

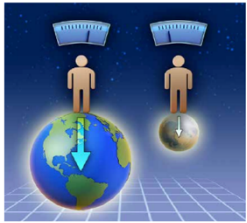


Science Knowledge Organiser

Year 5 Summer 1

Unbalanced Forces

Gravity is a pulling force that acts between any two objects with mass. The greater the mass of the objects and the closer they are to each other, the stronger the gravitational pull between them.

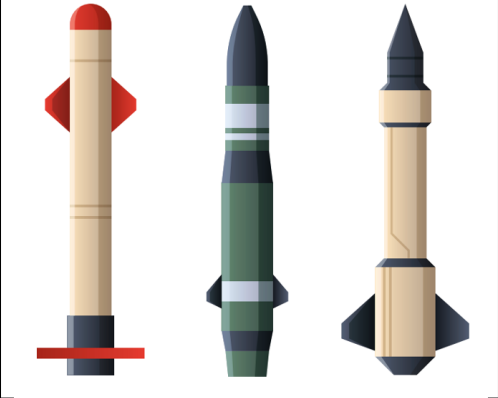


Friction is a contact force between two surfaces that opposes motion and causes a slowing effect. Rougher surfaces and more weight increase friction.

Air resistance, a type of friction, is the force that opposes an object moving through the air. The greater the object's surface area and the faster it moves, the greater the air resistance.



Streamlining involves designing objects to move through air or water more easily by making their shape smooth and sleek to reduce resistance from air or water.



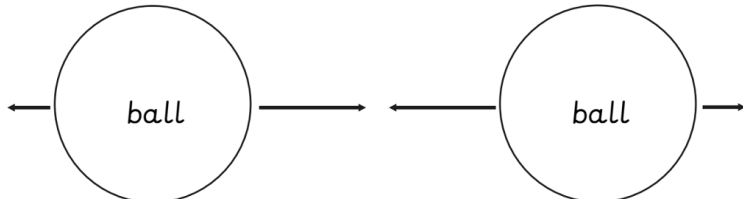
Sir Isaac Newton (1643-1727) was an English scientist who discovered the laws of gravity.



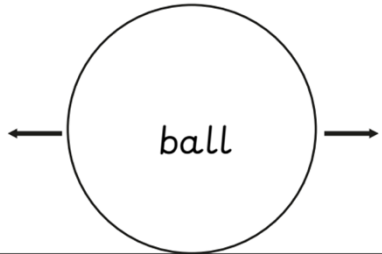
Water resistance, a type of friction, is the force that opposes an object moving through water. The greater the object's surface area and the faster it moves, the greater the water resistance.



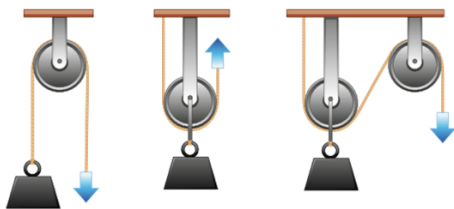
When forces are unbalanced (unequal), change will happen: changing speed, shape, direction, starting or stopping moving.



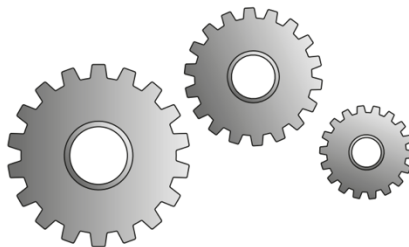
When forces are balanced (equal), an object will either be stationary or moving at a steady speed.



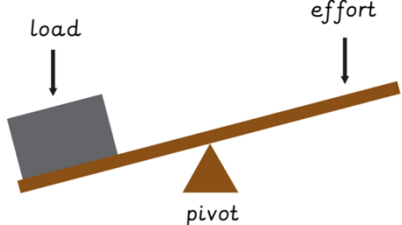
A pulley is a wheel with a groove around it for a rope, making it easier to lift heavy things by pulling down on the rope.



A gear is a wheel with teeth that fits into another gear to change the speed or direction of movement.



A lever is a stiff bar that moves around a pivot to lift a load more easily.





Art Knowledge Organiser

Year 5 Summer 1



Craft and Design

Architecture	Designing buildings
Architect	A person who designs buildings
Composition	Putting different elements together in a pleasing way
Elevation	In architecture this refers to the angle that a building is being viewed from
Legacy	Something lasting to remember a person or event for future generations
Monoprint	Printmaking where only one impression can be made
Perspective	The angle from which you are looking at something
Proportion	How big one element of an artwork appears compared to the whole thing
Transform	To change how something looks





Friedensreich Hundertwasser (1928-2000)
An Austrian artist and architect

Most famous for his imaginative, colourful and whimsical architectural work. The Hundertwasser house in Austria is one of his most famous buildings.






Famous buildings				
				
The Shard, London (Renzo Piano)	La Sagrada Familia, Barcelona (Antoni Gaudi)	Taj Mahal, India (Ustad Ahmad Lahort)	Burj Khalifa, Dubai (Adrian Smith)	Empire State Building, New York City (Shreve, Lamb & Harmon)

How to make a monoprint

			
Step 1 Ink a flat surface	Step 2 Lay paper over the ink	Step 3 Draw your design on the paper pressing firmly	Step 4 Peel the paper from the ink to reveal your print

Zaha Hadid

<ul style="list-style-type: none"> - Born in Baghdad, Iraq in 1950 - Moved to London to study architecture - First woman to be awarded the Pritzker Architecture Prize in 2004 - Her futuristic designs use strong materials like steel and concrete but her buildings appear soft and curved - Inspired by childhood visits to cities in Iraq 	The Riverside Museum, Scotland	University of Economics, Austria	'Argos' building, Austria
			



Geography Knowledge Organiser

Year 5 Summer 1

Energy and Sustainability

Vocabulary	
Economic/economy	Relating to how money and resources are used in society
Fossil fuels	Coal, oil and gas etc – fuels that take millions of years to form
Non-renewable energy	Energy sources that will run out, such as fossil fuels and nuclear energy
Renewable energy	Energy sources that are replaced naturally and do not run out, such as solar and wind energy
Sustainable	When something is good for people, the environment and the economy
Technology	Tools and techniques that help solve problems
Unsustainable	When something is not good for people, the environment and the economy

Renewable and non-renewable energy

All types of energy have advantages and disadvantages.

For example:

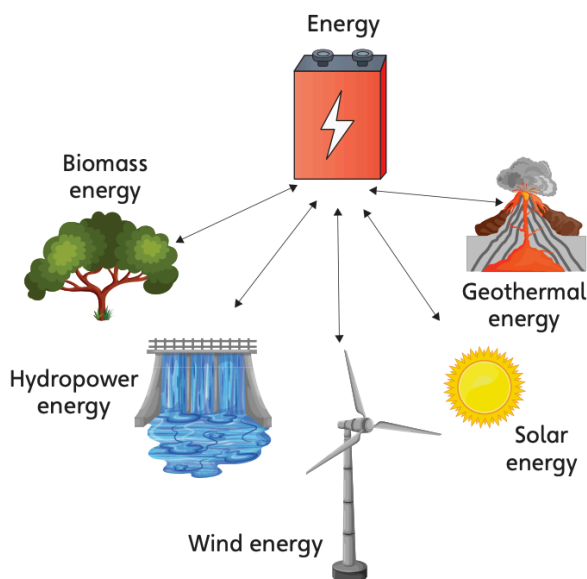
Solar energy

+ Little pollution; can be used in remote areas

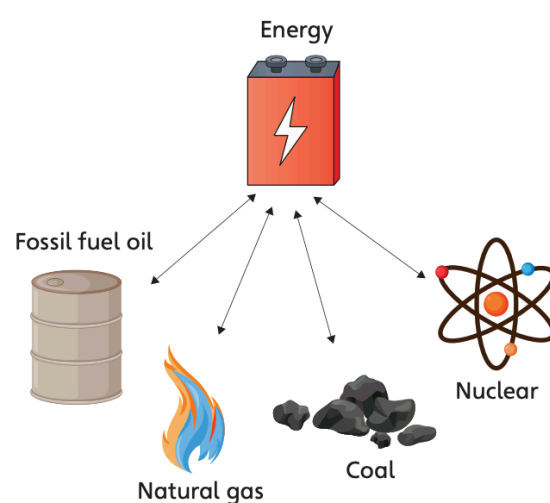
- Very expensive; require a lot of daylight

Countries can ensure their energy security by moving towards using more **renewable energy**.

Renewable energy



Non-renewable energy



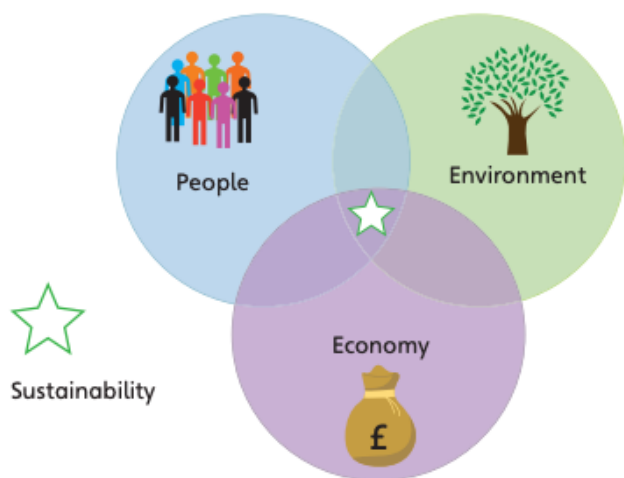
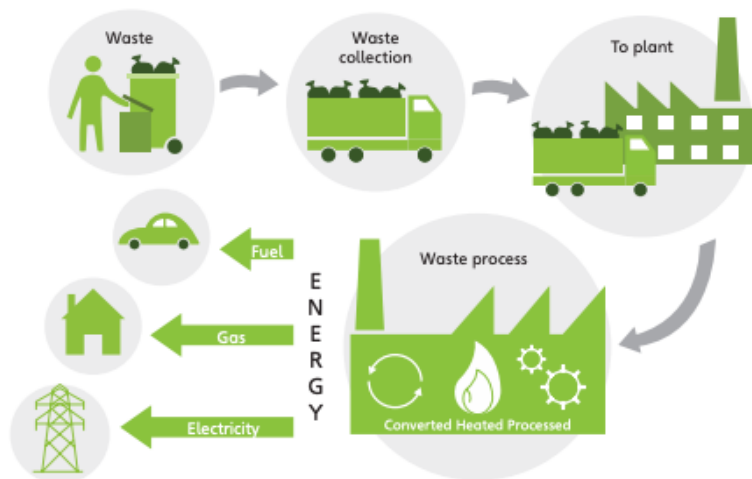


Geography Knowledge Organiser

Year 5 Summer 1

Energy and Sustainability

Waste to energy



Curitiba, Brazil



Freiburg, Germany



1

Il est...

Elle est...

2

Il/elle fait...

athlète



de l'athlétisme

triathlète



du triathlon

cycliste



du cyclisme

cavalier

cavalière



de l'équitation

archer

archère



du tir à l'arc

plongeur

plongeuse



du plongeon

escrimeur

escrimeuse



de l'escrime

rameur

rameuse



de l'aviron

nageur

nageuse



de la natation

boxeur

boxeuse



de la boxe

Prior Learning: In Year 4, children practice different ways of jumping (for distance, height and speed). They recapped how to measured and recorded their own and others scores. They practiced various activities to improve their speed and strength. They practiced their racing techniques on their own and with others.

Physical Me

- **Running - Speed** shuttle runs/sprints
- **Leaping/hopping/bounding/bounce-** 5 strides (**power**)
- **Throwing/Pushing** - Chest push (**strength**)
- **Skipping-** With a hoop (**speed, co-ordination**)
- **Jumping** - Speed bounce, long jump, vertical (**speed, strength, coordination**)

Key Skills

- Value Me:**
- Respect
 - Honesty

Thinking Me

- To improve my performance

Social Me

- Collaborate
- Encourage others



Key Vocabulary

Javelin

Collaborate

Vertical Jump

Power

Measure

Circuit

Drive

Force

Strides

Key Knowledge

Power- The ability to exert a maximum force in as short a time as possible, as in accelerating, jumping and throwing objects.

Drive- Means to force forward e.g drive forward in sprinting

Javelin- Is thrown from a standing position with both feet behind the throwing line and in contact with the floor.

- The throw is measured from the front of the throwing line to where the tip of the javelin first makes contact with the ground.
- The distance is measured in metres and always down to the nearest centimetre.

Athletic Events

Track Events:

- 100m sprint
- 200m sprint
- 400m sprint
- 800m middle distance
- 1500m middle distance

Field events:

- Javelin throw
- Long Jump
- Triple Jump
- Shot put
- Discus
- High Jump

Rounders Knowledge Organiser - Year 5



Prior Learning: In year 4, children continued to master their throwing and catching skills (under & overarm). They recapped how to bowl a ball in rounders. They recapped how to bat using a rounders bat, both self hitting and receiving a bowl. They also played a rounders game and adapted games.

Physical Me

- | | |
|-----------------|----------------------|
| Running | Throwing |
| Catching | Speed |
| Power | Strength |
| Balance | Reaction |
| Passing | Co-ordination |

Key Skills

Thinking Me
- To make decisions in a game

Value Me
- Passion
- Determination

Social Me
- Communicate
- Co-operate
- Collaborate

Rounder Rules

No more than 9 players may be on the field at any one time.

1) The bowler bowls to the batter who hits the ball forward on the Rounders Pitch.

NOTE: 1st post only, until the ball has crossed the line.

2) Batter then runs to as many posts as possible before the fielders return the ball to touch the post the batter is heading for, or the ball is returned to the bowler in the bowling square

3) SCORING:

- If the batter reaches the 2nd or 3rd post in one hit, the batting team scores 1/2 a Rounder.
- If the batter reaches 4th post in one hit, the batting team scores ONE Rounder.

- 2 NO BALLS from the bowler = 1/2 rounder
- Obstruction by a fielder = 1/2 Rounder

- Hit behind = 1st post only - until the ball has crossed the line

4) A player becomes 'out' of the innings when:

- A batter runs on the inside of the posts
- A batter deliberately throws the bat.
- The post the batter is running to gets stumped
- A batter overtakes another batter on the track
- The batter gets caught out.
- The batter loses contact with the post when the bowler has the ball

- A batter is out if they have a foot over the batting square and either miss or hit a good ball.

5) Batters must touch 4th post on getting home.

Key Vocabulary

Techniques

Backstop

Decisions

Aerobic

Speed

Innings

Scoop

Directions

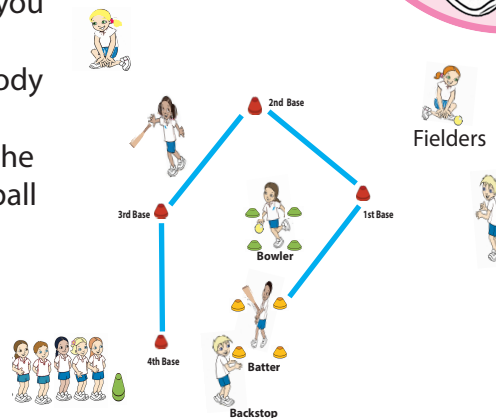
Donkey Drop

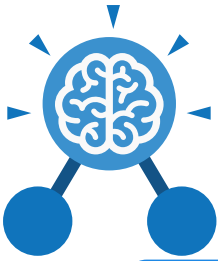
Key Knowledge

It is a **no ball** when:

- The ball is above the head/below the knee
- The ball bounces on its way to you
- The ball is wide or straight at body
- The bowler's foot is outside of the square when they release the ball
- The bowler does not use a smooth, underarm action

2 consecutive no balls = 1/2 rounder





Unit: 5.2 Online Safety

Key Learning

- To gain a greater understanding of the impact that sharing digital content can have.
- To review sources of support when using technology and children's responsibility to one another in their online behaviour.
- To know how to maintain secure passwords.
- To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this.
- To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.
- To learn about how to reference sources in their work.
- To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information.
- To ensure reliability through using different methods of communication.

Key Resources



Display Boards



Paint a Picture



Connect



Publish Plus

Key Questions

Who do I tell if I see anything online that makes me upset or scared?

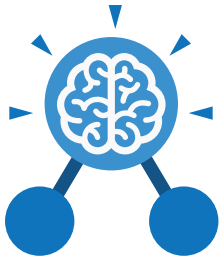
When you are at school, you should tell the teacher or another adult. At home, you should tell your parent or guardian or another adult that you trust.

Why are passwords so important?

Passwords protect your information and stop other people accessing it. Passwords are like a toothbrush; they should not be shared with anyone else.

Why is it important to reference sources in my work?

If you use a book or article written by someone else, then you must reference it, so people know where you got the information from. If you don't do this then it is known as plagiarism.



Unit: 5.2

Online Safety

Key Vocabulary

Citation

Making reference to the original source of a piece of information quotation or image.

Copyright

When the rights to something belong to a specific person.

Identity theft

When someone pretends to be another person online. It can be done for financial gain or to steal others' private information.

PEGI ratings

These show the age that digital content is suitable for and the type of content that it contains.

Password

The practice of sending email pretending to be from reputable companies in order to persuade individuals to reveal personal information, such as passwords and credit cards numbers.

Reliable source

A source of information that provides thorough, well-reasoned details based on valid evidence.

Collaborate

To work jointly on an activity or project.

Creative Commons Licence

A non-profit organisation who provide free licences for creators to use. If an image has a CC licence, you may usually use the image for non-commercial purposes. You must still give credit to the original creator of the image.

Malware

Software that is specifically designed to disrupt, damage, or gain unauthorised access to a computer system.

Personal information

Identifying information about yourself such as your name, address and telephone number.

SMART rules

A set of rules based around the word SMART designed to help you stay safe when online. SMART represents the words Safe, Meet, Accept, Reliable, Tell.

Communication

A way of exchanging information for example, email, blogs, speaking, writing.

Encrypt

The translation of data into a secret code to achieve data security.

Ownership

Who has permission or can give permission to use or edit a resource or part of the resource.

Phishing

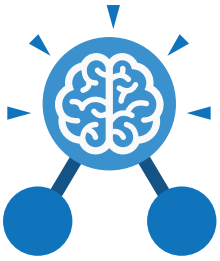
The practice of sending email pretending to be from reputable companies in order to persuade individuals to reveal personal information, such as passwords and credit cards numbers.

Spoof

An imitation of something that appears to look genuine.

Validity

The quality of something being logically or factually sound.



Unit: 5.2 Online Safety



SMART rules- S



SMART rules- M



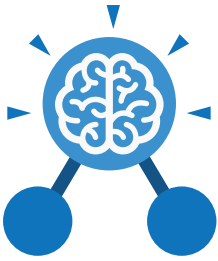
SMART rules- A



SMART rules- R



SMART rules- T



Unit: 5.7

Concept Maps

Key Learning

- To understand the need for visual representation when generating and discussing complex ideas.
- To understand the uses of a 'concept map'.
- To understand and use the correct vocabulary when creating a concept map.
- To create a concept map.
- To understand how a concept map can be used to retell stories and information.
- To create a collaborative concept map and present this to an audience.

Key Resources



2Connect

Key Vocabulary

Concept

An idea in the form of a question.

Collaborate

Participating in an activity with more than one person working together.

Story Mode

A way to use a 2Connect concept map to create a piece of text.

Concept Map

A tool for organising and representing knowledge. They form a web of ideas which are all interconnected.

Node

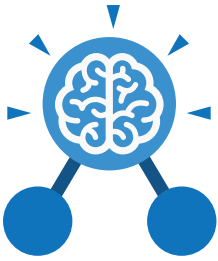
A way to represent concepts or ideas. Can contain text and/or an image.

Connection

Represent a relationship or link between two nodes or ideas.

Presentation Mode

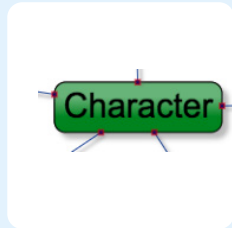
A mode on 2Connect where nodes and connections are revealed gradually to be accompanied by a verbal presentation.



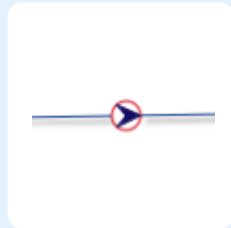
Unit: 5.7

Concept Maps

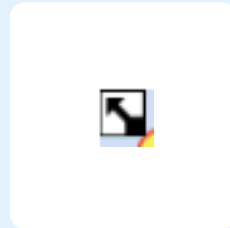
Key Images



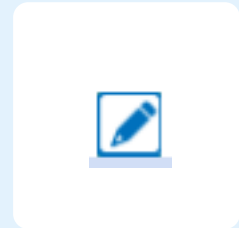
Node



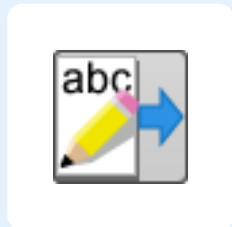
Connection



Resize node



Edit node



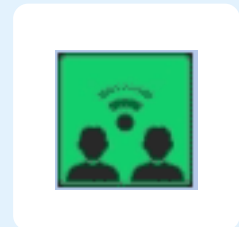
Show story



Begin Presentation



Collaboration Off



Collaboration On

Key Questions

What is a concept map?

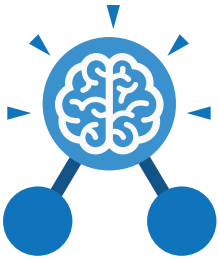
A concept map is a pictorial way of showing relationships between concepts and ideas. A concept map allows you to show information, pictures and links to support an idea or concept.

How is information arranged on a concept map?

On a concept map ideas or concepts are organised into nodes which are linked together with lines to show how the concepts and ideas link together.

How does a concept map help share ideas?

A concept map in 2Connect allows many users to contribute to the map which means that ideas or concepts can be quickly amended or additional information provided.



Unit: 5.8

Word Processing with Microsoft Word

Key Learning

- To know what a word processing tool is for.
- To add and edit images to a word document.
- To know how to use word wrap with images and text.
- To change the look of text within a document.
- To add features to a document to enhance its look and usability.
- To use tables within MS Word to present information.
- To introduce children to templates.
- To consider page layout including heading and columns.

Key Resources



2Connect



Key Questions

What is a word processing tool used for?

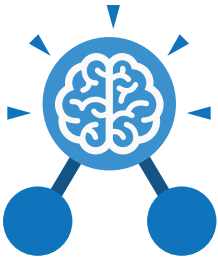
A word processing tool is used to create, edit and print off a document. This can contain text, images, tables or charts. Documents are a type of file that portray information.

What features can you use to make a document more readable?

You can change the font format to give the document a theme and make it more readable. By changing the paragraph formatting, you can ensure the words are spaced evenly. You can add images and use text wrapping to ensure they are positioned well on the page.

How do you successfully add an image to a document?

If you have an image saved onto your computer, you click on insert – pictures – insert image from this device. You can resize and move the image and ensure it fits well on the page by changing the text wrap setting.



Unit: 5.8

Word Processing with Microsoft Word

Key Vocabulary

Bulleted lists

A list with bullet points, used when the items do not have an order.

Copy and Paste

A way of transferring words or images from one location to another.

Cursor

The flashing vertical line that shows your place in a Word document.

Hyperlink

A clickable link from a document to another location, often a webpage.

Formatting

Changing the look of a document by selecting fonts, colours and how the text is spaced or aligned.

Word Processing tool

A program which allows you to write, edit and print different documents.

Caps Lock

A button on the computer keyboard which changes the letters to upper case (capital letters).

Copyright

When an image, logo or idea has a legal right to not be copied or used without the owner's permission.

Document

A type of file which shows written information and/or images and sometimes charts and tables.

Merge cells

A tool you can use when making a table to join cells which are next to each other in columns or rows.

Text wrapping

A feature which helps you place and position an image neatly on a page or within a paragraph of text.

Captions

Text under an image to provide more information about what is shown.

Creative Commons

Images where the copyright holder, often the creator, has given permission for the image to be used as long as the creator is attributed.

Font

A set of type which shows words and numbers in a particular style and size.

Page Orientation

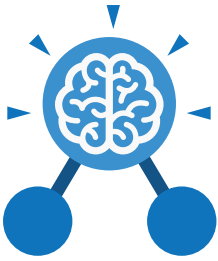
The direction that the rectangular page is viewed. Portrait means longer side going upwards, Landscape means the longer side going sideways.

Readability

How easy and pleasant it is to read and understand a document.

Word Art

A way to treat text as a graphic so that you can add special effects to text.



Unit: 5.8

Word Processing with Microsoft Word

Key Images



Open a new document



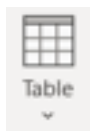
Open an existing document



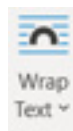
Save your work



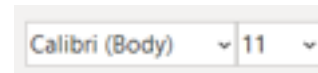
Undo key



Insert a table



Text wrapping



Font Category

Design

Design tab where you can change the style of the document

Insert

Insert tab where you can add an object such as a picture or table

Home

Home tab where many editing tools are found



Insert a picture