



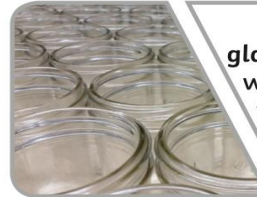
Key Vocabulary	
Material 	Objects around us are made from material like wood, plastic, metal or glass.
waterproof 	Materials that do not let liquid like water get through.
Absorbent 	Materials that soak up and hold liquids like a sponge.
Flexible 	Something that bends and can change shape easily.
Rigid 	Something that is hard and does not bend easily.
Transparent 	Transparent materials are completely see-through.
Opaque 	You cannot see through opaque materials.
Suitable 	Something that is right for its purpose for example, a paper rain coat is not suitable.

Key Information I will learn...

Properties of Materials



wood:
hard, stiff, strong, opaque, can be carved into any shape.



glass:
waterproof, transparent, hard, smooth.



plastic:
waterproof, strong, can be made to be flexible or stiff, smooth or rough.



metal:
strong, hard, easy to wash.



paper:
lightweight, flexible.



cardboard:
strong, light, stiff.



fabric:
soft, flexible, hard-wearing, can be stretchy, warm, absorbent.



rubber:
hard-wearing, elastic, flexible, strong.

Changing materials

Squash an object by pushing both hands together.



Bend an object by grabbing both ends of the object and bringing the ends inwards together.



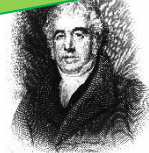
Twist an object by turning your hands in opposite directions.



Stretch an object by pulling your hands slowly and gently apart.



Influential Individual



This is **Charles Macintosh**. He was a Scottish inventor and chemist who invented waterproof fabric in 1818. The Mackintosh raincoat was introduced in 1824.

Chemistry

Rocks
States of Matter
Properties and Changes of Materials



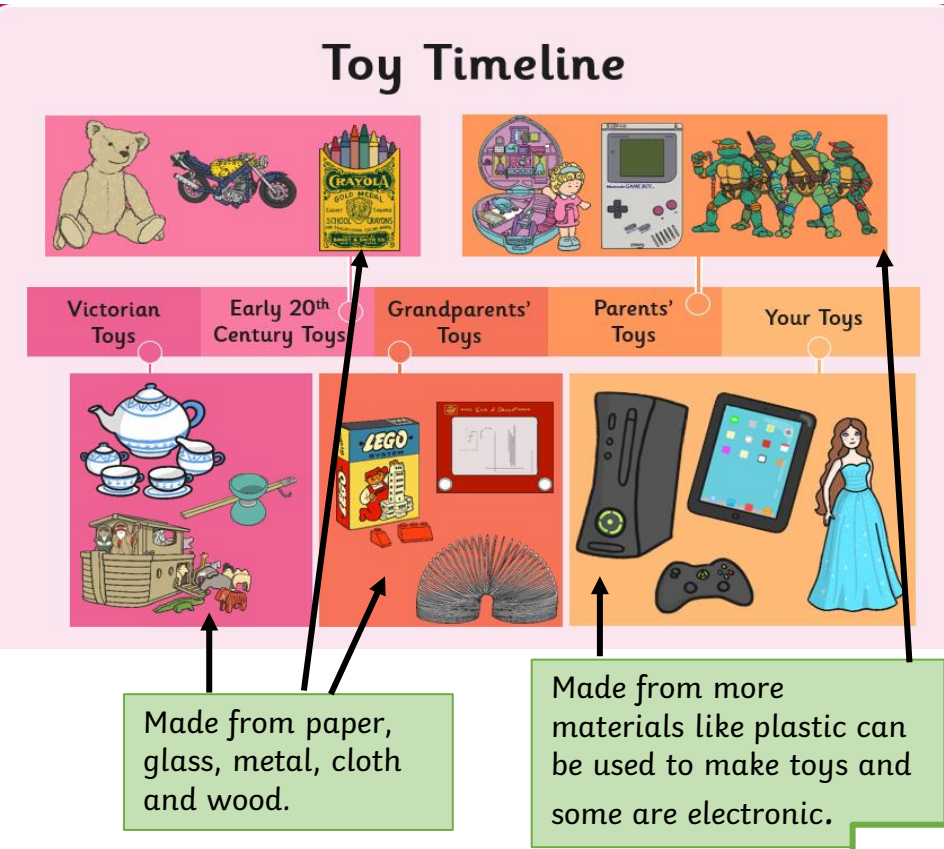
This is a **chemistry** unit of Science. This is because it is looking at the substances that make up everything in the universe.



Key Vocabulary	
100 century	100 years
10 decade	10 years
20 20th century	Last century 1900s
21 21st century	Current century 2000s
generation	A group of people: children, parents, grandparents, etc

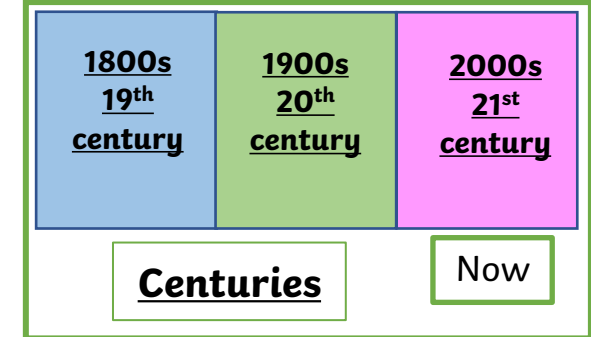
Key Information I will learn...

This is a history topic. We will be working as historians.



Past	Present

We still play with some of the same toys but they have changed over time.

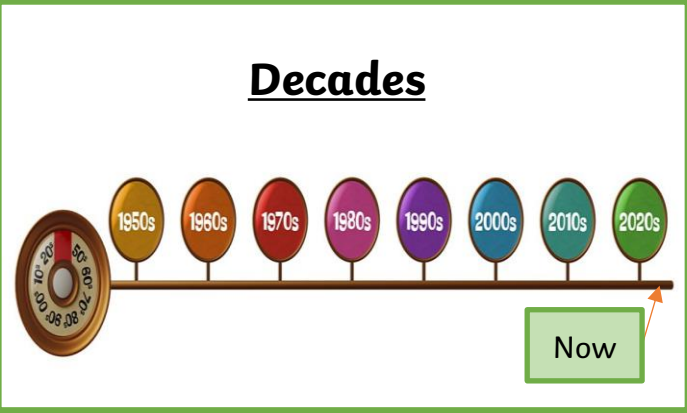


End Goals

- Children can:
- make suggestions for how I can find out about what toys were like in the past
 - discuss toys and ask questions about them
 - use appropriate vocabulary to describe toys of the present and past
 - Understand that toys in the past were different to toys today
 - sort old and new toys into categories
 - identify similarities and differences between old and new toys
 - understand the term 'decade' and order them chronologically
 - identify some of the toys that were popular in particular decades
 - order toys chronologically, using a timeline

Key Questions

- What are our toys like today?
- What toys did our parents and grandparents play with?
- How have toys changed through the decades?
- What are the similarities and differences between toys now and then?
- What materials were toys in the past made from?
- What materials are toys in the present made from?





Key Vocabulary

Sculpture	Creation of three-dimensional art
Sculptor	An artist who makes sculptures
Three Dimensions	An object with length, breadth and depth
Construction	Something that is put together or built
Materials	Something an object is made from such as wood, metal or plastic.
Tools	Something that is used to make a change to something else or to help do a job
Invent	To think of, come up with, or create something new
Design	A plan to help you make something
Explore	Discover something new

Key Questions

- What is a sculpture?
- How can materials be manipulated?
- What does it mean to bend, fold, twist, cut and fasten materials?
- How can you use materials, tools and ideas to invent?
- What do you like about your sculpture?
- What would you change about your sculpture?

Key Information I will learn...



Everyday Materials



Faith Bebbington: Sculpture using waste materials

End Goals

- Children can;
- explore what we mean by 'sculpture'
 - use their sketchbook to make drawings inspired by sculptures
 - Use their hands to make small sculptures out of lots of different materials.
 - bend, fold, twist, cut and fasten materials together.
 - use their hands to make sculptures without designing first.
 - discover that sometimes working with materials is hard work – things break or my fingers hurt – but that's okay.
 - use their sketchbook to respond to what I have learnt about materials.
 - share their work and listen to what other people like about it.
 - look at other people's work and sometimes share what they like about it with them.



Boats that float sculptures

Key Information I will learn...

Key Vocabulary

Prayer	A way of talking to God
Reflection	When you look back at something thoughtfully
Faith	When you have complete trust or confidence in someone or something.
Symbols	When one object or thing stands in the place of something else.
Wudu	The Islamic act of washing parts of the body using water.

Prayer can be used to praise God or to ask for something including help and forgiveness.



Christians and Muslims have different times of year when they have special worship or prayers.



Prayer is how Christians communicate with God.



Prayer is how Muslims communicate with Allah.



Praying helps give people a sense of belonging.

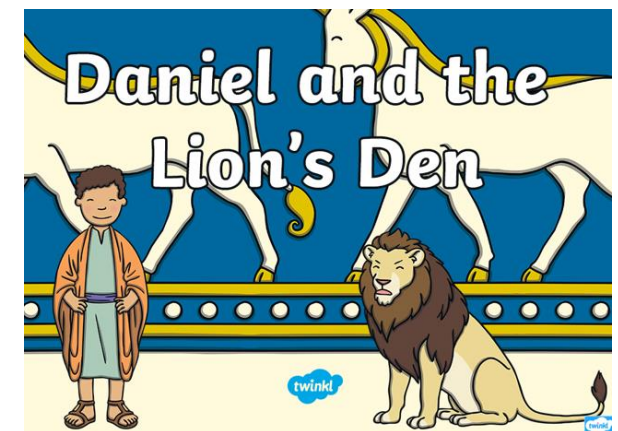


Key Questions

- What is prayer?
- Why do people pray?
- How do Christians pray?
- Do actions, positions or symbols help in prayer?
- How do Muslims pray?
- How do people prepare to pray?
- Can symbols of faith help us to pray?
- What are special times of worship and prayer for Christians and Muslims?

End Goals

- Children can;
- understand what prayer is and some reasons people might pray.
 - think about issues of concern for them.
 - identify ways Christian may pray.
 - describe how some symbols help in prayer.
 - Understand that some prayers are special, including the Lord's Prayer.
 - identify ways Muslims may pray.
 - describe how some actions and symbols help in prayer.
 - Understand that some prayers, places and artefacts are special.
 - Name some of the main festivals and seasons e.g. harvest, Lent, Easter, Advent, Christmas, Ramadan, Eid.
 - Describe special prayers/ worship associated with festivals and seasons.
 - Name some of the symbols and practices linked to festivals and seasons
 - Consider how prayer can take place anywhere but also think of places where it may be most helpful.



Key Vocabulary

Design criteria	A set of rules to help designers focus their ideas and test the success of them.
Evaluation	When you look at the good and bad points about something, then think about how you could improve it.
Input	The energy that is used to start something working.
Linkage	Lengths of materials that are joined together by pivots, so that links can move as part of a mechanism.
Mechanical	Something that can move because several pieces work together like a machine.
Mechanism	A collection of parts that work together to create a movement e.g a bicycle
Output	Output is the motion that happens as a result of starting the input.
Pivot	The central point, pin or shaft on which a mechanism turns or swings.
Survey	To ask a group of people questions about something and to use their answers to make improvements.

Key Information I will learn...

The four types of motion:



Linear motion
Movement in a straight line in any one direction.



Reciprocating motion
Movement in a straight line, back and forth, in any direction.



Rotary motion
Movement in a circular motion.



Oscillating motion
Movement in a curve, back and forth.

End Goals

Children can;

- Identify the correct terms for levers, linkages and pivots.
- Analyse popular toys with the correct terminology.
- Create functional linkages that produce the desired input and output motions.
- Design monsters suitable for children, which satisfy most of the design criteria.
- Evaluate their two designs against the design criteria, using this information and the feedback of their peers to choose their best design.
- Select and assemble materials to create their planned monster features.
- Assemble the monster to their linkages without affecting their functionality.

Key Questions

- What is a lever?
- What is a linkage?
- What does input and output mean?
- Why do designers have design criteria?
- What is a pivot point?
- What do you like about your moving monster? What would you change if you were to make it again? How could it be improved?

