

Subject: Design and Technology **Topic:** Packaging **Year Group:** 3

Prior Learning: In Year 1 I made a Christmas card with a moving picture. I investigated levers and sliders. I gained some experience of designing, making and evaluating products for a specified user and purpose. I developed some cutting, joining and finishing skills with card.

In Year 2 I explored vehicles with moving parts. I explored wheels, axles and bearings and how they can make a vehicle move. I made a vehicle move using wheels and either a fixed axle or free axle. I developed my cutting, shaping and joining skills using scissors, glue and masking tape.

What I will know by the end of the unit:

- Explore packaging, materials used and how the materials are joined.
- Explore nets to make 3D shapes.
- Begin to apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- Measure, mark out, cut, score and assembly components with increasing accuracy and independence.
- Work safely with a range of tools.
- Explain their choice of tools and equipment in relation to the skills and techniques they will be using.

Vocabulary:

Design – To think of (generate), develop and communicate ideas for a product.

Packaging – using materials to wrap and protect something inside

Materials – something you use to make packaging, e.g. paper, plastic, fabric, card

Structure – something that has a shape with parts which fit together

Strengthen – make stronger using additional materials or different joining techniques

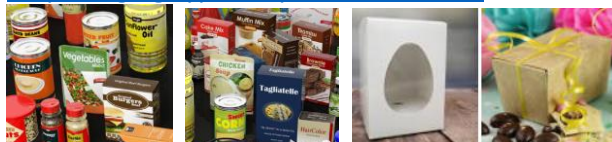
Stiffen – making a material hold its shape more firmly

Reinforce – using additional materials or more layers of the same material to make the structure stronger

Net (of a shape) – the shape formed when all faces of the shape are laid flat, with each face attached to at least one other

Useful Resources:

<https://www.assemblies.com/food-packaging-9-types-and-differences-explained/>
<https://www.newfoodmagazine.com/article/90810/food-packaging-types-importance-trends/>



Task:

- Create packaging for a hollow chocolate egg
- Consider the following:
 - **Function** - Does it hold the contents safely and securely? Is it suitable for its intended job?
 - **Safety** - Will the food be kept fresh? Will it be damaged?
 - **Reliability** - Is the packaging strong enough for the purpose?

Design

- ♣ use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- ♣ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- ♣ select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- ♣ select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- ♣ investigate and analyse a range of existing products
- ♣ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- ♣ understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- ♣ apply their understanding of how to strengthen, stiffen and reinforce more complex structures