YEAR 5 : Spring 1 **What's The Matter (Changes and Properties of State / Matter)**

Events

Daily Move A Mile

TO BE COMPLETED BY CLASS TEACHERS

RE & Values

Celebrations related to key figures

Feb – Love / Kindness
March - Understanding / Friendship

Computing – Robotics and Systems

To identify automatic control systems, understanding that many have sensors and can respond to changes in conditions around them.
To understand that we abstraction to help us understand natural systems.
To review the need for efficient program design.
To understand that a variable is used in computer programming to stand for a value to be input when the program is run.
To understand programs can control computer screen displays.
To use sequence, selection and repetition in programming an onscreen game or activity.
To understand adding comments to programs aids understanding and support future development.
To know automated systems are programmed to respond to inputs from sensors and use this data when controlling output devices.
To know we can review and refine programs to improve them.
To understand the need to save drafts and act on critical review to evaluate and improve their work.
To organise their work confidently in agreed locations, using appropriate file-naming conventions and folder structures.
To understand some of the ways they can use to report concerns about content and contact.
To be proactive in keeping electronic/other data secure, protecting personal information and encouraging eSafety practice in others.

PE

Gym
Select and combine their skills, techniques and ideas.
Apply combined skills accurately and appropriately, consistently showing precision, control and fluency.
Draw on what they know about strategy, tactics and composition when performing and evaluating.
Analyse and comment on skills and techniques and how these are applied in their own and others' work.
Uses more complex gym vocabulary to describe how to improve and refine performances.
Develops strength, technique and flexibility throughout performances.
Links skills with control, technique, co-ordination and fluency.
Understands composition by performing more complex sequences.

Science – Changes of Materials

Observe and explore the properties of materials (e.g. hardness, transparency, magnetism, electrical and thermal conductivity).
Identify some materials that are good thermal insulators and some everyday uses of these.
Recognise that metals are both good thermal and good electrical conductors.
Suggest why particular materials are used for different jobs depending on their properties.
Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.
Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.
Describe the properties of new materials (e.g. aerogel, silly putty, wrinkle-free cotton).
Explain why some materials are good thermal insulators.
Recognise that salt or sugar dissolves in water but sand won't.
Name some materials that will and some that will not dissolve in water.
Recognise that although it is not possible to see a dissolved solid, it remains in the solution.
Describe melting and dissolving and give everyday examples of each.
Describe the difference between melting and dissolving.
Identify and explore factors that affect the rate at which a solid dissolves.
Recognise that an undissolved solid can be separated from a liquid by filtering.
Recognise that a solid can be recovered from a solution by evaporation.
Describe the properties of mixtures which can be separated by filtration.
Describe some methods that are used to separate simple mixtures.
Explain that when solids dissolve they break up so small they can pass through the holes in the filter paper.
Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.
Use knowledge about how a specific mixture can be separated to suggest ways in which other similar mixtures might be separated.
Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.
Recognise that inks and dyes are often mixtures of different colours and these can be separated by chromatography.
Explain why ink or dye moves up the paper in chromatography.
Recognise that dissolving is a reversible change.
Recognise that some changes can be reversed and some cannot.
Recognise that changes of state are reversible.
Demonstrate that dissolving, mixing and changes of state are reversible changes.
Observe and explore a variety of chemical changes (e.g. burning).
Identify whether some changes are reversible or not.
Recognise dissolving as reversible.
Classify some changes as reversible (*e.g. dissolving)* and others as irreversible (*e.g. burning*).
Recognise that irreversible changes often make new and useful materials.
Recognise the hazards of burning materials.
Describe what happens when acid and bicarbonate of soda are mixed.
Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.
Explain that in some cases the new materials made are gases and identify some evidence for the production of gases (e.g. vigorous bubbling).

Evaluation
Watches and describes performances accurately.
Learn from others how they can improve their skills.
Comment on tactics and techniques to help improve performances.
Make suggestions on how to improve their work, commenting on similarities and differences.

Healthy Lifestyle
Can describe the effect exercise has on the body
Can explain the importance of exercise and a healthy lifestyle.
Understands the need to warm up and cool down.

Explore the effects of levers, pulleys and gears.
Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.
Describe how levers, pulleys and gears are used in everyday life (e.g. describe how having gears can make it easier to pedal a bike, how a bottle opener makes it easier to open a bottle lid).
Explain how introducing gears onto bikes has changed cycling.

Geography (Linking to food around the world):
Understand geographical similarities and differences through studying the human and physical geography of a region in the United Kingdom and region in a European country.
Use maps, atlases, globes and digital/computer mapping (Google Earth) to locate countries and describe features studied.

D&T – Food
Prepare food products taking into account the properties of ingredients and sensory characteristics
Select and prepare foods for a particular purpose
Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing.
Weigh and measure using scales
Cut and shape ingredients using appropriate tools and equipment e.g. grating
Join and combine food ingredients appropriately e.g. beating, rubbing in
Decorate appropriately
Show awareness of a healthy diet from an understanding of a balanced diet
Work safely and hygienically

Art – Printing
Create printing blocks by simplifying an initial sketch book idea
Use relief or impressed method
Create prints with three overlays
Work into prints with a range of media e.g. pens, colour pens and paints

Music – Water music
Controlling sounds through singing and playing (performing)
Improvise on own with increasing aural memory.
Creating and developing musical ideas (composing)
Compose and perform melodies using four or five notes.
Use a variety of different musical devices including melody, rhythms and chords.
Record own compositions.
Identify where to place emphasis and accents in a song/piece to create effects (duration).
Responding and reviewing (appraising)
Know how pulse, rhythm and pitch fit together.
Use a range of words to describe music (eg. duration, timbre, pitch, dynamics, tempo, texture, structure, beat, rhythm, metre, silence, riff, ostinato, melody, harmony, chord, flat, sharp, dotted rhythm, staccato, legato, crescendo, diminuendo).
Use these words to identify strengths and weaknesses in own and others' music
Read/ work out the musical stave (notes as Year 4).
Listening and applying knowledge and understanding
Perform songs in a way that reflects the meaning of the words, the venue and sense of occasion so that the audience appreciates it

MFL (French)
Understand the main points from a spoken passage made up of familiar language.
Ask and answer simple questions
Talk about personal interests.
Know how to pronounce some letter strings.
Understands the main point(s) from a short written text.
Match sound to print by reading aloud familiar words and phrases.
Use a book or glossary to find out the meanings of new words.
Write a few short sentences with support using already learnt.
Spell words that are readily understandable.
Respect and understand cultural diversity.
Understand how symbols, objects and pictures can represent a country.