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| **Structures: Constructing a Windmill (Y1)** | **Mechanisms: Wheels & Axels (Y1)** |
| **Design** | * Learning the importance of a clear design criteria.
* Including individual preferences and requirements in a design.
 | * Designing a vehicle that includes wheels, axles and axle holders, that when combined, will allow the wheels to move.
* Creating clearly labelled drawings that illustrate movement.
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| **Make** | * Making stable structures from card, tape and glue .
* Learning how to turn 2D nets into 3D structures.
* Following instructions to cut and assemble the supporting structure of a windmill.
* Making functioning turbines and axles which are assembled into a main supporting structure.
 | * Adapting mechanisms, when:
	+ they do not work as they should.
	+ to ﬁt their vehicle design.
	+ to improve how they work after testing their vehicle.
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| **Evaluate** | * Evaluating a windmill according to the design criteria, testing whether the structure is strong and stable and altering it if it isn’t
* Suggest points for improvements.
 | * Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and recognising that a wheel needs an axle in order to move.
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| **Technical** | * To understand that the shape of materials can be changed to improve the strength and stiffness of structures.
* To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses).
* To understand that axles are used in structures and mechanisms to make parts turn in a circle.
* To begin to understand that different structures are used for different purposes.
* To know that a structure is something that has been made and put together.
 | * To know that wheels need to be round to rotate and move.
* To understand that for a wheel to move it must be attached to a rotating axle.
* To know that an axle moves within an axle holder which is ﬁxed to the vehicle or toy.
* To know that the frame of a vehicle (chassis) needs to be balanced.
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| **Additional** | * To know that a client is the person I am designing for.
* To know that design criteria is a list of points to ensure the product meets the clients needs and wants.
* To know that a windmill harnesses the power of wind for a purpose like grinding grain, pumping water or generating electricity.
* To know that windmill turbines use wind to turn and make the machines inside work.
* To know that a windmill is a structure with sails that are moved by the wind.
* To know the three main parts of a windmill are the turbine, axle and structure.
 | * To know some real-life items that use wheels such as wheelbarrows, hamster wheels and vehicles.
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|  | **Food & Nutrition: Fruit & Veg (Y1)** | **Food & Nutrition: Balanced Diet (Y2)** |
| **Design** | * Designing smoothie carton packaging by-hand or on ICT software.
 | * Designing a healthy wrap based on a food combination which works well together.
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| **Make** | * Chopping fruit and vegetables safely to make a smoothie.
* Identifying if a food is a fruit or a vegetable.
* Learning where and how fruits and vegetables grow.
 | * Slicing food safely using the bridge or claw grip.
* Constructing a wrap that meets a design brief.
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| **Evaluate** | * Tasting and evaluating different food combinations.
* Describing appearance, smell and taste.
* Suggesting information to be included on packaging.
 | * Describing the taste, texture and smell of fruit and vegetables.
* Taste testing food combinations and ﬁnal products.
* Describing the information that should be included on a label.
* Evaluating which grip was most effective.
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| **Cooking and nutrition** | * Understanding the difference between fruits and vegetables.
* To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber).
* To know that a blender is a machine which mixes ingredients together into a smooth liquid.
* To know that a fruit has seeds and a vegetable does not.
* To know that fruits grow on trees or vines.
* To know that vegetables can grow either above or below ground.
* To know that vegetables can come from different parts of the plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber).
 | * To know that ‘diet’ means the food and drink that a person or animal usually eats.
* To understand what makes a balanced diet.
* To know where to ﬁnd the nutritional information on packaging.
* To know that the ﬁve main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar.
* To understand that I should eat a range of different foods from each food group, and roughly how much of each food group.
* To know that nutrients are substances in food that all living things need to make energy, grow and develop.
* To know that ‘ingredients’ means the items in a mixture or recipe.
* To know that I should only have a maximum of ﬁve teaspoons of sugar a day to stay healthy.
* To know that many food and drinks we do not expect to contain sugar do; we call these ‘hidden sugars’.
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|  | **Textiles: Puppets (Y1)** | **Textile: Pouches (Y2)** |
| **Design** | * Using a template to create a design for a puppet.
 | * Designing a pouch.
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| **Make** | * Cutting fabric neatly with scissors.
* Using joining methods to decorate a puppet.
* Sequencing the steps taken during construction.
 | * Selecting and cutting fabrics for sewing.
* Decorating a pouch using fabric glue or running stitch.
* Threading a needle.
* Sewing running stitch, with evenly spaced, neat, even stitches to join fabric.
* Neatly pinning and cutting fabric using a template.
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| **Evaluate** | * Reﬂecting on a ﬁnished product, explaining likes and dislikes.
 | * Troubleshooting scenarios posed by the teacher.
* Evaluating the quality of the stitching on others’ work.
* Discussing as a class the success of their stitching against the success criteria.
* Identifying aspects of their peers’ work that they particularly like and explaining why.
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| **Cooking and nutrition** | * To know that ‘joining technique’ means connecting two pieces of material together.
* To know that there are various temporary methods of joining fabric by using staples. glue or pins.
* To understand that different techniques for joining materials can be used for different purposes.
* To understand that a template (or fabric pattern) is used to cut out the same shape multiple times.
* To know that drawing a design idea is useful to see how an idea will look.
 | * To know that sewing is a method of joining fabric.
* To know that different stitches can be used when sewing.
* To understand the importance of tying a knot after sewing the ﬁnal stitch.
* To know that a thimble can be used to protect my ﬁngers when sewing.
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