

# KNOWLEDGE ORGANISER

YEAR 7 – TERM 2



Think Like An  
Environmentalist

Community, Collaboration and Challenge

# ATTENDANCE MATTERS



## EVERY DAY COUNTS

Missing just 1 day every 2 weeks is the same as missing 10% of the school year.

## LEARNING

Being in school allows you the best opportunity to learn.



## WELLBEING

Attending school supports your mental and emotional health.

## FUTURE SUCCESS

Regular attendance at school is vital for building the key skills needed for future employment



# EQUIPMENT



School Bag



Knowledge Organiser



Black and Green Pens



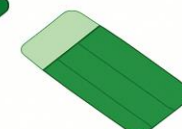
Pencil case



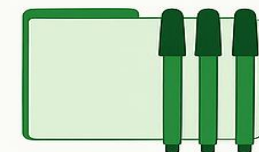
Calculator



Pencil



Rubber



Whiteboard and whiteboard pen



Highlighters



Ruler

# SCHOOL DAY

9:00–9:05

AM Reg

9:05–10:20

Lesson 1

10:20–11:35

Lesson 2

11:35–12:05

Break 1

12:05–13:20

Lesson 3

13:20–13:50

Break 2

13:50–15:05

Lesson 4

15:05–15:30

PM Reg – assembly or guided reading

# Multiplication Grid

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

# PERIODIC TABLE OF ELEMENTS

## Chemical Group Block



1																	18																																	
1	1.0080															2	4.00260																																	
1	<b>H</b> Hydrogen Nonmetal															2	<b>He</b> Helium Noble Gas																																	
2	3	7.0	4	9.012183	Atomic Number										17	35.45	Atomic Mass, u			13	10.81	14	12.011	15	14.007	16	15.999	17	18.9984...	10	20.180																			
2	<b>Li</b> Lithium Alkali Metal	<b>Be</b> Beryllium Alkaline Earth Me...	Name										<b>Cl</b> Chlorine Halogen	Symbol			<b>B</b> Boron Metalloid	<b>C</b> Carbon Nonmetal	<b>N</b> Nitrogen Nonmetal	<b>O</b> Oxygen Nonmetal	<b>F</b> Fluorine Halogen	<b>Ne</b> Neon Noble Gas																												
3	11	22.989...	12	24.305	Chemical Group Block										<b>Al</b> Aluminum Post-Transition M...	<b>Si</b> Silicon Metalloid	<b>P</b> Phosphorus Nonmetal	<b>S</b> Sulfur Nonmetal	<b>Cl</b> Chlorine Halogen	<b>Ar</b> Argon Noble Gas																														
3	<b>Na</b> Sodium Alkali Metal	<b>Mg</b> Magnesium Alkaline Earth Me...																	13	26.981...	14	28.085	15	30.973...	16	32.07	17	35.45	18	39.9																				
4	19	39.0983	20	40.08	21	44.95591	22	47.867	23	50.9415	24	51.996	25	54.93804	26	55.84	27	58.93319	28	58.693	29	63.55	30	65.4	31	69.723	32	72.63	33	74.92159	34	78.97	35	79.90	36	83.80														
4	<b>K</b> Potassium Alkali Metal	<b>Ca</b> Calcium Alkaline Earth Me...	<b>Sc</b> Scandium Transition Metal	<b>Ti</b> Titanium Transition Metal	<b>V</b> Vanadium Transition Metal	<b>Cr</b> Chromium Transition Metal	<b>Mn</b> Manganese Transition Metal	<b>Fe</b> Iron Transition Metal	<b>Co</b> Cobalt Transition Metal	<b>Ni</b> Nickel Transition Metal	<b>Cu</b> Copper Transition Metal	<b>Zn</b> Zinc Transition Metal	<b>Ga</b> Gallium Post-Transition M...	<b>Ge</b> Germanium Metalloid	<b>As</b> Arsenic Metalloid	<b>Se</b> Selenium Nonmetal	<b>Br</b> Bromine Halogen	<b>Kr</b> Krypton Noble Gas																																
5	37	85.468	38	87.62	39	88.90584	40	91.22	41	92.90637	42	95.95	43	96.90636	44	101.1	45	102.9055	46	106.42	47	107.868	48	112.41	49	114.818	50	118.71	51	121.760	52	127.6	53	126.9045	54	131.29														
5	<b>Rb</b> Rubidium Alkali Metal	<b>Sr</b> Strontium Alkaline Earth Me...	<b>Y</b> Yttrium Transition Metal	<b>Zr</b> Zirconium Transition Metal	<b>Nb</b> Niobium Transition Metal	<b>Mo</b> Molybdenum Transition Metal	<b>Tc</b> Technetium Transition Metal	<b>Ru</b> Ruthenium Transition Metal	<b>Rh</b> Rhodium Transition Metal	<b>Pd</b> Palladium Transition Metal	<b>Ag</b> Silver Transition Metal	<b>Cd</b> Cadmium Transition Metal	<b>In</b> Indium Post-Transition M...	<b>Sn</b> Tin Post-Transition M...	<b>Sb</b> Antimony Metalloid	<b>Te</b> Tellurium Metalloid	<b>I</b> Iodine Halogen	<b>Xe</b> Xenon Noble Gas																																
6	55	132.90...	56	137.33																	72	178.49	73	180.9479	74	183.84	75	186.207	76	190.2	77	192.22	78	195.08	79	196.96...	80	200.59	81	204.383	82	207	83	208.98...	84	208.98...	85	209.98...	86	222.01...
6	<b>Cs</b> Cesium Alkali Metal	<b>Ba</b> Barium Alkaline Earth Me...																	<b>Hf</b> Hafnium Transition Metal	<b>Ta</b> Tantalum Transition Metal	<b>W</b> Tungsten Transition Metal	<b>Re</b> Rhenium Transition Metal	<b>Os</b> Osmium Transition Metal	<b>Ir</b> Iridium Transition Metal	<b>Pt</b> Platinum Transition Metal	<b>Au</b> Gold Transition Metal	<b>Hg</b> Mercury Transition Metal	<b>Tl</b> Thallium Post-Transition M...	<b>Pb</b> Lead Post-Transition M...	<b>Bi</b> Bismuth Post-Transition M...	<b>Po</b> Polonium Metalloid	<b>At</b> Astatine Halogen	<b>Rn</b> Radon Noble Gas																	
7	87	223.01...	88	226.02...																	104	267.1...	105	268.1...	106	269.1...	107	270.1...	108	269.1...	109	277.1...	110	282.1...	111	282.1...	112	286.1...	113	286.1...	114	290.1...	115	290.1...	116	293.2...	117	294.2...	118	295.2...
7	<b>Fr</b> Francium Alkali Metal	<b>Ra</b> Radium Alkaline Earth Me...																	<b>Rf</b> Rutherfordium Transition Metal	<b>Db</b> Dubnium Transition Metal	<b>Sg</b> Seaborgium Transition Metal	<b>Bh</b> Bohrium Transition Metal	<b>Hs</b> Hassium Transition Metal	<b>Mt</b> Meitnerium Transition Metal	<b>Ds</b> Darmstadtium Transition Metal	<b>Rg</b> Roentgenium Transition Metal	<b>Cn</b> Copernicium Transition Metal	<b>Nh</b> Nihonium Post-Transition M...	<b>Fl</b> Flerovium Post-Transition M...	<b>Mc</b> Moscovium Post-Transition M...	<b>Lv</b> Livermorium Post-Transition M...	<b>Ts</b> Tennessine Halogen	<b>Og</b> Oganesson Noble Gas																	
			57	138.9055	58	140.116	59	140.90...	60	144.24	61	144.91...	62	150.4	63	151.964	64	157.2	65	158.92...	66	162.500	67	164.93...	68	167.26	69	168.93...	70	173.05	71	174.9668																		
			<b>La</b> Lanthanum Lanthanide	<b>Ce</b> Cerium Lanthanide	<b>Pr</b> Praseodymium Lanthanide	<b>Nd</b> Neodymium Lanthanide	<b>Pm</b> Promethium Lanthanide	<b>Sm</b> Samarium Lanthanide	<b>Eu</b> Europium Lanthanide	<b>Gd</b> Gadolinium Lanthanide	<b>Tb</b> Terbium Lanthanide	<b>Dy</b> Dysprosium Lanthanide	<b>Ho</b> Holmium Lanthanide	<b>Er</b> Erbium Lanthanide	<b>Tm</b> Thulium Lanthanide	<b>Yb</b> Ytterbium Lanthanide	<b>Lu</b> Lutetium Lanthanide																																	
			89	227.02...	90	232.038	91	231.03...	92	238.0289	93	237.04...	94	244.06...	95	243.06...	96	247.07...	97	247.07...	98	251.07...	99	252.0830	100	257.0...	101	258.0...	102	259.1...	103	266.1...																		
			<b>Ac</b> Actinium Actinide	<b>Th</b> Thorium Actinide	<b>Pa</b> Protactinium Actinide	<b>U</b> Uranium Actinide	<b>Np</b> Neptunium Actinide	<b>Pu</b> Plutonium Actinide	<b>Am</b> Americium Actinide	<b>Cm</b> Curium Actinide	<b>Bk</b> Berkelium Actinide	<b>Cf</b> Californium Actinide	<b>Es</b> Einsteinium Actinide	<b>Fm</b> Fermium Actinide	<b>Md</b> Mendelevium Actinide	<b>No</b> Nobelium Actinide	<b>Lr</b> Lawrencium Actinide																																	

# 01 Adjectives

**THAT DESCRIBE:**  
*age:* young, old  
*colour:* red, blue  
*condition:* new, used  
*size:* large, medium  
*speed:* fast, slow  
*etc.*

**COMPARATIVE:**  
 smaller, better...

**SUPERLATIVE:**  
 the smallest,  
 the worst,  
 the best...

# 08 Verbs

**ACTION:**  
 to run, to organise,  
 to read, to think...  
 > Transitive  
 or  
 > Intransitive

**LINKING:**  
 to be,  
 to look, to appear,  
 to seem, to smell...

**HELPING  
 (= AUXILIARY):**  
 can, may,  
 will, must,  
 should, to be,  
 to have...

# 07 Pronouns

**PERSONAL (subject):**  
 I, you, he, she, it,  
 we,  
 you, they

**PERSONAL (object):**  
 me, you, him, her,  
 it, us, you, them

**PERSONAL (reflexive):**  
 myself, yourself,  
 himself, herself,  
 itself, ourselves,  
 yourselves,  
 themselves

**DEMONSTRATIVE:**  
 this, these,  
 that, those

**POSSESSIVE:**  
 mine, yours, his,  
 hers, its, ours,  
 yours, theirs

**INTERROGATIVE:**  
 how, where,  
 when, which...?

**INDEFINITE:**  
 somebody,  
 anyone...

**RELATIVE:**  
 that, which,  
 whose, whom...

# 06 Prepositions

**PLACE / DIRECTION:**  
 in, at, on,  
 under, above,  
 across,  
 among,  
 between...

**TIME:**  
 in, at, on,  
 over, until, about,  
 during, before,  
 after, while,  
 through...

**OTHER (agent,  
 phrase...):**  
 by, with, on, over,  
 to, up, within,  
 beyond, for...

# 05 Nouns

**COMMON NOUNS:** house, dog, laptop...

**PROPER NOUNS:**  
 (Capitalised)  
 London, Paris,  
 James, William,  
 Julia, Jennifer...

> **VERBAL:** swimming...

> **COLLECTIVE:** choir, jury...

> **COMPOUND:** mother-in-law...

> **COUNTABLE:** book, day...

> **UNCOUNTABLE:** traffic, calm...

> **ABSTRACT V. CONCRETE:** wit vs. road...

# 02 Adverbs

**PLACE:**  
 here, there,  
 outside, everywhere,  
 upstairs, nowhere,  
 somewhere....

**TIME:**  
 ago, before, since,  
 yet, for, still,  
 afterwards...

**FREQUENCY:**  
 often, never,  
 sometimes, always

**MANNER:**  
 just, quite,  
 quickly, hardly,  
 well, carefully,  
 barely, almost,  
 scarcely,  
 beautifully...

# 03 Conjunctions

**COORDINATING:**  
 and, or, but,  
 yet, nor, for, so

**CORRELATIVE:**  
 both... and...,  
 either... or...,  
 just as... so...,  
 whether... or...,  
 neither... nor...,  
 not only... but also...

**SUBORDINATING:**  
 after, since, if,  
 while, although,  
 before, because,  
 unless

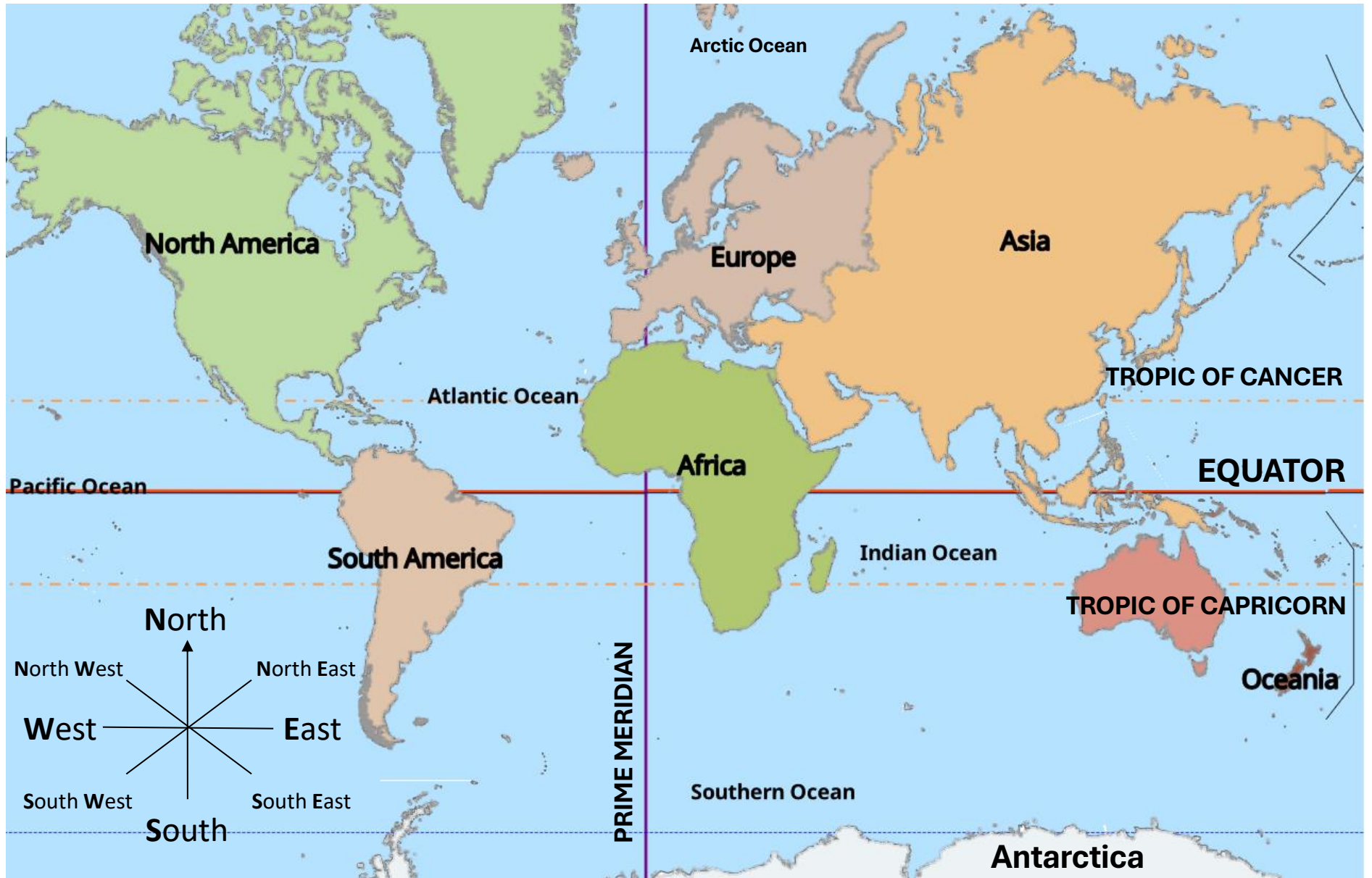
# 04 Determiners

**TELLS US WHICH:**  
 each, every,  
 some, none,  
 all...

**TELLS US WHOSE:**  
 my, your, her, his, its,  
 our, your, their (= possessive  
 adjectives or determiners)



# World Map



## Year 7 Book Illustration

## Art

## Term 2

### Fantastic and Strange

**Theme:** Creating a Fantasy creature Through Art

**Focus:** Children's book illustration  
Drawing, composition, colour, texture, and imagination

Artist: Mateo Dinean, Maurice Sendak, Wayne Anderson



### Introduction to Fantasy Art

- **Learning Objective:** Understand the characteristics and themes of fantasy art.
- **Activities:**
  - Explore famous fantasy artists (e.g., Brian Froud, John Howe, Alan Lee).
  - Discuss common elements: mythical creatures, invented landscapes, magical items.



### Fantasy Creatures – Design & Sketching

- **Learning Objective:** Develop creature design skills using reference and imagination.
- **Activities:**
  - Look at examples of dragons, elves, goblins, hybrids, etc.
  - Practice combining animals to create new creatures.
  - Sketch 2–3 creature ideas with annotations.
- **Skills:** Shape, line, proportion.

### Lesson 4: Bringing it Together – Composition Planning

- **Learning Objective:** Plan a final fantasy artwork using previous ideas.
- **Activities:**
  - Thumbnail sketches exploring different layouts.
  - Choose one and draw out a final composition in pencil.
  - Peer critique and improve.



### Lesson 5: Adding Detail – Colour, Texture, and Atmosphere

- **Learning Objective:** Develop detail in final piece using colour and texture.
- **Activities:**
  - Explore colour schemes: mystical, eerie, bright, etc.
  - Practice techniques in chosen media (coloured pencil, paint, ink).
  - Begin adding colour to final piece.
- **Focus:** Use of tone, blending, and surface texture.
- **Skills:** Layout, storytelling through imagery.

### Lesson 6: Final Touches & Evaluation

- **Learning Objective:** Complete artwork and evaluate the creative process.
- **Activities:**
  - Finish detailing and backgrounds.
  - Class gallery walk and peer feedback.



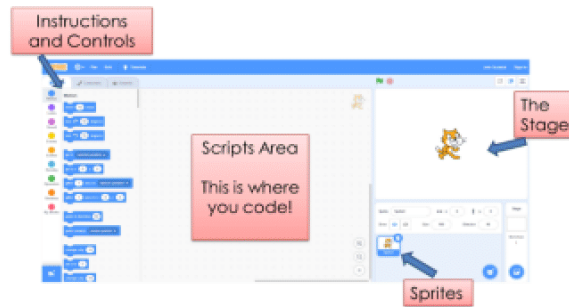
# Computing

## KS3 Knowledge Organiser

## Introduction to Programming in Scratch

### The Scratch Interface

<b>Instructions and Controls</b>	This area contains various blocks of code, which allows you to piece together logic in order to code your programs
<b>Scripts Area</b>	This is the workspace upon which you drag and join the required blocks of code, to create the logic for your program
<b>The Stage</b>	This is the canvas on which your program will be displayed.
<b>Sprites</b>	Programmable objects. For example, if you are creating a game, your character would be a sprite.



### Key Vocabulary

Key Word	Definition
<b>Sprite</b>	An object which can be programmed in Scratch
<b>Block</b>	A piece of programming code in Scratch
<b>Inputs</b>	Values which get sent from the user into the computer
<b>Variables</b>	The place where inputs get stored by the program (they represent memory locations)
<b>Outputs</b>	The values which get sent from the computer to the user
<b>IF Statement</b>	The logic used to program decisions in programs

### Inputs

The ASK block is an input script. When it is run, it will pause the program and wait for the user to enter some text.

The input will be stored in a variable called 'answer'.

### Variables

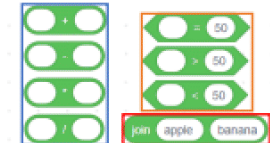
Variables represent locations in memory where data is stored. We can create as many variables as we like when we program (we don't have to only use the ASK block). We can therefore store as many inputs as we like, all while the program is running.

Variables are created in the orange 'variables' blocks section.

If we wish to add data to a variable, we use the 'Set' block.

### Operators

The operator blocks allow us to perform calculations, see how data relates to each other and join text and variable contents together. Below is an example of some of arithmetic operators, relational operators and also the concatenation (joining) operator.



### Outputs

The SAY block is an output script. When it is run, it will output whatever is contained in its contents box, for a given number of seconds.

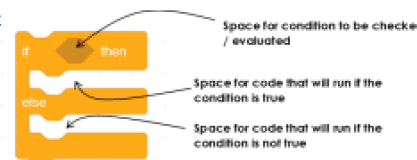
We can also insert variables into the say script, so that the contents of variables can be outputted. The JOIN operator can be used to join together the contents of variables with some text.

The image shows a Scratch script starting with an 'ask' block, followed by a 'say' block containing a variable 'answer', and a 'join' block containing 'What a lovely name!' and the 'answer' variable.

### IF Statements

IF statement allows programs to take different pathways depending on conditions.

In Scratch, the IF block contains spaces for...  
- a condition to be checked  
- blocks to run if the condition is true  
- blocks to run if the condition is false.



For more pathways, IF blocks can be placed inside other IF blocks.

The image shows a Scratch script for a mood checker. It starts with an 'ask' block for a rating from 1 to 3. It then uses nested IF blocks: an outer IF block for 'feeling OK' (1 or 2) and an inner IF block for 'not feeling good' (3). The script outputs messages based on these conditions and includes an error message for ratings 1, 2, or 3.

If this condition is TRUE (i.e. if answer contains a 1), then the program will output 'Sorry to hear that you are not...'. However, if this condition is FALSE (i.e. if answer does not contain a 1), then the program will run another IF statement, to check if answer contains a 2.

And if it doesn't contain a 2, then it will run another IF statement to check if answer contains a 3.

And if it doesn't find either a 1, 2 or a 3 in the answer variable, then it will output an error message.

# Drama

## Year 7

## Drama

## Term 1

### Plot

**A Christmas Carol** was written by Charles Dickens in 1843.

The story follows Ebenezer Scrooge, a greedy old man who changes after being visited by three ghosts: Past, Present, and Yet to Come.

### Context

**Poverty in Victorian England** was widespread and severe. The gap between the wealthy and the poor was vast, with many working families struggling to survive on meagre wages, facing unemployment, illness, and the threat of the workhouse.

### Key characters

**Scrooge** – Miserly, selfish, later regretful and generous.

**Bob Cratchit** – Kind, hardworking clerk; shows family and moral values.

**Tiny Tim** – Innocent symbol of hardship and hope.

**Jacob Marley** – the ghost of Scrooge's business partner.

**The Ghosts** – Christmas Past, Christmas Present and Christmas Yet to Come

### Drama Techniques

**Narration** – Telling the story directly to the audience.

**Freeze Frame** – Creating still images to show important moments.

**Thought-tracking** – Saying what a character is thinking aloud during a still image.

### Themes

**Redemption** – Scrooge becomes a better person.

**Poverty and Social Injustice** – through the Cratchit family

**Kindness and Generosity** – The Spirit of Christmas

**Isolation vs. Community** – Scrooge starts alone but reconnects with others.

### Vocal and physical skills

**Pitch** – Use a higher or lower voice to suit age or emotion.

**Pace** – Speed up for panic or slow down for seriousness.

**Posture** – Hunched for old age, upright for confidence.

**Facial Expression** – Show fear, joy, or surprise as Scrooge reacts to each ghost.

## A Christmas Carol

## **Mystical Beasts – Year 7 Fantasy Writing - Genre Overview**

Fantasy writing transports readers to magical worlds filled with mythical creatures, powerful heroes, and epic quests. In this unit, inspired by *Spiderwick*, *Harry Potter*, and *Fantastic Beasts*, students will create their own fantasy narratives featuring original mystical beasts.

### **Plot Elements:**

- A quest or mission
- Discovery of a magical object or creature
- Conflict between good and evil
- A climactic battle or resolution

### **Top Tips for Fantasy Writing**

- Show, don't tell** – describe actions and feelings vividly.
- Create atmosphere** – use setting to build mood.
- Use mythical elements** – invent creatures, powers, or worlds.
- Vary sentence lengths** – for rhythm and suspense.
- Think about character growth** – how do they change?

### **Settings:**

- Enchanted forests
- Hidden realms
- Magical schools or libraries
- Portals to other worlds

### **Sentence Starters to Spark Imagination**

- Deep in the misty valley, something stirred...
- The creature's eyes glowed like embers in the dark...
- No one had dared enter the cave until today...
- She heard the whisper of wings overhead...
- The forest held its breath...

### **Story Structure Guide**

- 1.Setting** – Where is your world? Is it magical, dangerous, ancient?
- 2.Character** – Who is your hero? What makes them unique?
- 3.Conflict** – What challenge or beast must they face?
- 4.Climax** – What is the turning point or biggest danger?
- 5.Ending** – Is the beast defeated? Is the world changed?

### **Fantasy**

#### **Vocabulary**

#### **Bank**

- Enchanted
- Portal
- Spellbound
- Lurking
- Whispering
- Ancient
- Glimmering
- Forbidden
- Guardian
- Realm

## Fantasy Techniques to Master

Technique	Example	Self-Quiz Prompt
<b>Simile</b>	"Its roar echoed like thunder in a canyon."	Can you write your own simile?
<b>Personification</b>	"The trees whispered secrets to the wind."	What object could you personify?
<b>Sensory Description</b>	"The air shimmered with magic."	Can you describe a scene using 3 senses?
<b>Motif</b>	Repeated use of feathers or fire	What motif could suit your beast?
<b>Short Sentences</b>	"It moved."	Try writing a dramatic short sentence.
<b>Interrogative</b>	"What was that sound?"	Can you add a question to build tension?

## Self-Quizzing ideas

### **Writing Techniques**

- What is a simile? Write one about a dragon's roar.
- What is personification? Try personifying a forest.
- Write a short sentence that creates suspense.
- Add a question to a paragraph to build tension.

### **Story Planning**

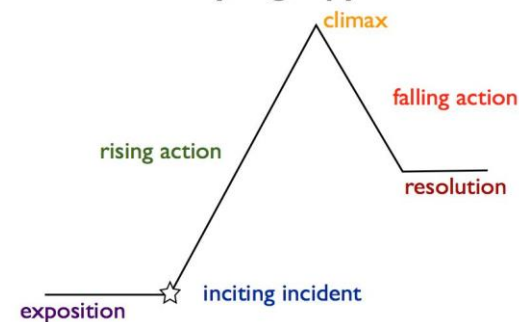
- What makes your setting magical or mysterious?
- Who is your protagonist? What do they fear?
- What is the main conflict in your story?

### **Creative Challenges**

- Draw your mystical beast and label its features.
- Create a map of your fantasy world.
- Write a diary entry from your character's point of view.
- Create a "Beast Fact File" with name, habitat, powers, and weaknesses.

Basic features	Definition
Capital Letters	These must be at the starts of names, starts of sentences and use the pronoun 'I'.
Full stops	Unless using another piece of punctuation, these need to be at the end of sentences.
Question marks	Instead of a full stop denoting a question. E.g. When do you use a question mark?
Commas	Used to separate items in a list or a dependent clause from an independent clause. E.g. If I had to choose, I like blue, red and green.
Apostrophes	Indicating a contraction or possessive. E.g. The pie wasn't Peter's to eat.
Consistent tense	The tense you begin writing in should usually stay the same throughout your writing.
Paragraphs	A break in writing indicates the topic, person, place, time or focus of your writing has changed.
Homophone spellings	Easily mistaken spellings like there, their and they're; to, too and two or your and you're.
Semi-colons	A punctuation mark that can separate two independent clauses instead of a conjunction or full stop.
Colon	Colon can separate an independent clause and a dependent clause or start a list.
Simple, compound and complex sentences	Use a variety of these to make writing interesting. Simple sentences are just an independent clause. Compound sentences are two independent clauses usually joined with a conjunction and a complex sentence is an independent and dependent clause.

## freitag's pyramid



Language Devices	Definition
Simile	A comparison using the words 'like' or 'as'.
Metaphor	A comparison that represent one thing as being the other.
Personification	When an object is represented as being human.
Onomatopoeia	Words that sound like a sound.
Alliteration	Two or more words starting with the same letter.
Imagery	A vivid, easy to imagine description.
Symbolism	When one thing is standing in the place of another.
Oxymoron	When two things are put together but are impossible.
Juxtaposition	When two opposing ideas or themes are used near each other.
Pathetic Fallacy	When nature creates a mood in a story.

## Module 1 - La rentrée

Point de départ			
Bonjour Hello	(Comment) ça va? How are you?	Ça va (très) bien I'm (very) well	Au revoir! Goodbye
Salut! Hi!		Pas mal, merci Not bad, thank you	À plus! See you later
		Ça ne va pas! Not good!	

### Voici ma salle de classe

Qu'est-ce qu'il y a sur la photo? What is on the photo?	Sur la photo In the photo  Au fond- at the front Au centre- in the centre À gauche- on the left À droite- on the right	il y a  there is/are	un tableau (noir/blanc) a (black/white) board  un poster - poster un/une prof(esseur) - a teacher un écran - screen un ordinateur - a computer une porte - a door une fenêtre - a window une tablette - a tablet des tables - some tables des chaises - some chairs des élèves - some pupils	c'est it is	sympa - nice  génial - great  moderne - modern  triste - sad  nul - rubbish  démodé - old fashioned
--	--	-------------------------------	--	----------------	---

<b>As-tu des frères ou des soeurs?</b>	Oui, j'ai.. Yes I have..	un (demi) -frère a (half) brother une (demi) - soeur a (half) sister
As-tu des frères ou des soeurs?  Do you have brothers or sisters?	Non je n'ai pas de frères ou de soeurs I don't have any brothers or sisters	
	Je suis fils/fille unique I'm an only child	

### Tu es comment?

Je suis - I am Je ne suis pas - I'm not	amusant (e) - funny arrogant (e) - arrogant bavard (e) - chatty fort (e) - strong grand (e) - big/tall intelligent (e) - intelligent méchant (e) - nasty patient (e) - patient petit (e) - small/short timide - shy
Il est - he is Elle est - she is	

## Qu'est-ce que tu fais?

Ma vie, c'est... My life is...	chanter - to sing danser - to dance retrouver mes amis - to meet up with friends bloguer - to blog surfer - to surf tchatter - the chat rigoler - to have a laugh étudier - to study nager - to swim jouer - to play gagner - to win
Pour moi, la rentrée c'est... For me, going back to school is....	

## Module 1 - La rentrée

### Mon interview par vidéo

C'est quand, ton anniversaire ? When is your birthday?	mon anniversaire c'est le... my birthday is the	premier - 1 <sup>st</sup> 2,3,4,5 etc	janvier février mars avril mai juin	juillet août septembre octobre novembre décembre
---	--	---	--	---

### Les numéros

1 un/une
2 deux
3 trois
4 quatre
5 cinq
6 six
7 sept
8 huit
9 neuf
10 dix
11 onze
12 douze
13 treize
14 quatorze
15 quinze
16 seize
17 dix-sept (10+7)
18 dix-huit (10+8)
19 dix-neuf
20 vingt
30 trente
40 quarante
50 cinquante
60 soixante
70 soixante-dix (60+10)
71 soixante et onze (60+11)
80 quatre-vingts (4 x 20)
90 quatre-vingts-dix (4x20)+10
100 cent

### Tu aimes ça?

Tu aimes...? Do you like?	J'aime - I like	le sport - sport le foot - football le vélo - cycling le collège - school le poisson - fish
	Je n'aime pas - I don't like	la danse - dance la musique - music
	Je préfère - I prefer	les serpents - snakes les pizzas - pizza les glaces - ice-creams les jeux vidéo - video games les vacances - holidays les BD - comics les mangas - manga les araignées - spiders

### High Frequency Words

je	I
tu	you
il	he
elle	she
un/une	a
des	some
et	and
mais	but
aussi	also
assez	quite
très	very
trop	too much
un peu	a bit

## Module 2 – En classe

### Point de départ

ici- here			blanc(he) - white
en bas- at the bottom		un cercle a circle	bleu (e) - blue
au centre - in the centre	il y a there is, are	un demi-cercle a semi circle	gris (e) - grey
à droite - on the right		un triangle a triangle	jaune - yellow
à gauche - on the left			marron - brown
			noir (e) - black
			orange - orange
			rose - pink
			rouge - red
			vert (e) - green
			violet(te) - purple

### Qu'est-ce que tu portes?

Qu'est-ce que tu portes? What do you wear?	Je porte I wear	l'uniforme scolaire school uniform	et c'est and it is...	chic smart	
	on porte we wear	un pantalon - trousers un polo - a polo shirt un pull - a jumper un sweat - a sweatshirt un tee-shirt - a T-shirt		mais, ce n'est pas but it's not...	confortable comfortable
		une chemise - a shirt une cravate - a tie une jupe - a skirt			démodé(e) old-fashioned
		des baskets - trainers des chaussettes - socks des chaussures - shoes		pratique practical	

### Ta journée scolaire est comment?

Ta journée scolaire est comment? What is your school day like?	je quitte la maison - I leave the house j'arrive au collège - I arrive at school je retrouve mes copains - I meet my friends on commence les cours - we start lessons je mange à la cantine - I eat in the canteen je chante dans la chorale - I sing in the choir je joue dehors - I play outside on recommence les cours - we start lessons again à (quatre) heures - at (four) o'clock
---	---

### C'est comment, un collègue français?

Quel est ton jour préféré? What is your favourite day?	Mon jour préféré, c'est le.... My favourite day is....	lundi - Monday mardi - Tuesday mercredi - Wednesday jeudi - Thursday vendredi - Friday samedi - Saturday dimanche - Sunday
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## Module 2 – En classe

### Qu'est-ce que tu penses de tes matières?

Qu'est-ce que tu penses de tes matières? What do you think of your subjects?	J'aime I like	le français - French le théâtre - drama	parce que c'est because it is	facile- easy difficile- difficult intéressant - interesting ennuyeux - boring amusant - fun(ny) créatif - creative nul - rubbish
	J'adore I love	la géographie - geography la musique - music la technologie - technology		
Tu aimes? Do you like?	J'aime assez I quite like	l'anglais - English l'EPS - PE l'histoire - history l'informatique - ICT	car c'est because it is	le/la prof est sympa the teacher is kind le/la prof est trop stricte the teacher is too strict
	Je n'aime pas I don't like	les arts plastiques - art les maths - maths les sciences - science		
	Je déteste I hate			j'ai trop de devoirs I have too much homework

### Extra!

J'ai deux heures d'anglais	I have 2 hours of English
C'est ma matière préférée	It's my favourite subject
Je suis fort (e) en maths	I am good at maths
J'ai un emploi du temps	I have a timetable
Je n'aime pas la rentrée	I don't like the start of the new school year
Je préfère les vacances	I prefer the holidays.

### Un collège super cool!

Le collège est... The school is..	grand - big petit - small de taille moyenne - medium sized
Il y a There is/are	500 élèves - 500 pupils un cinema 3D - a 3D cinema une piscine - a swimming pool un court de tennis - a tennis court
Il n'y a pas de There is/are not	harcèlement - bullying toilettes sales - dirty toilets profs trop sévères - too strict teachers
Tu es d'accord?	Je (ne) suis (pas) d'accord - I (don't) agree

### High Frequency Words

on	we
et	and
mais	but
parce que	because
très	very
vraiment	really
trop	too
d'abord	firstly
après	after

## GRAMMAIRE

Regular present tense verbs

**ER VERBS** e.g. Passer = to spend (time)

Je passe	<i>I spend</i>
Tu passes	<i>You spend</i>
Il/Elle/On passe	<i>He/She/One spends</i>
Nous passons	<i>We spend</i>
Vous passez	<i>You spend (form/pl)</i>
Ils/Elles passent	<i>They spend</i>

**IR VERBS** e.g. Finir = finish

Je finis	<i>I finish</i>
Tu finis	<i>You finish</i>
Il/Elle/On finit	<i>He/She/One finishes</i>
Nous finissons	<i>We finish</i>
Vous finissez	<i>You finish (form/pl)</i>
Ils/Elles finissent	<i>They finish</i>

**RE VERBS** e.g. vendre = to sell

Je vends	<i>I sell</i>
Tu vends	<i>You sell</i>
Il/Elle/On vend	<i>He/She/One sells</i>
Nous vendons	<i>We sell</i>
Vous vendez	<i>You sell (form/pl)</i>
Ils/Elles vendent	<i>They sell</i>

## GRAMMAIRE Irregular present tense verbs

**Faire = to do / to make**

Je fais	<i>I do</i>
Tu fais	<i>You do</i>
Il/Elle/On fait	<i>He/She/One does</i>
Nous faisons	<i>We do</i>
Vous faites	<i>You do (form/pl)</i>
Ils/Elles font	<i>They do</i>

**Aller = to go**

Je vais	<i>I go</i>
Tu vas	<i>You go</i>
Il/Elle/On va	<i>He/She/One goes</i>
Nous allons	<i>We go</i>
Vous allez	<i>You go (form/pl)</i>
Ils/Elles vont	<i>They go</i>

**Vouloir = to want**

Je veux	<i>I want</i>
Tu veux	<i>You want</i>
Il/Elle/On veut	<i>He/She/One wants</i>
Nous voulons	<i>We want</i>
Vous voulez	<i>You want (form/pl)</i>
Ils/Elles veulent	<i>They want</i>

**Pouvoir = to be able to**

Je peux	<i>I can</i>
Tu peux	<i>You can</i>
Il/Elle/On peut	<i>He/She/One can</i>
Nous pouvons	<i>We can</i>
Vous pouvez	<i>You can (form/pl)</i>
Ils/Elles peuvent	<i>They can</i>

GRAMMAIRE Modal verbs

## Grammar

Aujourd'hui	<i>Today</i>
Demain (soir)	<i>Tomorrow (night)</i>
Ce matin / ce soir	<i>This morning/evening</i>
Cet après-midi	<i>This afternoon</i>
La semaine prochaine	<i>Next week</i>

★ **S'il fait beau**  
*If the weather's nice*

★ **S'il fait mauvais**  
*If the weather's bad*

★ **Si j'ai assez d'argent**  
*If I have enough money*

**Ça va être...**  
*It's going to be*

cool / génial / sympa  
*cool / great / nice*

**Qu'est-ce qu'on va faire? What are we going to do?**

**Near Future Tense = Aller + infinitive (going to do)**

<b>Je vais</b> <i>I am going</i>	<b>aller</b> au parc	<i>to go to the park</i>
	<b>visiter</b> le musée	<i>to visit the museum</i>
<b>On va / Nous allons</b> <i>We are going</i>	<b>manger</b> au resto	<i>to eat at a restaurant</i>
	<b>acheter</b> un jeu vidéo	<i>to buy a videogame</i>
Use the present tense of the verb ALLER from above ↗	<b>voir</b> un spectacle	<i>to see a show</i>
	<b>faire</b> les magasins	<i>to go shopping</i>
	<b>prendre</b> le bus	<i>to take the bus</i>

<b>Qu'est-ce que tu as fait le week-end dernier?</b> <i>What did you do last weekend?</i>	<b>J'ai / Nous avons...</b> <i>I / We...</i>	...passé (le week-end) <i>...spent (the weekend)</i>	...participé à une compétition <i>...took part in a competition</i>	fait <b>du</b> vélo <i>...went cycling</i>
	...joué au tennis <i>...played tennis</i>	...fêté (mon anniv) ...celebrated <i>my birthday</i>	...regardé un match / film <i>...watched a match / a film</i>	fait <b>de la</b> natation <i>...went swimming</i>

Hier <i>Yesterday</i>
Avant-hier <i>The day before yesterday</i>
Le week-end dernier <i>Last weekend</i>
La semaine dernière <i>Last week</i>
Il y a deux semaines <i>Two weeks ago</i>
D'abord / Enfin <i>Firstly / Finally</i>
Ensuite / puis <i>Next / then</i>
Après <i>After</i>
Plus tard <i>Later</i>
★ Après avoir (mangé) <i>After having (eaten)</i>
★ Avant de (partir) <i>Before (leaving)</i>



The Past: The Perfect Tense with Avoir									
We use the perfect tense to say what <u>we did</u> or <u>have done</u> in the past. To form it you need 2 parts: <b>PART 1: Avoir</b> (the verb to have) + <b>PART 2: Past participle</b> (e.g. visited/done/eaten)									
PART 1: Avoir = To have		PART 2: The Past participle							
J'ai <i>I have</i>	+	ER verbs + <b>é</b>		IR verbs + <b>i</b>		RE verbs + <b>u</b>		Irregulars	
Tu <b>as</b> <i>You have</i>		visité	visited	fini	finished	perdu	lost	fait	did
Il / Elle/ On <b>a</b> <i>He / She has</i>		regardé	watched	vomi	vomited	attendu	waited	pris	took
Nous <b>avons</b> <i>We have</i>		écouté	listened	dormi	slept	vendu	sold	bu	drank
Vous <b>avez</b> <i>You all have</i>		mangé	ate /eaten					vu	saw
Ils / Elles <b>ont</b> <i>They have</i>		acheté	bought					lu	read

Je suis allé(e) ... <i>I went...</i>
Nous sommes allé(e) ... <i>I went...</i>
au parc / au stade <i>...to the parc / stadium</i>
à la piscine <i>...to the pool</i>
aux magasins <i>...to the shops</i>

The Past: The Perfect Tense with Être					
Some specific 'special' verbs take <b>Être (To be)</b> instead of Avoir...					
<b>Être verbs agree with the subject!</b> If it's feminine, add an 'e'. If it's plural, add an 's'					
PART 1: Être = To be		PART 2: The Past participle (+e) (+s)			
Je <b>suis</b> <i>I am</i>	+	allé(e)(s)	went	sorti(e)(s)	went out
Tu <b>es</b> <i>You are</i>		resté(e)(s)	stayed	parti(e)(s)	left
Il / Elle <b>est</b> <i>He/She is</i>		arrivé(e)(s)	arrived	venu(e)(s)	came
Nous <b>sommes</b> <i>We are</i>		retourné(e)(s)	returned	revenu(e)(s)	came back
Vous <b>êtes</b> <i>You lot are</i>		rentré(e)(s)	went back (home)	devenu(e)(s)	became
Ils / Elles <b>sont</b> <i>They are</i>					

Grammar

# Geography

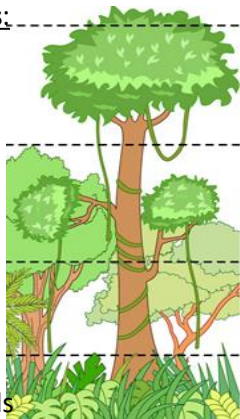
1

Tier 3	Definition
Biome	A large global ecosystem with similar climate and species.
Ecosystem	A community of plants and animals that interact with each other and their physical environment.
Flora	Species of plants.
Fauna	Species of animals.
Food Chains	A connection between different organisms that rely on one another as a food source.
Food Webs	A complex network between species that rely on each other for food.
Biotic	Relating to living things (flora and fauna).
Abiotic	Relating to non-living things (soil including minerals and rock and climate).
Social	Impacts that affect the people within a community.
Economic	Impacts that affect the money people or a community have.
Environmental	Impacts that affect the landscape and ecosystems of an area.

2

**Tropical Rainforests:**

- Emergent Layer**  
Tallest trees  
Birds & Insects
- Canopy Layer**  
Thickest  
Host most species
- Understory Layer**  
Shorter young trees  
Bushes
- Shrub Layer**  
Insects, large animals



- Kapok Tree
- Macaw
- Lianas
- Lemur
- Palms
- Tree boa
- Fungi
- Leopard

4

**Tropical Deserts:**

**Flora Adaptations - Cacti**

- Wide reaching roots to absorb any rain
- Spines instead of leaves to deter predators
- Spines so water drips to roots, not lost by transpiration



**Fauna Adaptations - Big Horn Sheep**

- Light colouring reflects 40% of the sun's rays
- Seeks shade during the hottest midday sun
- Climbs rocky mountain slopes due to cloven hoof



6

**Polar Regions:**

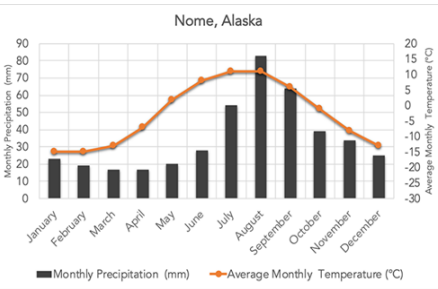
**Climate -**

**Temperature**

- Low = -14°C
- January
- High = +10°C
- July

**Rainfall**

- Low = 18mm
- High = 82mm



3

**Causes of Tropical Rainforest deforestation: Amazon**

- Commercial farming** - Farming to sell produce for a profit. Cattle and crops. Responsible for 80% of Amazon deforestation. Ruins soil and nutrients
- Logging** - The business of cutting down trees and transporting the logs to sawmills. Selective logging and clear felling. Teak and Mahogany worth the most.
- Mineral Extraction** - The removal of mineral resources from the earth. Gold, Bauxite, Oil and gas. Pollutes rivers and air. Trees above the mines and quarries are removed.
- Hydro-electricity** - Dams have been built and large areas of rainforest destroyed by flooding.

5

**Opportunities in Tropical Deserts: Western Desert**

- Mineral extraction** - The Western Desert has an abundance of valuable minerals, such as copper, uranium, lead, and zinc.
- Energy development** - In the Mojave desert, heat from the sun generates steam to drive turbines that generate electricity for 140,000 homes.
- Tourism** - The bright lights of Las Vegas, an entertainment hub which attracts over 37 million visitors annually. National parks, such as the Grand Canyon and Joshua Tree offer wild and spectacular scenery.

7

**Challenges in Polar Regions: Alaska**

- Extreme temperature** - average temperature is low with a record of -80°C in Fort Yukon in 1971. Perma- frost (permanently frozen ground) is widespread
- Inaccessibility** - few surfaced roads and snow and ice covers roads at points during the year. The melting of roads in the summer makes some unpassable.
- Provision of buildings** - the heat from buildings melts the permafrost which causes buildings to subside (collapse into the ground). Building materials are difficult to import.

# History

## What was England like in Anglo-Saxon times?

- England had a population of about 2 million people (less than half of London today!)
- Almost everyone farmed land.
- England was a Christian country, and religion played a large role in everyday life.
- For centuries England had been under threat from the Vikings, and parts of northern England had Viking settlers.
- Edward the Confessor was king from 1042 to 1066, but the kings before him (Cnut and his two sons) had been Vikings.
- England had a very well-organised government.

### The Monarchy

#### Edward's strengths

- A powerful king was one who had success in battle and led a strong army.
- Edward was not a warrior king himself, but his earls and thegns were a **powerful military force**.
- He was a **respected law-maker** – someone who kept things peaceful.
- He was **pious (very religious)**. Kings claimed to have a special link to God.



**Edward the Confessor** was king from 1042 to 1066. Every boy swore an **oath** to the king when they reached 12 years old. The king controlled law-making, money, land ownership, the military and taxation.

#### Limits to Edward's power

- Half of the country, the **Danelaw**, still had strong Danish links from previous Viking invasions. These people wanted to live by their own laws and customs.
- The **Earl of Wessex, Earl Godwin**, was very powerful. He could put pressure on Edward to do things his way.
- Edward and Godwin fell out in **1050**. Edward forced Godwin into exile, but he returned in 1051 with an army, and Edward gave him his earldom back to prevent a war.

### Government

#### The Witan

The **Witan** was a council of advisers to the king, made up of important people like earls and archbishops. It discussed threats and disputes, and had a large role in choosing a new king.



The king decided who was on the Witan and when it met. He did not have to follow its advice.

### The Social System

At the top of Anglo-Saxon society were the King and the elite aristocracy, and at the very bottom were slaves.

The **king** was the **most powerful** person in Anglo-Saxon England. His job was to protect his people from attack and make laws.



King

**Earls** were the most important men after the king. The area of the country controlled by an earl was called an **earldom**.



Earls

**Thegns** ("thanes") were local lords who lived in a **manor house** and held more than 5 **hides** of land. Thegns had a duty to provide men for the **fyrd** (army) when needed.



Thegns

**Peasants** made up most of the population. They worked for their local lord. **Ceorls** ("curls") were free to go and work for another lord if they wanted to, although they still had to do some work for their local lord as well.



Peasants

**Slaves** made up about 10% of the population, and were viewed more as property than people. Owning slaves was a normal part of life for the Anglo-Saxons, but the Normans thought it was cruel.



Slaves

**Peasants and merchants** could work their way up to **thegn** status.

**Slaves** could be freed by their masters to become ordinary **peasants**.

**Thegns** could be promoted to **earls**.

A **peasant** could sell themselves into **slavery** to support their family.

An **earl** could be demoted to a **thegn**.

### Earldoms

The earls were given many of the king's powers in order to help run the country.

- **They collected taxes.** Earls kept a third of what they collected, so were very rich.
- They were in charge of **justice and legal punishments** in their earldom.
- They had great **military power**. Each earl had a group of highly-trained bodyguard soldiers called **housecarls**.

Earls depended on the support of the thegns in their earldom.

# History

Battle

#1

## The Battle of Gate Fulford – 20<sup>th</sup> September 1066

Harald Hardrada and Tostig attacked in September 1066. They were blocked just outside York by the new Earl of Northumbria **Morcar** and his brother **Edwin** (Earl of Mercia) at **Gate Fulford**.

**The battle was a defeat for Morcar and Edwin.** Their mistake was fighting just outside York, rather than within the city walls.

Harold heard about the invasion and marched north. He must have been confident that William would not attack the south any time soon.



## Edward the Confessor's Death

Edward died on the 5<sup>th</sup> of January 1066. He had no children, which meant there was a **succession crisis**.

The Bayeux Tapestry shows Edward on his deathbed, holding out his hand to Harold.

The Witan met quickly and Harold was crowned the same day as Edward's burial, 6<sup>th</sup> January 1066.



Battle

#2

## The Battle of Stamford Bridge – 25<sup>th</sup> September 1066

Harold surprised Hardrada and Tostig at Stamford Bridge. Both Hardrada and Tostig were killed. **Harold won** because:

- The Vikings had left their armour on their ships
- He had the element of surprise
- Hardrada and Tostig had fought at Gate Fulford 5 days before
- The Vikings were (wrongly) under the impression that the English hated Harold
- Harold's men broke the Viking shield wall

## The Norman Invasion



Battle





#3

## The Battle of Hastings – 14<sup>th</sup> October 1066

After leaving York, Harold stopped in London for around 5 days to gather troops. He then continued south and met William at **Senlac Hill, near Hastings**.

- The battle began in Harold's favour, but his strong **shield wall** gradually broke down.
- At one point a rumour went round that William had been killed, so he tipped his helmet to show he was still alive.
- Harold Godwinson and his brothers Gyrth and Leofwine held their position on the top of the hill. Eventually they were killed, but their housecarls fought on to the last.

## 1066 & the Rival Claimants for the Throne

Harold Godwinson	William, Duke of Normandy	Harald Hardrada	Edgar Aethling
<b>Claim:</b>	<b>Claim:</b>	<b>Claim:</b>	<b>Claim:</b>
Appointed by Edward on his deathbed. Family connection (brother-in-law). Proven military success and influence with the earls.	An agreement supposedly made with King Edward in about 1051, and confirmed during Harold's 1064 embassy.	Complicated – he had essentially inherited the claim from previous Viking kings.	Royal blood – Edward's nephew and natural heir ("Aethling" = prince of royal blood).
<b>Strength of claim:</b>	<b>Strength of claim:</b>	<b>Strength of claim:</b>	<b>Strength of claim:</b>
<b>Good</b> – supported by witnesses (though ones loyal to him). Good chance of success.	Backed by the Pope, but no real evidence. <b>Good</b> chance of success – the Normans were strong warriors.	<b>Weak</b> , though the Danelaw may have welcomed a Viking king. The exiled Tostig went to Harald for support – together they had a strong army and fleet.	<b>Weak</b> – he was a blood relation, but the Witan wanted a strong king to see off threats from Scandinavia and Normandy.
			

## YEAR 7 — PLACE VALUE AND PROPORTION

### Ordering integers and decimals

@whisto\_maths

#### What do I need to be able to do?

By the end of this unit you should be able to:

- Understand place value and the number system including decimals
- Understand and use place value for decimals, integers and measures of any size
- Order number and use a number line for positive and negative integers, fractions and decimals
- use the symbols  $=$ ,  $\neq$ ,  $\leq$ ,  $\geq$
- Work with terminating decimals and their corresponding fractions
- Round numbers to an appropriate accuracy
- Describe, interpret and compare data distributions using the median and range

#### Keywords

**Approximate:** To estimate a number, amount or total often using rounding of numbers to make them easier to calculate with

**Integer:** a whole number that is positive or negative

**Interval:** between two points or values

**Median:** A measure of central tendency (middle, average) found by putting all the data values in order and finding the middle value of the list

**Negative:** Any number less than zero, written with a minus sign

**Place holder:** We use 0 as a place holder to show that there are none of a particular place in a number

**Place value:** The value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right

**Range:** The difference between the largest and smallest numbers in a set

**Significant figure:** A digit that gives meaning to a number. The most significant digit (figure) in an integer is the number on the left. The most significant digit in a decimal fraction is the first non-zero number after the decimal point

#### Integer Place Value

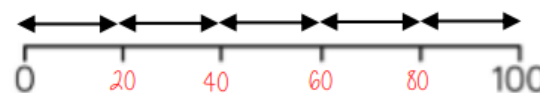
Billions			Millions			Thousands			Ones			
H	T	O	H	T	O	H	T	O	H	T	O	
			3	1	4	8	0	3	3	0	2	9

Placeholder

Three billion, one hundred and forty eight million,  
thirty three thousand and twenty nine

1 billion 1,000,000,000  
1 million 1,000,000

#### Intervals on a number line

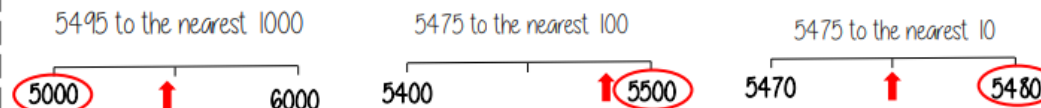


Divide the difference by the number of intervals (gaps).

E.g.  $100 \div 5 = 20$

#### Rounding to the nearest power of ten

If the number is halfway between we "round up"



# Maths

## Compare integers using $<$ , $>$ , $=$ , $\neq$

$<$ less than		$\neq$	2 500 000
$>$ greater than	Two and a half million	$=$	Three billion
$=$ equal to	300 000 000	$<$	68 000
$\neq$ not equal to	Six thousand and eighty		

## Range Spread of the values

Difference between the biggest and smallest

3 9 8 12

Range: Biggest value - Smallest value

$$12 - 3 = 9$$

Range = 9

## Median The middle value

Example 1

4 3 9 8 12

Median: put the in order 3 4 8 9 12

find the middle number 3 4 **8** 9 12

Example 2

150 154 148

137 160 158

Median: put the in order

137 148 **150 154** 158 160

There are 2 middle numbers

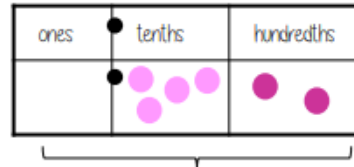
Find the midpoint

152

## Decimals

We say  
'nought point five two'

Five tenths and two hundredths



0 ones, 5 tenth and 2 hundredths

$$0 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.01 + 0.01$$

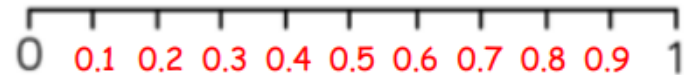
$$= 0 + 0.5 + 0.02$$

$$= 0.52$$

## Decimal intervals on a number line

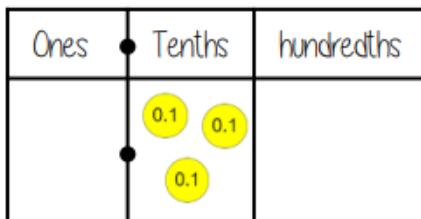
One whole split into 10 parts makes tenths = 0.1

One tenth split into 10 parts makes hundredths = 0.01



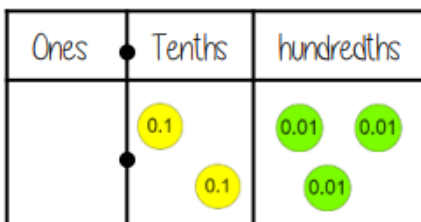
## Comparing decimals

Which the largest of 0.3 and 0.23?



0.3 > 0.23

"There are more counters in the furthest column to the left"



0.30  
0.23

Comparing the values both with the same number of decimal places is another way to compare the number of tenths and hundredths

## Round to 1 significant figure

370 to 1 significant figure is 400

37 to 1 significant figure is 40

37 to 1 significant figure is 4

0.37 to 1 significant figure is 0.4

0.00000037 to 1 significant figure is 0.0000004

Round to the first non zero number

## YEAR 7 — PLACE VALUE AND PROPORTION... FDP equivalence

@whisto\_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Convert fluently between fractions, decimals & percentages

Keywords

**Fraction:** how many parts of a whole we have.

**Decimal:** a number with a decimal point used to separate ones, tenths, hundredths etc.

**Percentage:** a proportion of a whole represented as a number between 0 and 100

**Place value:** the numerical value that a digit has decided by its position in the number

**Placeholder:** a number that occupies a position to give value

**Interval:** a range between two numbers

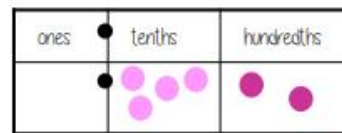
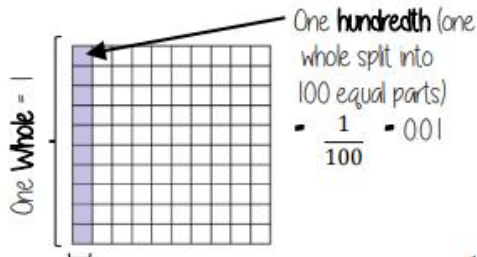
**Tenth:** one whole split into 10 equal parts

**Hundredth:** one whole split into 100 equal parts

**Sector:** a part of a circle between two radius (often referred to as looking like a piece of pie)

**Recurring:** a decimal that repeats in a given pattern

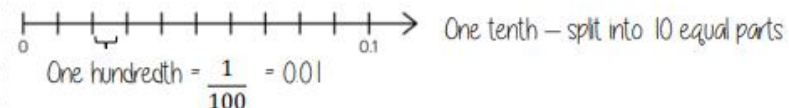
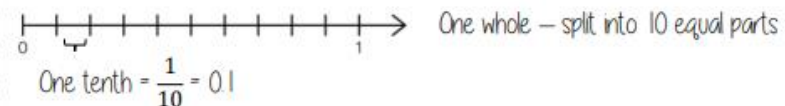
Tenths and hundredths



0 ones, 5 tenths and 2 hundredths

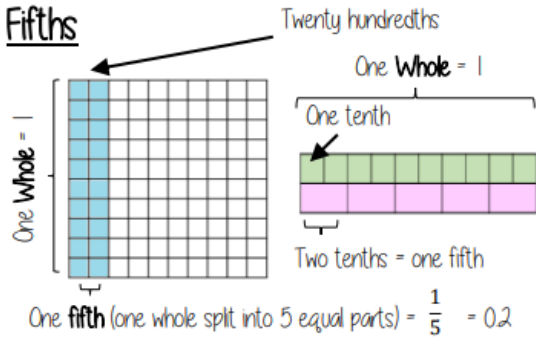
$$0 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.01 + 0.01$$
$$= 0 + 0.5 + 0.02$$
$$= 0.52$$

On a number line

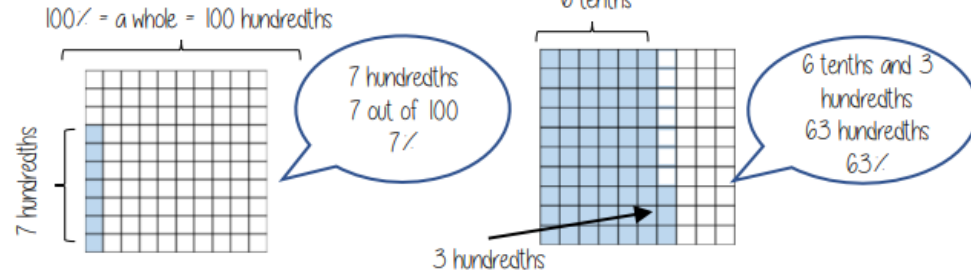


# Maths

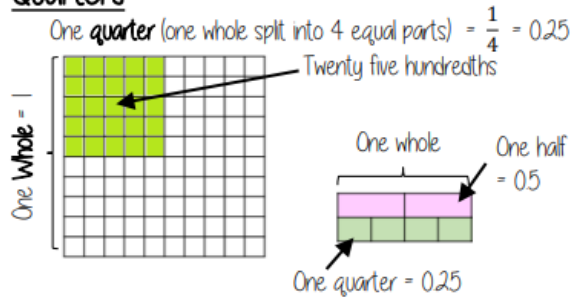
## Fifths



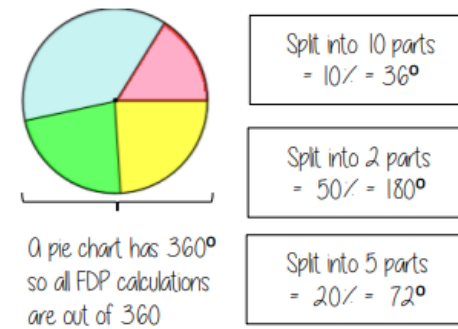
## Percentages on a hundred grid



## Quarters

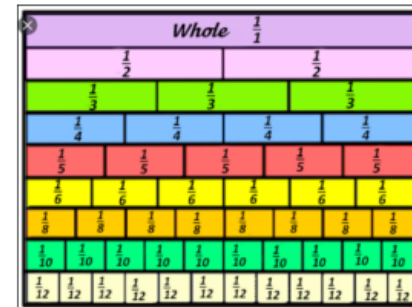


## Simple pie charts



## Equivalent fractions

Represent equivalence with fraction walls

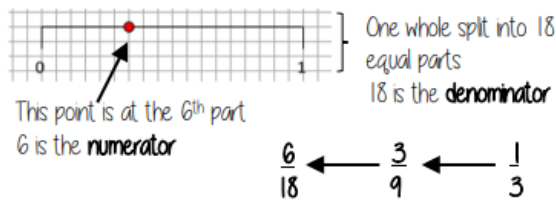


## Fractions — on a diagram

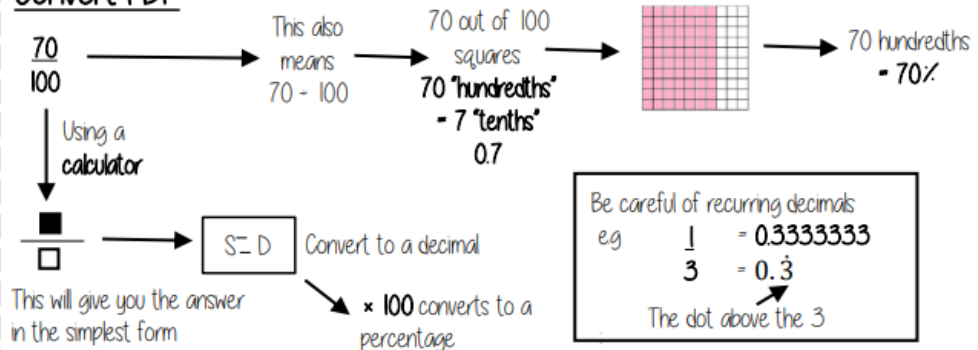


The denominator is represented by EQUALLY sized parts — this is split into quarters

## Fractions — on a number line



## Convert FDP



## Year 7

## Music

## Term 2

### Why create computer and video game music?

It enhances **gameplay**, sets **mood**, and gives **live feedback** about **game events** that makes it feel real.

Students learn **purposeful composition** for **characters**, **story arcs** and **scene setting**.



### 7 Key Words to Know

**Motif** – a short, memorable theme for a character – e.g. Mario.

**8-bit / Chiptune** – retro, beepy sound from early consoles.

**Arpeggio** – notes of a chord played one after another.

**Layering** – adding / removing parts to build the dramatic intensity.

**Tempo (BPM)** – speed of the beat; must sync to gameplay

**Dynamics** – changes in volume for drama and mood

**SFX (Sound-effects)** – non-musical sounds that enhance game action

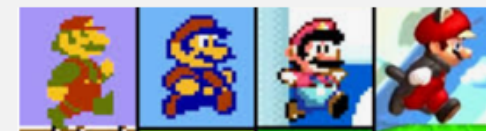
### Origins of computer game music

Computer game sounds started back in **1958** – but video game music **themes** dates to the early **8-bit music** in the **70s**.

Early computers could only play a **few sounds** at once, so composers used simple **waveforms** and **catchy tunes**.

This helped create famous themes like

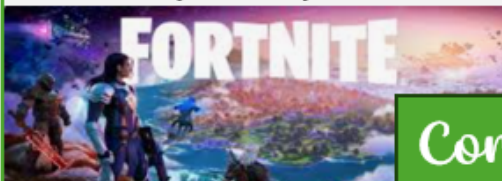
### Mario



### Motifs and Loops

**Motifs** announce the arrival of a **game character** – students explore how to **compose melodies** suiting the **character**.

Computer games use **endlessly repeating loops** to set game **scenes** and **mood** which **overlap** so that players never notice the **join** as they move around.



### Harmony & Arpeggios

The **limitations** of early computers meant rather than play **chords** (lots of notes at once), they would be broken up into **arpeggios** (one note at a time) to create the same effect without using all the channels.

### Texture – layers and sound effects

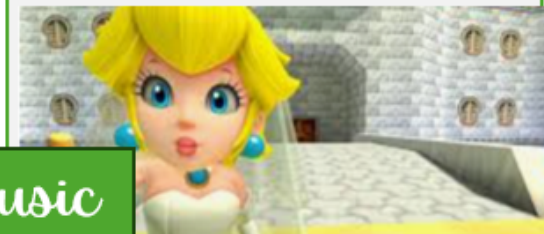
Students add **layers** for **drama** and strip them back for **calm moments**, to keep the game player's **emotion in sync**.

Sound effects **punctuate** the game play.

### Timing & Transitions

**Music** must hit gameplay **cues** – which are events at a particular time.

Students **compose** live to a video of **gameplay**, so that their music can react to changes as it happens in the game.



## Year 7

## Physical Education

## Term 2

7

**Sleep:**

Getting **8-10 hours of sleep each night** helps your body and brain recover and grow.

Poor sleep can lead to tiredness, poor concentration in lessons, and lower performance in PE. For example, a good night's sleep helps you focus better and have more energy for sports.



8

**Hydration:**

Drinking enough water is important to stay healthy, especially during exercise.

Dehydration can cause **headaches, dizziness, tiredness, and poor performance**. For example, drinking water before, during, and after PE lessons helps you stay alert and perform well.



9

**Injury Prevention:**

To avoid injuries, it's important to warm up before exercise, use the correct equipment (e.g., shin pads), and follow the rules of the game. Stretching also helps prevent muscle injuries. For example, warming up before football helps prevent muscle strains.



10

**Personal Safety:**

Being aware of your surroundings and using equipment safely reduces accidents.

This includes checking the playing area for hazards, wearing appropriate footwear, and following PE teacher instructions. For example, always tie your shoelaces to prevent tripping.



11

**Positive Mindset:**

Trying your best, staying determined, and encouraging yourself and others helps you **learn new skills** and enjoy physical activity.

For example, if you miss a goal, keep trying and support your teammates instead of giving up.



12

**Healthy Lifestyle Choices:**

Making healthy decisions every day helps you feel your best.






This includes **not smoking, limiting screen time**, choosing healthy foods, and being active for at least 60 minutes every day.

For example, choosing to walk to school instead of getting a lift keeps you active and healthy.



# Science

## Keywords

	<b>Hazard</b>	Anything that has the potential to cause harm or damage
	<b>Risk</b>	The harm or damage that could be caused by a hazard
	<b>Accuracy</b>	The closeness of a measurement to its true value
	<b>Precision</b>	How close measurements are to each other
	<b>Reliable</b>	Similar data can be reproduced under same conditions

## Scientific Method

**Hypothesis:** What you predict will happen, based on prior knowledge e.g. As X increases, Y will increase because.....

**Independent Variable:** The thing that is being changed

**Dependent Variable:** The thing that is being observed/measured

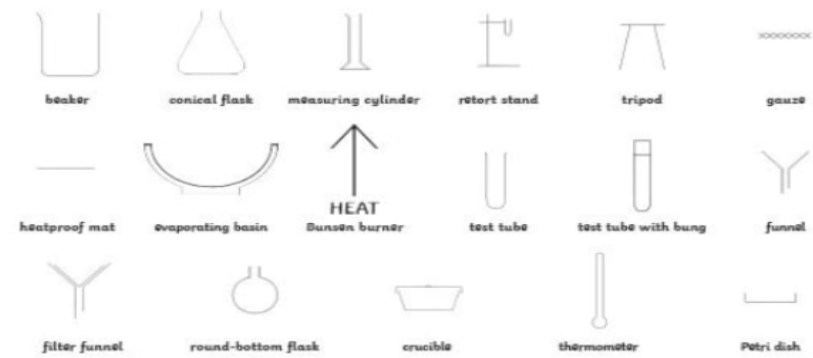
**Control Variables:** All the things that are being kept the same e.g. volume, concentration, mass, time

**Method:** Step by step instructions of how to change the independent variable, measure the dependent variable, control all other variables, repeat measurements, perform calculations on collected data

**Conclusion:** What have you found out? Was your hypothesis correct? Does your data support your hypothesis? Explain the results using scientific knowledge

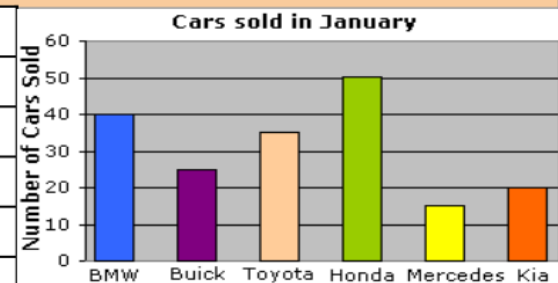
**Evaluation:** How reliable is your data (could someone follow your method and collect a similar set of results)? Are there anomalies? How could you make it more reliable?

## Drawing Scientific Diagrams

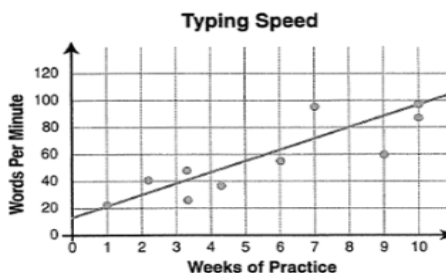


## Presenting Data in a Graph

<b>S</b>	<b>Scale</b>
<b>P</b>	<b>Pencil &amp; ruler</b>
<b>A</b>	<b>Axis</b>
<b>T</b>	<b>Title</b>
<b>U</b>	<b>Units</b>
<b>L</b>	<b>Line of best fit if appropriate</b>
<b>A</b>	<b>Accuracy</b>



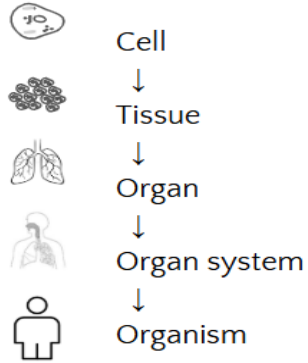
**Bar Graph:**  
Categoric/Discrete data



**Line Graph:**  
Continuous data

# Science

## Organisation levels:



## Types of organism:



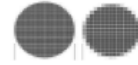
Unicellular -  
made up of  
one cell.



Multicellular -  
made up of  
many types of  
cell.



Microscopes - used to  
view objects in great detail



Resolution

low

high



Cost

low

high



Magnification

X 2000

X 2 000,000

Light



Electron



## Specialised cells:

Specialised cells  
have **structural  
adaptations** that  
allow them to carry  
out a particular  
**function** (job).

Examples:

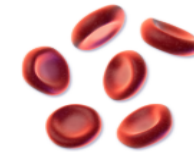
Sperm cells:



- tail for swimming

Red blood cells:

- carry oxygen



- no nucleus  
- large surface area

Root hair cell:

- absorb water  
and minerals



- large surface area

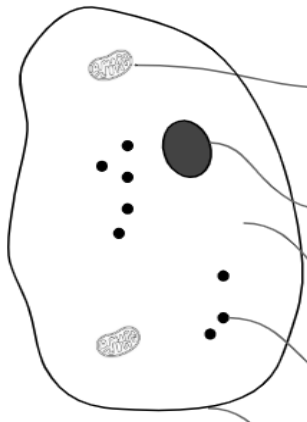
## Cell types and organelles



Animal cell



Plant cell



Organelles found in both:



Mitochondria:  
*respiration*



Nucleus: *contains DNA  
and controls cell*



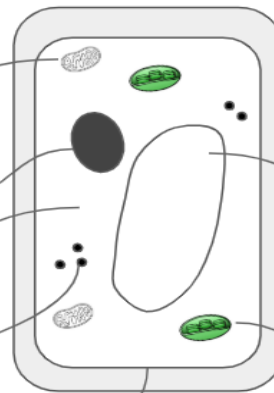
Cytoplasm:  
*chemical reactions*



Ribosome:  
*makes protein*



Cell membrane:  
*controls movement of  
substances in and out*



Organelles only found  
in plant cells:



Vacuole: cell sap  
& shape



Cell wall:  
structure



Chloroplasts:  
photosynthesis

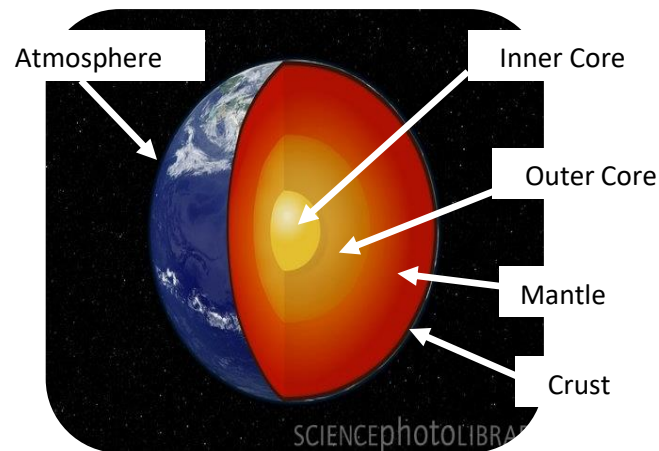
Cells - The units of a living organism, contains parts to carry out life processes.

## Keywords

Rock cycle	Sequence of processes where rocks change from one type to another.
Weathering	The wearing down of rock by physical, chemical or biological processes
Erosion	Movement of rock by water, ice or wind (transportation).
Minerals	Chemicals that rocks are made from.
Strata	Layers of sedimentary rock
Sediment	Small grains of sand, mud, dirt or rock

## Earth's Structure

### The Structure of the Earth



## Sedimentary Rocks

Formed from layers of sediment, and can contain fossils.  
Examples are limestone, chalk and sandstone.

### How sedimentary rocks are formed:

1. **Weathering** (rock sediments are loosened from the surface of the rock e.g. by rain, ice, heat etc.)
2. **Erosion** (rock sediments are worn away/ broken off)
3. **Transportation** (rock pieces moved further away, e.g. by a river)
4. **Sedimentation** (rock pieces collect in layers)
5. **Compaction** (sediments squashed together)
6. **Cementation** (sediments 'glued' together by minerals)

## Igneous Rocks

Formed from cooled magma, with minerals arranged in crystals.  
Examples are granite, basalt and obsidian.

The size of the crystals depends on how quickly they cooled. Large = it cooled slowly, small = it cooled quickly.

### 2 types of igneous rocks:

1. **Extrusive rock** – when the rock forms above the surface of the earth from lava after a volcanic eruption.
2. **Intrusive rock** – when the rock forms underground from magma.

## Metamorphic Rocks

Formed from existing rocks exposed to heat and pressure over a long time. Earth movements can put pressure on buried rocks and proximity to magma can cause chemical changes.  
Examples are marble, slate and schist.

## Keywords

Galaxy	Collection of stars held together by gravity. Our galaxy is called the Milky Way.
Light year	The distance light travels in a year (over 9 million, million kilometres).
Stars	Bodies which give out light, and which may have a solar system of planets.
Orbit	Path taken by a satellite, planet or star moving around a larger body. Earth completes one orbit of the Sun every year.
Exoplanet	Planet that orbits a star outside our solar system.

## What is in Space?

**Moons** - Our moon is the Earth's only natural satellite.

**Planets** - We have 8 planets in our Solar System.

**Stars** - The Sun is the closest star to Earth and is actually a relatively small star.

**Solar system** - Made up of planets, moons and other celestial objects, all orbiting around the Sun.

**Galaxy** - The Solar System is part of the Milky Way galaxy.

**Universe** - The observable universe is the part that can be seen / observed.

## Our Solar System

The order of planets in our solar system:

Mercury - closest to the Sun  
Venus  
Earth  
Mars  
Jupiter  
Saturn  
Uranus  
Neptune - furthest from the Sun

Mnemonic to help you remember:  
My Very Educated Mother Just Served Us Nachos.

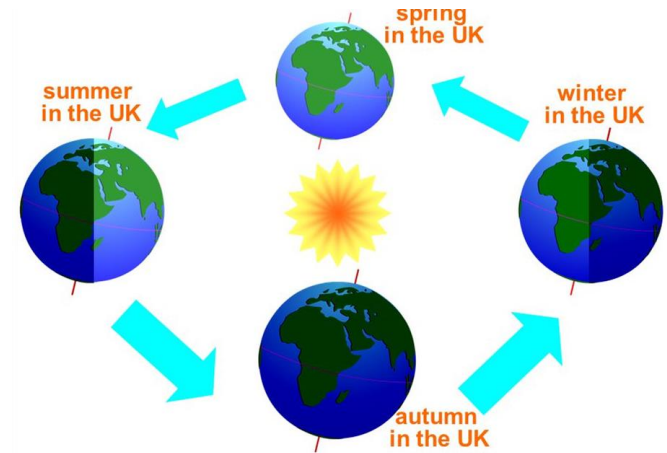
# The Universe

## Seasons

The Earth's axis is the imaginary line through the centre of the Earth between the South and North poles.

This axis is tilted slightly.

We get different seasons because the Earth is tilted.



## The Big Bang

The theory states that originally all the matter in the universe was concentrated into a single incredibly tiny point.

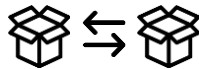
This began to enlarge rapidly in a hot explosion, and it is still expanding today.

This explosion is called the Big Bang, and happened about 13.7 billion years ago.

# Energy stores and transfers



**Energy** - the ability of something to do work  
Measured in joules (J).



**Conserved:** Energy cannot be created or destroyed but can be transferred between energy stores.



## Energy Stores



### Nuclear

The energy stored in the nucleus of an atom.

### Elastic



The energy stored in an object when it is stretched, squashed, or compressed, and released when the object returns to its original shape.



### Electromagnetic

The energy stored when repelling charges have been moved closer together or when attracting charges have been pulled further apart.



### Kinetic

The energy an object possesses when it is moving



### Gravitational potential

The amount of potential energy an object has due to its height above the earth.



### Chemical

The energy stored in chemical bonds of a substance.



### Thermal

Energy stored because an object is warm. A form of kinetic energy due to the motion of particles.



## Work done = energy transferred



Mechanical work = forces and waves



Electrical work = electric currents



Electromagnetic radiation = light



Heating = conduction and convection

## Power

The number of joules of energy transferred every second.



Power is measured in watts (W)

## Efficiency



Useful energy  
Energy transferred into a form we want



Wasted energy  
Energy in a form we don't want and can't use - normally dissipated to the surroundings as heat



Conserved  
The total amount of energy stays the same - it can be in different stores!

## Units

energy (E)  
force (F)  
power (P)

joules (J)  
newtons (N)  
watts (W)

