same safe place.

If using a sewing machine, follow staff instructions carefully.

Make sure that you are wearing the correct equipment for tasks.

If you need to move around with scissors, hold around the closed blades, facing down.

Report any accidents & clean up properly after yourself.

Year 6

No DT this term.