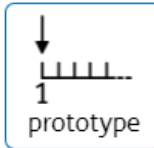
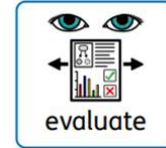
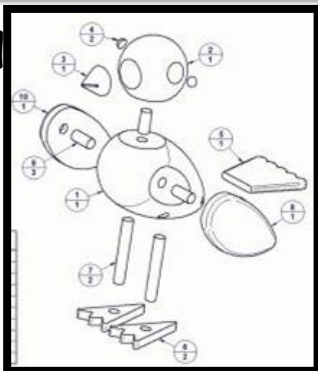


Exploded Diagram



## Tier 2 Vocabulary

<b>Specification</b>	A list that describes what a product needs to do
<b>Evaluation</b>	To judge if a product meets chosen criteria
<b>Design</b>	A plan or drawing of your ideas
<b>Innovative</b>	Having a new idea

## Topic (Tier 3) Vocabulary

<b>CAD</b>	Computer Aided Design
<b>Linkage</b>	A series of parts that are connected and can move
<b>Prototype</b>	A quick 3-D model used to check a design
<b>Product</b>	Something that is made

# National Treasures

## Childhood Puppets



## Rights of the Child/Global Goals

### Article 13

Every child must be free to express their thoughts and opinions and to access all kinds of information, as long as it is within the law.

### Global Goal 9

Industry, innovation and infrastructure

## Prior learning

How to strengthen materials

Working to design criteria

How shadows are made from work in science lessons

## DT Big Ideas

### We Are Engineers

**Design:** we use criteria to design products that do a job for a person or group.

**Make:** we make products that do a job or solve a problem.

**Evaluate:** we continually reflect on our work and that of others and we look for ways to improve it.

**Technical Knowledge:** we apply our understanding to make products that work.

**Techniques for building frame structures**

Roll paper to make tubes for construction



**Joining straws**

Drinking straw

Plastic tubing

Threaded and tied

Pipe cleaner

Straws split to fit round then glued

Staw flattened, wrapped around and glued

Ends of straws flattened and glued

Glued to card

One straw creased and inserted

Flattened and glued


Pipe cleaner

Sleeve glued around joint


Sticky tape

**Joining thin sectioned pieces of wood**


Card strips can be used to make joints (Use PVA glue)



Basic bands or string can be used to make joints



Card triangles can be used to make joints




**Understanding triangulation**

Creating triangles for rigidity

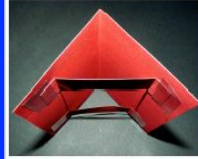


More rigid




Creating diagonals in your frame will help ensure it stays upright and sturdy.

Making 'beams' across shapes will help to reinforce them and keep the object the same shape.

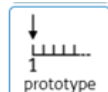
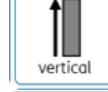
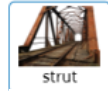


**Tier 2 Vocabulary**

<b>Innovative</b>	Having a new idea
<b>Evaluation</b>	To judge if a product meets chosen criteria
<b>Design</b>	A plan or drawing of your ideas
<b>Specification</b>	A list that describes what a product needs to do

**Topic (Tier 3) Vocabulary**

<b>Beams</b>	A long, strong piece of wood or metal used to support
<b>Struts</b>	A rod that is part of a frame work
<b>Reinforce</b>	Make stronger
<b>Diagonal</b>	A straight line that goes from one corner to another inside a shape
<b>Vertical</b>	A line that is parallel to the ground
<b>Horizontal</b>	A line that is at right angles to the ground
<b>Prototype</b>	A quick 3-D model used to check a design
<b>Product</b>	Something that is made



# National Treasures

## British Fairground



# Rights of the Child/Global Goals

## Article 13

Every child must be free to express their thoughts and opinions and to access all kinds of information, as long as it is within the law.

## Global Goal 9

Industry, innovation and infrastructure

# Prior learning

Electrical circuits  
Mechanisms  
Attaching and strengthening materials

# DT Big Ideas

## We Are Engineers

**Design:** we use criteria to design products that do a job for a person or group.

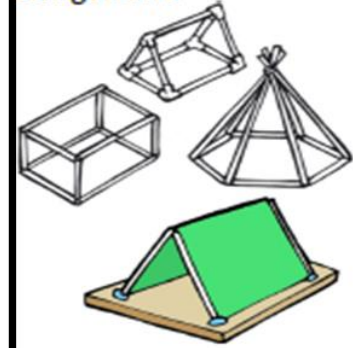
**Make:** we make products that do a job or solve a problem.

**Evaluate:** we continually reflect on our work and that of others and we look for ways to improve it.

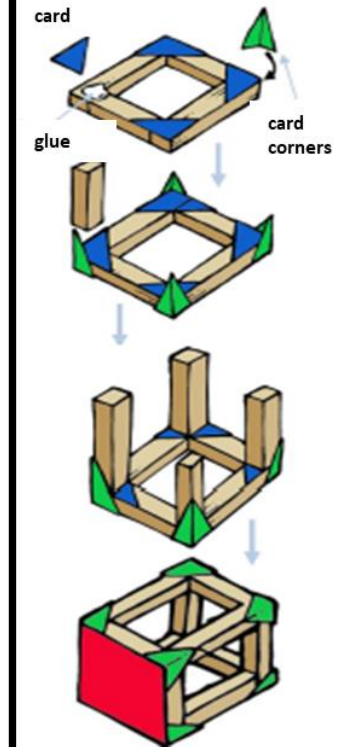
**Technical Knowledge:** we apply our understanding to make products that work.

## Making small-scale frame structures

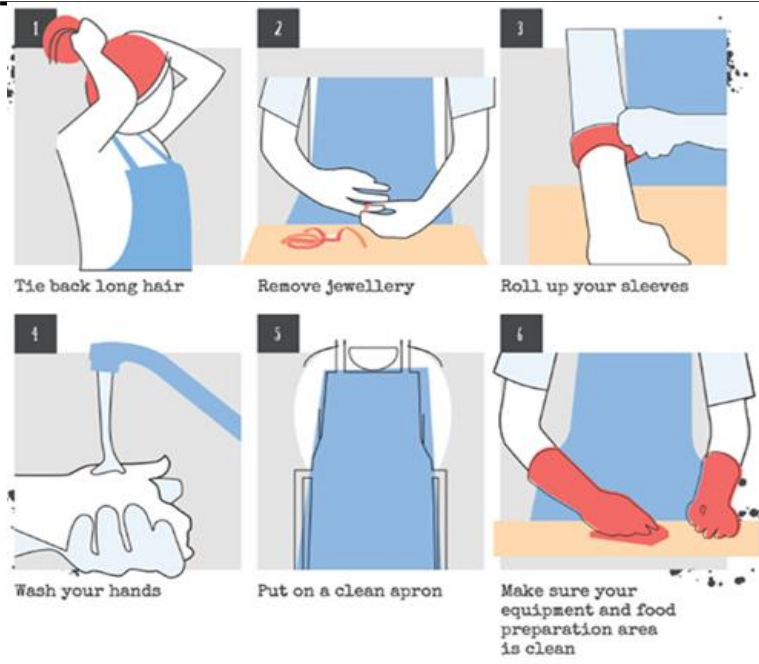
### Using straws



### Using square section wood

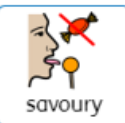
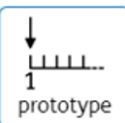






Tier 2 Vocabulary	
<b>Design</b>	A plan or drawing of your ideas
<b>Innovative</b>	A new idea
<b>Specification</b>	A list that describes what a product needs to do
<b>Evaluation</b>	To judge if a product meets chosen criteria

Topic (Tier 3) Vocabulary	
<b>Prototype</b>	A quick 3-D model used to check a design
<b>Product</b>	Something that is made
<b>Savoury</b>	food that is salty or spicy rather than sweet
<b>Use by date</b>	date by which the food should be eaten
<b>Sell by date</b>	date by which the food should be sold



On most food packaging now you will find a diagram that looks this:

The section along the top tells you how many grams of each nutrient is in a serving of the product.

ENERGY 1478KJ 352KCAL	FAT 14.6g	SATURATED 6.6g	SUGARS 4.0g	SALT 1.46g
18%	21%	33%	4%	24%

The section along the bottom tells you what percentage this amount is of your RDA.

Red means that there is a high amount of that particular nutrient in the product.

Orange means that there is a medium amount of that particular nutrient in the product.

Green means that there is a low amount of that particular nutrient in the product.

# National Treasures



## Rights of the Child/Global Goals

### Article 24

Every child has the right to the best possible health.

Governments must provide good quality health care, clean water, nutritious food, and a clean environment and education on health and well-being so that children can stay healthy.

### Global Goal 3

Good health and wellbeing

## Prior learning

Seasonality  
Healthy choices

## DT Big Ideas

### We Are Engineers

**Design:** we use criteria to design products that do a job for a person or group.

**Make:** we make products that do a job or solve a problem.

**Evaluate:** we continually reflect on our work and that of others and we look for ways to improve it.

**Technical Knowledge:** we apply our understanding to make products that work.

**Cooking and Nutrition:** we use what we know about food to safely prepare healthy meals.

	Fruit								
	apple	pear	blackberry	blackcurrant	cherry	plum	rhubarb	strawberry	raspberry
January	✓	✓					✓		
February	✓						✓		
March							✓		
April							✓		
May							✓		
June				✓			✓	✓	
July				✓	✓			✓	✓
August			✓					✓	✓
September	✓	✓	✓			✓		✓	✓
October	✓	✓	✓			✓			
November	✓	✓							
December	✓	✓							

## Eatwell Guide

Check the label on packaged foods

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

Each serving (100g) contains

Energy (kcal)	200	120	220	280	200
Fat (g)	10	5	10	15	10
Carbohydrate (g)	15	10	20	30	15
Fibre (g)	1	2	1	1	1
Salt (g)	0.5	0.2	0.5	0.8	0.5

of an adult's reference intake  
Typical values (as sold) per 100g/100ml/100kcal

Choose foods lower in fat, salt and sugars

**Fruit and vegetables**  
Eat at least 5 portions of a variety of fruit and vegetables every day

**Potatoes, bread, rice, pasta and other starchy carbohydrates**  
Choose wholegrain or higher fibre versions with less added fat, salt and sugar

**Beans, pulses, fish, eggs, meat and other proteins**  
Eat more beans and pulses, 2 portions of sustainably sourced fish per week, one of which is oily. Eat less red and processed meat

**Dairy and alternatives**  
Choose lower fat and lower sugar options

**Oil & spreads**  
Choose unsaturated oils and use in small amounts

6-8 a day

Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS

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