



# What is Design and Technology?



- Design and technology is an area of study that focuses on planning, designing and creating things (called "products") which people use.
- It involves students designing and making products using a range of materials and media.
- Your technology lessons will not take place in normal classrooms. They will be based in a workshop so that you can complete practical work.

# Just a few of the things you may learn and

**USE**....(please click on the circles to see how the process works!)

Laser  
cutting

Hand file

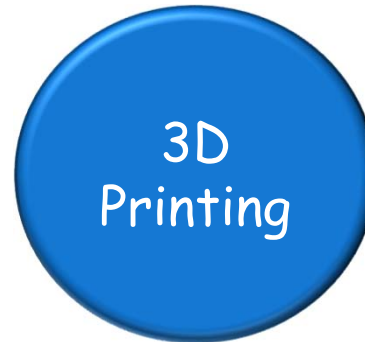
Tenon saw

3D  
Printing

Coping  
saw

Vacuum  
forming

Soldering  
Iron



...and some of the materials  
you may use!

Woods

Metals

Papers

Cardboard

Plastics

Smart Materials

# By the end of this project you will be able to:

- Explain why Design & Technology is important
- Identify some famous designers & their products
- Understand the term 'Target Audience'
- Design and make your own product
- Justify why your product is suitable for your target audience
- Evaluate the success of your finished product

# Why is design and technology important?



Watch this  
video to find  
out more!

Which of these require the use of design and technology in order to be made?



# Famous designers

Many influential designers and inventors throughout the world have been responsible for changing the way we live our lives and developing products that solve problems and make tasks easier for the user.

Over the next few slides, you will be introduced to some of those designers, find out which products they are recognised for and the impact they have had on the world around us.



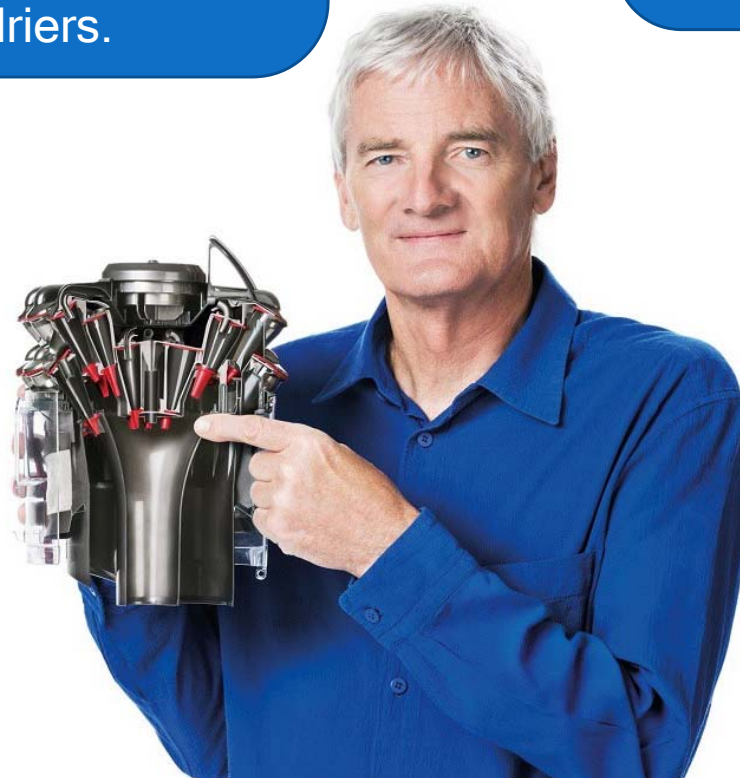
# Sir James Dyson

A British inventor and industrial designer who founded Dyson Ltd

Responsible for the Dyson Airblade - a hand dryer that uses air to remove the water rather than heat. Again, this product is much more efficient than normal hand driers.

Best known as the inventor of the Dual Cyclone bagless vacuum cleaner - which resulted in a more efficient machine.

His ambition, innovation and success has inspired many other developing inventors.



Manufactured other innovative household appliances which use less energy and make the experience easier for the person using it.

# The Wright brothers

The Wright brothers, Orville and Wilbur, were two American brothers, inventors and aviation pioneers who invented and built the world's first successful airplane.

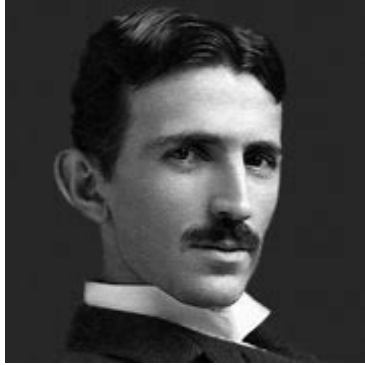
They observed the way that birds angled their wings to balance and control the body when flying. That movement inspired their design.



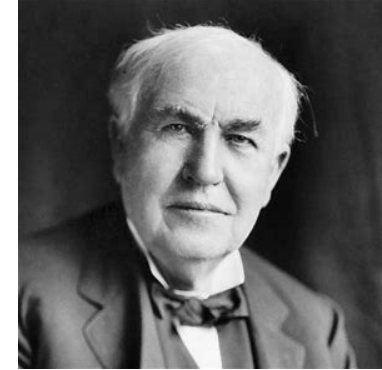
Modern aviation and planes have all been developed from this original idea. Without the Wright brothers, we may not have modern day aeroplanes.

Without the design and development from this idea, we may not be able to use planes for passengers and cargo - this would make it very difficult for us to go on holiday and buy the foods, medicines and clothing that are flown to the UK from other countries!

# Nikola Tesla and Thomas Edison



Nikola Tesla, a Serbian-American inventor and Thomas Alva Edison, an American inventor, were both responsible for developing devices within the field of electric power generation.



Nikolas Tesla is most famous for inventing 'Alternating Current'. This is the form of electricity that is used in billions of homes, businesses and devices throughout the world.

He created many other inventions including the Tesla coil which is used in radios and ways to harness wireless electricity - this method is now used by many mobile phone manufacturers for wireless charging!

Edison's most famous invention was the light bulb which led to people being able to use electricity and electrical appliances within their home - he invented 'Direct Current' which is commonly used to power batteries and electronic devices

He also had two other very successful inventions - the Phonograph, which was the first machine to record and playback sound and the motion picture camera which helped progress the movies that you watch today!

# TESLA motor company



Leading designers and manufacturers of electric sports cars

The founders of Tesla Motors, Martin Eberhard and Marc Tarpenning named the company after Nikola Tesla because without his invention of Alternating Current, the electric cars they produce today would not be possible!

Elon Musk who is another founder and chief designer for Tesla also considers Thomas Edison's inventions to have had a huge impact on not only their work but many other products around the world.

# What is a target audience?

When a designer is making any type of product, it is very important to understand who the product is being made for. This is called the target audience.

The needs of that particular person or group of people will influence how the product is designed.

For example –

A table lamp designed for a young child's bedroom would have different requirements to a table lamp designed for an adult's living room.



# Your design challenge

*For you to get a little taste of Design and Technology , you are going to complete the 'product in a tin' mini challenge!*

- For this challenge, you will need to make your own, creative product that will fit into a tin the same size as a Pringles snack tin. The exact dimensions are on the last slide.
- The product should be made using materials from **AT LEAST** two of the main materials categories used in Design & Technology e.g. wood, metal, plastic, textiles and paper/board.
- The product must be able to fit in the tin with the lid closed. It can be rolled, folded or taken apart to fit in to the tin (but remember it must be a finished product and not a materials & components kit).
- Any product can be created but it must be designed for a particular user (target audience) and have a purpose/function.
- You can also decorate the tin with your own packaging for the product, if you do not have a tin or can't get one then you can just create the product. You may want to include a poster or instruction leaflet.



Here are some examples of real products in a tin currently being sold....



Here are some examples that other students have created!



Jewellery holder



Dog collar



Marble Golf game



Friend in a tin





Decoration



Fidget snake



Recycled earrings



Child's game



Knitted monster

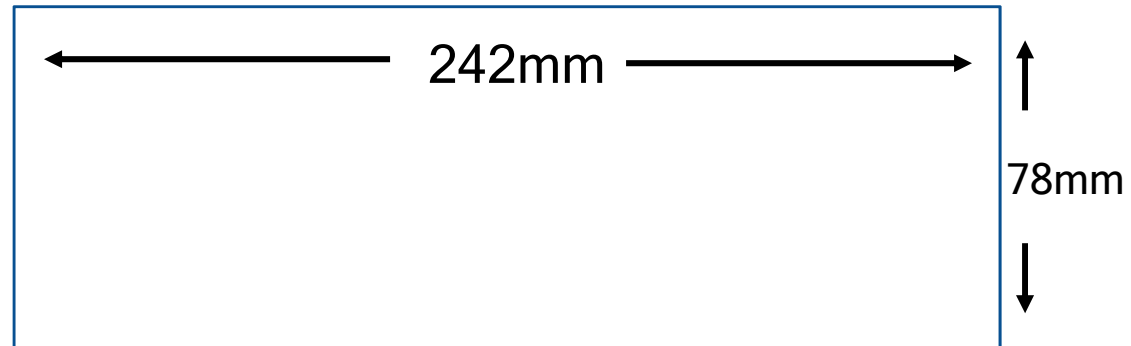
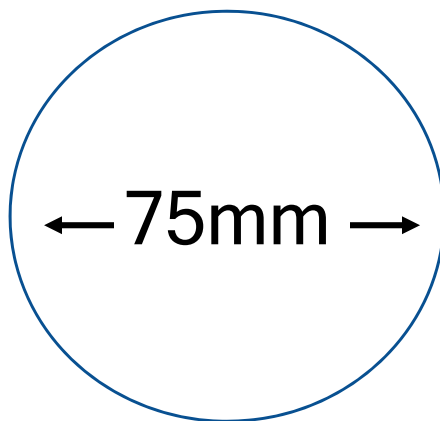
# Tin size



The product has to fit in to a tubular tin that is the same size as a 40g Pringles snack tin or a 60g Nescafe Azera coffee tin.



If you can get one of these tins and wish to decorate it then please do so. If not, the sizes that the product must fit into are as follows:



# Materials

- The product must include a material from at least 2 of these categories e.g. wood and metal, paper and plastic, textiles and metal.
- Any combination of 2 materials can be used as long each one is from a different category. Any amount of each material is used and one can be used much more than the other.
- Materials can be bought as ready made components and parts or can be cut and shaped.
- Examples of components and parts you might use to add a different material category to your work could included things like a metal wing nut and bolt, a plastic clip fastener, an embroidered patch and metal split rings.

And finally, if a parent, grandparent, carer or teacher is able to email me a photograph of your product, I would love to see them! - my email address is:

[ewhapplington@bolsover.derbyshire.sch.uk](mailto:ewhapplington@bolsover.derbyshire.sch.uk)

# Have fun!!!!