



# Big Question:

## What makes the best rocket launcher? How does the seasonality effect the taste of food?

### Key Vocabulary:

#### Materials

any substance that has a name. For example: chalk, paper, wood, iron, air, water, clay, plastic, rubber,

#### Combine

join together to make a single thing.

#### Struts

a piece of **wood** or metal which holds the **weight** of other pieces in a building or other structure.

#### Components

The **components** of something are the parts that it is made of.

#### Seasonal

of, relating to, or varying in occurrence according to the season.

### Knowledge from Y2 that will help me answer the big question:

A healthy diet should include meat or fish, starchy foods (such as potatoes or rice), some dairy foods, a small amount of fat and plenty of fruit and vegetables. Computer software can be used to help design or plan a product. Advantages include identifying and solving problems before the product is made and experimenting with different materials and colours.

### New knowledge that will help me answer the big question:

Equipment and devices can be controlled by pressing buttons on a control panel, such as on a washing machine or microwave.

Seasonality is the time of year when the harvest or flavour of a type of food is at its best. Buying seasonal food is beneficial for many reasons: the food tastes better; it is fresher because it hasn't been transported thousands of miles; the nutritional value is higher; the carbon footprint is lower, due to reduced transport; it supports local growers and is usually cheaper.

A balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions.

### New knowledge that will help me answer the big question:

A pattern piece is a drawing or shape used to guide how to make something. There are many different computer aided design packages for designing products.

Various methods can be used to support a framework. These include cross braces, guy ropes and diagonal struts. Frameworks can be built using lolly sticks, skewers and bamboo canes.

There are many rules for using tools safely and these may vary depending on the tools being used. For example, someone using a chisel should chip or cut with the cutting edge pointing away from their body. All tools should be cleaned and put away after use, and should not be used if they are loose or cracked.

Testing a product against the design criteria will highlight anything that needs improvement or redesign. Changes are often made to a design during manufacture.

### Knowledge from Y3 that will help me answer the big question:

Preparation techniques for savoury dishes include peeling, chopping, deseeding, slicing, dicing, grating, mixing and skinning.

There are five main food groups that should be eaten regularly as part of a balanced diet: fruit and vegetables; carbohydrates (potatoes, bread, rice and pasta); proteins (beans, pulses, fish, eggs and meat); dairy and alternatives (milk, cheese and yoghurt) and fats (oils and spreads). Foods high in fat, salt and sugar should only be eaten occasionally as part of a healthy, balanced diet.

### Knowledge from Y4 that will help me answer the big question:

A prototype is a mock-up of a design that will look like the finished product but may not be full size or made of the same materials. Shell and frame structures can be strengthened by gluing several layers of card together, using triangular shapes rather than squares, adding diagonal support struts and using 'Jinks' corners (small, thin pieces of card cut into a right-angled triangle and glued over each joint to straighten and strengthen them).

Annotated sketches and exploded diagrams show specific parts of a design, highlight sections or show functions. They communicate ideas in a visual, detailed way.



### New knowledge that will help me answer the big question:

Many new designs and inventions influenced society. For example, Gladys West helped to invent Global Positioning System (GPS). This invention has influenced society as people now use mapping technology on their phones to find routes and places.

Mechanisms can be used to add functionality to a model. For example, sliders or levers can be used in moving pictures, storybooks or simple puppets; linkages in moving vehicles or puppets; gears in motorised vehicles or spinning toys; pulleys in cable cars or transport systems and cams in 3-D moving toys or pictures.

As an geographer, the essential knowledge I need to answer the big question is:	Date
→ Many new designs and inventions influenced society. For example, Gladys West helped to invent Global Positioning System (GPS). This invention has influenced society as people now use mapping technology on their phones to find routes and places.	
→ Mechanisms can be used to add functionality to a model. For example, sliders or levers can be used in moving pictures, storybooks or simple puppets; linkages in moving vehicles or puppets; gears in motorised vehicles or spinning toys; pulleys in cable cars or transport systems and cams in 3-D moving toys or pictures.	
→ A pattern piece is a drawing or shape used to guide how to make something.	
→ Select and combine materials with precision.	
→ Various methods can be used to support a framework. These include cross braces, guy ropes and diagonal struts. Frameworks can be built using lolly sticks, skewers and bamboo canes.	
→ There are many rules for using tools safely and these may vary depending on the tools being used. For example, someone using a chisel should chip or cut with the cutting edge pointing away from their body. All tools should be cleaned and put away after use, and should not be used if they are loose or cracked.	
→ Testing a product against the design criteria will highlight anything that needs improvement or redesign. Changes are often made to a design during manufacture.	
→ Equipment and devices can be controlled by pressing buttons on a control panel, such as on a washing machine or microwave.	
→ Incorporate circuits that use a variety of components into models or products.	
→ Seasonality is the time of year when the harvest or flavour of a type of food is at its best. Buying seasonal food is beneficial for many reasons: the food tastes better; it is fresher because it hasn't been transported thousands of miles; the nutritional value is higher; the carbon footprint is lower, due to reduced transport; it supports local growers and is usually cheaper. →	
→ A balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions.	
→ Sweet dishes are usually desserts, such as cakes, fruit pies and trifles. Savoury dishes usually have a salty or spicy flavour rather than a sweet one.	
→ A focus group is a small group of people whose reactions and opinions about a product are taken and studied. Evaluations can be made by asking product users a selection of questions to obtain data on how the product has met its design criteria	