



Big Question:

How can effective design contribute to survival in the Arctic?

Key Vocabulary:

Alterations: To make changes to something

Availability: The quality of being able to be used.

Design Criteria: The precise goals that a project must achieve in order to be successful.

Iterative: Revisiting and reflecting at regular points.

Flexibility: Bending easily without breaking.

Precision: Being exact and accurate.

Texture: The feel of a surface of substance.

New knowledge that will help me answer the big question:

The Wright brothers are significant inventors. They built the first ever successful heavier than air aeroplane. This has benefited society because it has made international travel quicker and easier for ordinary people to explore the world.



Knowledge from Y1 that will help me answer the big question:

A monarch is a king or queen who rules the country.

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

Design criteria are the exact goals a project must achieve to be successful.




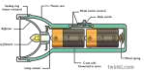


Knowledge from Y4 that will help me answer the big question:

A profile of a leader can include their significant achievements, events in which they played a part and the opinions of others about the person (positive or negative).







New knowledge that will help me answer the big question:

Before we make a product, we need to create a design criteria. A design criteria should show the intended use of the product, age range targeted and final appearance.

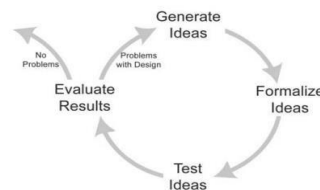
Ideas can be communicated in different ways:

					
Discussion	Annotated Sketches	Prototype	Cross-Sectional Diagrams	Pattern Pieces	Computer-Aided Design

When we make something, we need to choose the best materials. We need to think about their characteristics:

					
Flexibility	Waterproof	Texture	Colour	Cost	Availability

Design is an iterative process. This means that we need to make alterations and improvements while we are making the product.



New knowledge that will help me answer the big question:

Eating a balanced diet is a positive lifestyle choice.. Food that is high in fat, salt or sugar can still be eaten occasionally as part of a balanced diet.

Organic produce is food that has been grown without the use of man-made fertilisers, pesticides, growth regulators or animal feed additives.



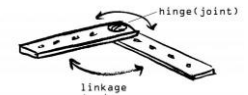
New knowledge that will help me answer the big question:

Mechanical systems can include

- Levers



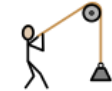
- Linkages



- Gears

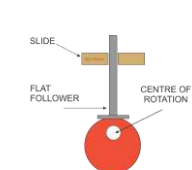


- Pulleys



- Cams

ECCENTRIC CAM



As a designer, the essential knowledge I need to answer the big question is:	Date
The aeroplane, invented by the Wright Brothers in 1903, has made international travel far quicker than using the boat and therefore made it easier for ordinary people to explore the world.	
The Wright brothers invented and built the world's first-ever successful heavier-than-air aeroplane. They are significant inventors because their work has benefited society through the improvement in transport.	
Create a detailed comparative report about two or more products or inventions	
Computer monitoring uses sensors as a scientific tool to record information about environmental changes over time.	
It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability.	
Design criteria should cover the intended use of the product, age range targeted and final appearance. Ideas can be communicated in a range of ways, including through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.	
Select appropriate tools for a task and use them safely and precisely.	
Design is an iterative process, meaning alterations and improvements are made continually throughout the manufacturing process. Evaluating a product while it's being manufactured, and explaining these evaluations to others, can help to refine it.	
Mechanical systems can include sliders, levers, linkages, gears, pulleys and cams.	
Eating a balanced diet is a positive lifestyle choice that should be sustained over time. Food that is high in fat, salt or sugar can still be eaten occasionally as part of a balanced diet.	
Organic produce is food that has been grown without the use of man-made fertilisers, pesticides, growth regulators or animal feed additives.	