Enquiry Organiser LKS2 **Year 4**
Spring 1B

Art and Design – Painting

Knowledge I know...

- Georgia O'Keeffe was an artist.
- She was born in 1887 and was one of seven children.
- She began experimenting with painting close up views of flowers.
- She used oil paints in vibrant, bold colours.
- A colour wheel **is** a diagram used in the visual arts to represent the colours and their relationships to one another.
- Tertiary colours are the colours created when mixing a primary colour with a secondary colour.
- Different colours can have very different effects on our emotions.
- Complementary colours work in pairs and can be found directly opposite each other on the colour wheel, for example, purple and yellow.
- Few artists use only pure colours from around the colour wheel. Often artist will use tints, shades and tones when mixing colours.
  Monochromatic is where the artist uses tints, shades and tones of a single colour.

Skills I can...

- Confidently make a range of marks using a paintbrush including single strokes, zig zags, umbrella handles, polos and a string of pearls.
- Experiment with mixing media e.g. wax crayon under/over paint.
- Understand the relationship between colours and have confident in mixing and using them.
- Show my explorations in my sketchbook.
- Evaluate and analyse creative works of my peers.
- Explore the work of a range of artists, describing the differences and similarities between different practices and disciplines, and making links to my own work.
- Express my thoughts and feelings about a piece of art.
-

Links back to I remember... [Y2]

- Vary tone through blending using coloured pencils [Autumn].
- Mix a wider range of colours using pencil crayons [Autumn].
- Using complementary and harmonising colours [colour wheel]
- Using hard edged painting skills.
- Beginning to make a range of marks using a paintbrush including single strokes, zig zags, umbrella handles, polos and a string of pearls.
- Demonstrating my proficiency in water colour painting.
- Mixing and matching colour accurately.
- Georgia O'Keeffe was an artist.
- She painted Oriental Poppies in 1928.

Vocabulary:

Watercolour: a type of paint which is used with water to give transparent colour
Primary: colours used to create all other colours and cannot be made (red, yellow, blue)
Secondary: a colour created by mixing two primary colours e.g. orange and purple
Tertiary: are colours that are created by mixing equal parts of primary colour and secondary colour
Warm: are colours that envoke a feeling of warmth, such as red, orange and yellow
Cool: are hues that are often associated with water, grass and the sky
Complementary:work in pairs and contrast with each other, they can be found directly opposite each other on the colour wheel, for example, purple and yellow
Contrast: is the use of different elements to create visual interest and draw the viewer's eye to certain areas
Hue: a hue is the pure form of a colour that hasn't been changed in any way. It is not the tint, tone or shade of a colour
Tint: making a colour lighter by adding white
Shade: making a colour darker by adding black
Tone: the lightness or darkness of a colour

Images:

Progress is **knowing more** (knowledge), **remembering more** (links back to), **being able to do more** (skills)

Enquiry Organiser LKS2 **Year 4**
Spring 1B

History – Rise and Fall of the Roman Empire

Knowledge I know...

- Many Romans believed the myth that Rome was founded in 753 BCE.
- The myth of Romulus and Remus and why it was important to the Romans.
- Before the Roman Empire was founded, Rome was first ruled by kings and then Rome became a republic and run by a senate
- How Roman society was made up of plebeians and patricians
- The Punic wars were a series of wars between Rome and Carthage
- The Romans conquers Macedonia and the Greek city-states.
- Where the Roman Empire was located.
- When Roman's took over a territory it was called a province.
- Julias Ceaser was not an emperor but a dictator.
- Augustus was the first Emperor of Rome
- The Roman army was made up of centuries and legions
- The uniform of a Roman solider
- The tasks of a Roman solider
- Romans used more advance technology in battle.
- Where Pompeii was and Mount Vesuvius
- How the eruption of Mount Vesuvius destroyed Pompeii
- What evidence was left from Pompeii

Skills I can...

- Sequence some events or objects on a simple timeline without support providing a few dates and/or period labels and terms.
- To understand that a timeline To be divided into BC (Before Christ) and AD (Anno Domini).
- To work on a wider variety of interpretations such as history books, museum displays and historical fiction and non-fiction.
- To comment on a range of possible reasons for differences in several accounts (e.g. explain how and why there were different viewpoints about X).
- To explain historical situations, events, developments and individuals from more than 1 viewpoint.
- To draw together information from sources about the complexity of life in the past.
- Ask valid questions for enquiries and answer using several sources.
- To produce structured narratives and descriptions.
- To explain with confidence the significance of particular causes and effects for many of the key events and developments.
- Describe links between different features in past situations
- To explain why certain changes and developments were of particular significance within topics and across time periods.
- To explain why they were certain differences and similarities across time periods.
- Describe links between different features in past situations.
- Make valid statements about the main similarities, differences and changes occurring within topics.
- To explain independently why a historical topic, event or person was distinctive or significant (e.g. Julia Ceaser).
- To comment on the usefulness and reliability of a range of sources for particular enquiries.

Links back to I remember...[Y2]

- What democracy is from Oliver Cromwell and Anicet Greece units
- Explain how past people/events influence life today
- That a timeline is divided into BC (Before Christ) and AD (Anno Domini)
- Select and organise key pieces of information
- Make connections between the historical periods previously studied (Ancient Egypt, Stone Age, Iron Age)

Vocabulary:

Myth - a traditional story, usually about heroes, heroines, gods and goddesses
Republic - a country where the leaders are chosen or elected by the people living in the country
Senate - a group of people who are voted for a make laws for people to live by.
Plebeians – The poorer Romans who were not allowed to vote or become senators. The majority of Roman society.
Patricians – The wealthiest Romans who were allowed to vote and become senators
Centurion – A commander in the Orman army**.**
Legion – 5,000-6,00 men
Province- a place controlled by Rome that was outside of Italy
Dictator - is a person with complete power and control over a country
Empire – a large group of states and/or countries ruled over by one single monarch.
Pompeii – A city in ancient Roman which was buried in a volcanic eruption in AD 79.
Vesuvius – The volcano which erupted and buried Pompeii.

Images:

Progress is **knowing more** (knowledge), **remembering more** (links back to), **being able to do more** (skills)

Enquiry Organiser LKS2 **Year 4**
Spring 1B

Computing – Programming (Repetition in Games – Scratch)

Knowledge I know...

- That some programming languages enable more than one process to be run at once.
- How to read code and predict what the output will be once the code is run.
- In programming there are infinite loops and count-controlled loops.
- The difference between count-controlled and infinite loops and use this to modify existing animations and games using repetition.
- The parts of a game and can match them to a design.

Skills I can...

- List an everyday task as a set of instructions including repetition.
- Predict the outcome of a snippet of code.
- Modify a snippet of code to create a given outcome.
- Modify loops to produce a given outcome.
- Choose when to use a count-controlled and an infinite loop.
- Choose which action will be repeated for each object.
- Explain what the outcome of the repeated action should be.
- Evaluate the effectiveness of the repeated sequences used in my program.
- Identify which parts of a loop can be changed.
- Explain the effect of my changes.
- Re-use existing code snippets on new sprites.
- Evaluate the use of repetition in a project.
- Select key parts of a given project to use in my own design.
- Develop my own design explaining what my project will do.
- Refine the algorithm in my design.
- Build a program that follows my design.
- Evaluate the steps I followed when building my project.

Links back to I remember... [KS1]

- That commands in Scratch are represented as blocks [Y3].
- Each sprite is controlled by the commands I choose [Y3].
- Sequences are made by joining blocks of code together [Y3].
- Sequence of commands can have an order [Y3].
- Code can be copied from one sprite to another [Y3]. Projects should be tested to see if they perform as expected [Y3].
- Creating a program following a design [Y3].
- Starting a program in different ways [Y3].
- Creating a sequence of connected commands [Y3].
- Building a sequence of commands [Y3].
- Implementing my algorithm as code [Y3].

Vocabulary:

Algorithm: a precise set of ordered steps that can be followed by a human or a computer to achieve a task.
Animate: the movement sequence of a sprite.
Backdrop: the background to the stage of a scratch project.
Block: Segment of instruction or code.
Bug: a problem that needs to be found and fixed.
Debugging: finding and fixing a problem with a program.
Duplicate: a copy or clone of, e.g. duplicating an algorithm for a sprite to carry out the same task as another sprite.
Evaluate: the process of confirming that the algorithm (or section of) has worked well.
Event: the start of code or instruction. Event blocks trigger the instructional code to begin when pressed.
Event block: trigger the instructional code to begin when pressed.
Forever: continuous loop. A forever block loops the section of code.
Program: a set of ordered commands that can be run by a computer to complete a task.
Code: The commands a computer can run.
Command: a single instruction that can be used in a program to control a computer.
Count-controlled loop: a command that repeatedly runs a defined section of code a predefined number of times.
Infinite-loop: a command that repeatedly runs a defined section of code indefinitely.
Loop: a command that repeatedly runs a defined section of code.
Modify: to change.
Motion: a movement (of a sprite) e.g. move, go, glide.
Order: arrange in a methodical way.
Refine: to identify and improve.
Repeat: part of the program where one or more commands are run multiple times in a loop.
Sequence: the order in which commands are performed to achieve a task.
Sprite: the main characters of the project.
Value: the way to change a variable in a block.

Images:

Progress is **knowing more** (knowledge), **remembering more** (links back to), **being able to do more** (skills)

Enquiry Organiser LKS2 **Year 4**
Spring 1B

Science – States of Matter

Knowledge I know...

- There are three states of matter: solid, liquid and gas.
- A solid keeps its shape and has a fixed volume. Some solids are made up of small grains which can be poured into a heap.
- A liquid has a fixed volume but changes in shape to fit the container. A liquid can be poured and keeps a level, horizontal surface.
- A gas fills all available space; it has no fixed shape or volume.
- A liquid has a fixed volume but changes in shape to fit the container. A liquid can be poured and keeps a level, horizontal surface.
- Some liquids flow less easily and are slow to pour.
- Melting is a change of state from solid to liquid. Freezing is a change of state from liquid to solid.
- The temperature a liquid freezes at is called its freezing point. The freezing point of water is 0°C.
- Different substances have different freezing points.
- Boiling and evaporation are both a change of state from liquid to gas.
- Boiling happens at a specific temperature and bubbles of the gas can be seen inside the liquid. Water boils when it is heated to 100C.
- Evaporation happens at any temperature and only at the surface of the liquid. It happens more quickly if the temperature is higher, the liquid has a larger surface area or it is windy.
- The water cycle is an example of evaporation and condensation.
- Water at the surface of seas, lakes and rivers evaporates into water vapour, a gas.
- Water vapour rises and cools. It condenses back into liquid water droplets which form clouds.
- When the water droplets in a cloud get too heavy, they fall as rain, sleet or snow. This is known as precipitation.
- A gas fills all available space; it has no fixed shape or volume.
- Many gases are invisible.
- A gas has a mass, so its weight can be measured.
- A gas can be squashed or compressed into a smaller space.

Skills I can...

- asking relevant questions and using different types of scientific enquiries to answer them.
- setting up simple practical enquiries, comparative and fair tests.
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- identifying differences, similarities or changes related to simple scientific ideas and processes.
- using straightforward scientific evidence to answer questions or to support their findings.

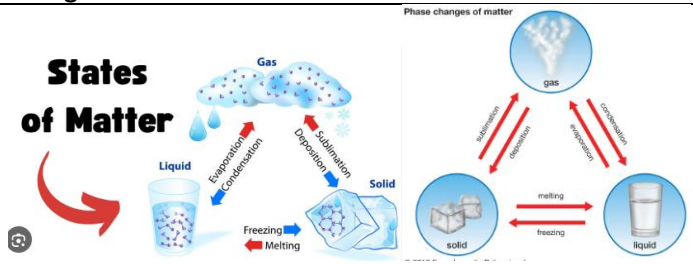
Links back to I remember... [KS1]

- Solids: Have a fixed shape and size (e.g., rock, wood, toys). Particles are tightly packed and vibrate in place.
- Liquids: Take the shape of their container but have a fixed amount (volume) (e.g., water, juice, milk). Particles are close but can slide past each other.
- Gases: Spread out to fill their whole container (e.g., air, steam). Particles are far apart and move quickly.
- Heating: A solid can melt into a liquid (ice to water). A liquid can heat up and turn into a gas (water to steam/water vapour).
- Cooling: A gas can cool to become a liquid (steam to water) (condensation). A liquid can cool to become a solid (water to ice) (freezing/solidification).

Vocabulary:

Solid: has a defined shape and volume.
Liquid: has an almost-fixed volume, but no set shape.
Gas: has neither a definite volume or definite shape.
Particles: an **extremely tiny piece of matter.**
Properties: what a material is like and how it behaves (soft, stretchy).
Variables: factors that can change.
Fair test: a way of finding out something by changing only one thing at a time.
Method: how an experiment is carried out.
Evaporate: when a liquid becomes a gas.
Water vapour: water in its gas state.
Condensation: a process by which a substance changes from a gas to a liquid.
Compressed: the squashing of particles.
Water Cycle: the **journey water takes as it moves from the land to the sky and back again.**
Precipitation: Water falling back to the earth in the form of rain/snow/hail.
Run off: water running over land back to lakes, rivers and the sea.

Images:



Progress is **knowing more** (knowledge), **remembering more** (links back to), **being able to do more** (skills)

Enquiry Organiser LKS2 **Year 4**
Spring 1B

Geography – Volcanoes [Eruption of Mount Vesuvius in AD79]

Knowledge I know...

- Volcanoes can form on land or at sea.
- The earth is made up for four layer – Crust, mantle, outer core and inner core.
- There are two common types of volcano: composite and shield
- Composite volcanoes have steep sides, they erupt violently but infrequently.
- Shield volcanoes are gentle sloped and have a large base. They erupt less frequently and less violently.
- Supervolcaones are volcanoes which erupt with a huge, destructive force. They are extremely rare.
- Maga is liquid rock below the earth, lava is liquid rock on the earth's surface.
- When volcanoes erupt, they emit dangerous gases, dust and pieces of rock.
- When lava cools it forms igneous rock.
- The crater is the mouth of the volcano
- The main vent is the main passage where magma travels to the earth's surface.
- The magma chamber is the location underneath the main vent where magma is stored.
- Active volcanoes are volcanoes that have erupted recently and are likely to erupt again.
- Dormant volcanoes are currently inactive but might erupt again.
- Extinct volcanoes are unlikely ever to erupt again.
- One in twenty of the earth's population live close to an active volcano.
- Lava flows and dust clouds enrich the soil and make it more fertile
- The heat from volcanoes can be used to heat homes.
- Tourists visit volcanoes because they are exciting.
- People who live near volcanoes take special precautions
- Where Pompeii was and Mount Vesuvius
- How the eruption of Mount Vesuvius destroyed Pompeii

Skills I can...

- Understand geographical similarities and differences through the study of human and physical geography.
- Describe and understand the key aspects of human geography near volcanoes including land use patterns and types of settlement.
- Describe and understand the relevant key aspects of physical geography, including volcanoes.
- Use maps, atlases, globes to locate countries and continents and describe features.
- To ask and respond to geographical questions about their environment and the countries studied including how and why using evidence to support their answers.
- To give their own views about locations and explain why.
- To compare their views with others.
- To use geographical vocabulary to describe local and/or small scale geographical features as well as those on a wider global level.
- To understand that geographers learn about the world by observing and collecting data and information.
- To begin to understand that some knowledge about the world can be revised as we collect new data and information.
- To analyse and communicate geographical information by constructing maps with keys, labelled diagrams, age-appropriate graphs and through writing, using appropriate geographical vocabulary.

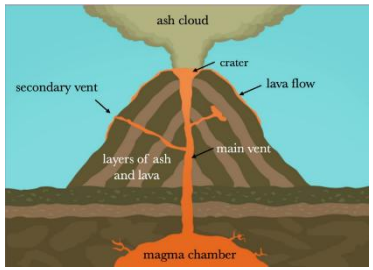
Links back to I remember...[KS1]

- Mountains and tectonic plates
- Countries in Europe
- Different used of land
  The difference between human and physical geography

Vocabulary:

Crust – The think layer of solid rock that makes up the outer layer of the Earth
Mantle – The layer under the crust, the rock is hot liquid.
Outer Core – Hot liquid rock near the centre of Earth
Inner core – very centre of the Earth. Made of hot solid rock.
Erupt - To erupt is to suddenly burst or break open and emit something.
Magma - Magma is molten or semi-molten rock underground
Lava - Lava is molten rock that has broken through Earth's surface.
Pompeii – A city in ancient Roman which was buried in a volcanic eruption in AD 79.
Vesuvius – The volcano which erupted and buried Pompeii.

Images:



Progress is **knowing more** (knowledge), **remembering more** (links back to), **being able to do more** (skills)