

## Science

Unit Title—Changes in Humans

Scientist Focus—Louis Pasteur, Alexander Flemming

Key Knowledge— Humans change as we develop and grow older, data is raw unorganised facts where as information has a structure and is in context, puberty is the physical changes to our body as we grow older, the gestation period of organisms is different for each species, life expectancy varies and is reliant on a number of variables.

Key Vocabulary— puberty, life cycle, gestation, growth, reproduce, foetus, fertilisation, baby, toddler, child, teenager, adolescent, life expectancy, old age, early/middle/late adulthood

Key Skills Developed—describe the stages of human development, explain how babies grow and develop, describe and explain the main changes that take place during puberty, identify the main changes that take place during old age, report findings from enquiries, identify the relationship between variables.

## History/Geography

Unit Title—The Victorians

Key Knowledge—The Victorians refers to an era in British History when Queen Victoria was Monarch, this era was from 1837-1901, the vast difference between the deprived and the affluent during this time including health and housing, the advancements in technology during this era, common illnesses and the reasons why along with cures at the time, The work of Dr Barnardo in helping street children and John Snow into the spread of cholera.

Key Vocabulary— Queen Victoria, compare, deprived, affluent, era, industrial revolution, terrace, workhouse, slums, cholera, diphtheria, small pox, cobbled, John, Snow, medicine, technological, engineer, Isambard Kingdom Brunel, Orphan, Orphanage, Dr Barnardo, British Empire

Key Skills Developed—Place key events in British history on a timeline, compare modern housing and conditions with those of a Victorian slum, Research common illnesses from the era along with their given 'cure', diagnose illnesses from a description, recognise the Victorian inventions that are still around today, understand the hardship of life for the deprived in Victorian England, Understand the reasons the British Empire spread during this time.

## Art/Design Technology

Unit Title—Printing and weaving

Artist Focus—William Morris

Key Knowledge— Victorians began to print onto textiles to create cushions and curtains using repeated patterns, William Morris was famous for this process using nature as his inspiration, learning the process and idea of weaving on a loom (paper and cardboard) to produce a piece of material.

Key Vocabulary—textiles, weaving, thread, shuttle, weft, warp, yarn, block, printing, texture, pattern, repeated, wool, loom

Key Skills Developed— study of a Victorian artist's work, create a printed design using a block and repeated pattern, use of weaving techniques to weave using a variety of medium including paper and wool on a loom, justify reasons for choices including materials and colour and evaluating work.

Outcome—Piece of material made from cardboard hand loom, paper weaving artwork and repeated pattern block printed work.

## PE

Key Skills—Keeping fit circuit training

Key Vocabulary—station PB pulse  
resting heart rate recovery

Music—Violins Mr Price

French—Catherine Cheater

Term and Focus—Autumn 1

Street Child —Berlie Doherty

Christian Value—Endurance

PSCHE Focus—Mental Health and Well-Being

## Cross-Curricular Maths

Science—presentation of results

History—population/disease graphs

Art— Repeating patterns, tessellation

## Cross-Curricular Writing

RE— Diary of a

History—Biography of a Victorian inventor/scientist

Enhancement Ops

Harvest Festival

Topic themed homework

Oliver twist film

Styal Mill trip— possibly end of year

Teacup doodles session

Bury Music Service assembly

Dog's Trust visit

## English

Key Texts-Street Child

Grammatical knowledge developed-sentence types, word classes adverbs—  
how,where,when

Spelling rules—Twinkl Y5 1A word list. Words with silent letters, homophones,  
prefixes and suffixes

Key genres-diary; narrative; film narrative; eye-witness account; non-  
chronological report

Key vocabulary—character; narrative; dialogue; informal and formal language;  
passive voice; active voice; inverted commas; semi-colon; first, second, third person, comparison

## Maths

Focus—Place Value; Addition, Subtraction, Statistics

Key Knowledge—read write and compare numbers to 1,000,000 and determine the value of digit; count forwards and backwards from any number in steps of 10; use negative numbers in context and count across zero; round to the nearest 10, 100, 1000, 10,000 and 100,000; solve number problems; read roman numerals up to 1000 and in years; add and subtract increasingly large numbers mentally; use formal written methods to add and subtract, use rounding to check answers; solve addition and subtraction multi step problems; solve problems represented using graphs; interpret information shown in tables and timestables.

Key Vocabulary—million, hundred thousand, ten thousand, thousand, hundred, ten, ones, negative, positive, zero, calculate, accuracy, round; accurate; inaccurate; reason; addition; subtraction; place value; axis; table; interval; difference; timestable;

## RE

Unit Title—How and why do Christians read the Bible?

Key Questions—How and why is the Bible used? Do you need a Bible to be a Christian? Why is the Bible holy? Why is the Bible a best seller? Why are there so many versions of the Bible?

Key Knowledge— that the Bible is inspired by the word of God, that there are many translations of the Bible, that the Bible guides Christians and effects their daily lives; to know about holy books from other faiths and their impact

Key Vocabulary—Old testament, New testament gospel, word of God, translation

Key Skills Developed—to see and handle a wide variety of bibles; To talk to an adult about how and why they use/read the bible; Compare the teaching of the bible and Christian behaviour; Making connections between Bible passages, Christian values and beliefs.

## Computing

Unit Title—Flowol

Key Knowledge—that computers follow instructions (algorithms), instructions are written using programmes to test (simulate) real life processes and to control things.

Key Vocabulary— instructions, algorithm, process, Flowol, decision, output, input, control, software, sequences, simulations, deconstruct , subroutine

Key Skills Developed- Follow written instructions to draw a simple flowchart. Insert symbols into a flowchart. Add inputs into a flowchart. Identify conventional symbols, understanding the process of each stage. Create a program to control a simple sequence. Modify symbols in a flowchart for effect. Create flowcharts for multiple inputs and outputs. Use decisions and subroutines. Programme inputs and outputs.

## Science

Unit Title—Living things in their habitats Scientist Focus—Jane Goodall

**Key Knowledge**— The process of reproduction and the life cycles of plants, mammals, amphibians, insects and birds. The children will explore reproduction in different plants, including different methods of pollination and asexual reproduction. They will recap their work in Year 3 by playing a game to name the parts of a flower. The children will have the opportunity to take cuttings from plants, creating clones of the parent plant. They will learn about different types of mammals and their different life cycles, making life cycle wheels to present their learning. Furthermore, the children will find out about Jane Goodall and her work with the now-endangered chimpanzees in Africa. They will explore metamorphosis in insects and amphibians, comparing their life cycles. Finally, the children will explore the life cycles of birds, and will write and star in their own wildlife documentary comparing the life cycles of different living things.

**Key Vocabulary**— Life cycle, sexual, asexual, stamen, anther, ovule, gametes, pollination, reproduction, mammal, amphibian, insect, bird, stage, habitat, metamorphosis

**Key Skills Developed**— Identify parts of a flower, Give one difference between sexual and asexual reproduction, Describe ways plants can be pollinated, Identify plants that reproduce asexually, Describe ways to grow new plants other than from seed, Identify the stages in the process of sexual reproduction, Identify different types of mammals, Give three facts about Jane Goodall, Describe threats faced by chimpanzees, Identify familiar animals that undergo metamorphosis, Order the stages of the life cycles of mammals, birds, insects and amphibians.

## History/Geography

Unit Title—Marvellous Mapping

**Key Knowledge**—Marvellous Maps allows children to further explore the range of maps available to geographers and to develop their understanding of the key features of maps. They will study a range of maps and atlases, including digital maps, and compare their features. They will learn to use the eight compass points to give directions and give grid references to locate places on a map. By comparing maps of the same place, children will learn about the way that places have changed over time.

**Key Vocabulary**— Atlas, map, index, symbol, Ordnance Survey, co-ordinates, longitude, latitude, grid reference, location, similarities, differences, compare, physical features.

**Key Skills Developed**—Use an index to find a place name, Find the correct page in an atlas by using the index, Explain why maps have symbols on them, Recognise some map symbols on an Ordnance Survey map, Give co-ordinates by going across first and then up, Find a location from four-figure coordinates, Find similarities and differences between photographs of the same location, Find differences between maps of the same location, Find a location on a page by using simple co-ordinates, Identify physical features on a map, Use a key to find out what a symbol means, Give four-figure co-ordinates for a location, Find similarities between maps of the same location.

## Art/Design Technology

Unit Title—Sunsets and the sea (mixing colours)

Artist Focus—Hokusai

**Key Knowledge**— Study of a famous artist (Hokusai) and recognise his style of work, Use this famous artist as inspiration for your own work, record observations, thoughts and feelings, use sketch book to develop ideas, mix and experiment with mixing to create tones of colours, apply water colour techniques to produce a final refined piece.

**Key Vocabulary**—landscape, seascape, Hokusai, colour palette, tones, hues, shades, contrasting, complimenting, Japanese, inspiration, style

**Key Skills Developed**— Select and collect visual information from 1<sup>st</sup> hand observation to help develop own ideas, Discuss & investigate artist style & technique, Develop control of water colours and colour mixing/ matching techniques, Discuss sources of inspiration in Hokusai's Japanese landscapes: Mount Fuji, seascapes & tsunamis, waterfalls.

**Outcome**—Develop effective colour mixing techniques, produce own interpretation of a Hokusai, use colour mixing techniques to produce a refined finished product.

## PE

**Key Skills**—Gymnastics (movement)

**Key Vocabulary**— Routine, series, sequence, perform, pike, vaulting, round offs

**Music**—Violins Mr Price

**French**—Catherine Cheater

**Term and Focus**—Autumn 2

**Kensuke's Kingdom** —Michael Morpurgo

**Christian Value**—Peace (Advent)

**PSCHE Focus**—Caring Friendships

**Cross-Curricular Maths**

**Geography**— mapping co ordinates, area of maps, distance, perimeter & direction

**Art**— ratio mixing colours

**Cross-Curricular Writing**

**RE**— Diaries of gospels

**Eye witness accounts of events**

**Geography**— Description of islands

**Enhancement Ops**

**Topic themed homework**

**Parent Open Afternoon**

**Apple store coding trip**

**Dog's Trust session**

**Children in Need organised by Y5**

**Road Safety week**

**World science day**

**Christmas nativity/service**

## English

**Key Texts**—Kensuke's Kingdom

**Grammatical knowledge expanded noun phrases, word classes**—modal verbs, adverbs of possibility, pronouns and relative clauses

**Spelling rules**—Twinkl Y5 1B word list. Words with silent letters, modal verbs and 'ment' suffix

**Key genres**—diary; Captains Log (Diary entries) fictional writing, newspaper report and descriptive writing.

**Key vocabulary**—character; narrative; dialogue; comparison, factual, expanded noun phrase (ENP) synonym, first person, relative clause, past, present, future, pronoun,

## Maths

**Focus**—Multiplication and Division, Area and Perimeter

**Key Knowledge**—mentally multiply and divide numbers drawing on known facts; multiply and divide whole numbers by 10, 100 and 1000; identify multiples and factors including common factors and factor pairs for numbers, recognise and use square and cube numbers and recognise the notation for these; solve problems using multiplication and division; know and use the vocabulary of prime numbers, prime numbers and composite numbers; establish whether a number up to 100 is prime and recall prime numbers up to 19; measure and calculate the perimeter for composite rectilinear shapes using cm and m; calculate and compare the area of rectangles and estimate the area of irregular shapes.

**Key Vocabulary**—multiply factor, multiple, prime, composite, square, cube, factor pair, lowest common factor, number fact, place value chart, problem solve, strategy, investigation, systematically, perimeter, area, linear, rectangular, rectilinear, irregular, regular, cm, mm, m, convert, m<sup>2</sup>, cm<sup>2</sup>

## RE

Unit Title—Christmas (The Gospels of Matthew and Luke)

**Key Questions**—Where in the Bible is the Christmas story? How are the stories in Matthew and Luke similar/different? How do our celebrations reflect the true meaning of Christmas? Where do the ideas of including a donkey and a stable in the story come from?

**Key Knowledge**— that the nativity is found in the gospels of Matthew and Luke, that the true meaning of Christmas is the celebration of the birth of Jesus, the son of God, Messiah, that different denominations of Christianity hold different beliefs views about Mary.

**Key Vocabulary**—Saviour, Messiah, Gospel, Matthew, Luke, nativity, Herod, incarnation and salvation.

**Key Skills Developed**—Identifying the two nativity stories and considering the purpose of the Gospel writers.

## Computing

Unit Title—Scratch (Developing games)

**Key Knowledge**—this unit builds on the knowledge of Year 4 unit (quizzes and games) using scratch to edit and build algorithms for simple games. The children will develop their existing skills in writing, editing and debugging code.

**Key Vocabulary**— e-safety, program, code, control, simulate, simulation, input, output, algorithms, debug, errors, repetition, sequence, decomposing, sprite, background.

**Key Skills Developed**— Design a develop a character game, design an original character or back drop for a game, add features or effects to enhance a game, create an original animated game with a specific goal, program costume changes for a sprite and add point scoring and levels to game code.

## Science

Unit Title—Earth and Space Focus—Galileo, Copernicus, Galileo, Newton

Key Knowledge— The purpose of this unit is to give the children a basic overview of the Earth and its place in our Solar System. Also the consideration of how scientists work by creating theories from what they can see, then testing these theories by experimenting and finding things out to further refine/change/argue their ideas.

Key Vocabulary— Planet, solar system, spherical body, evidence, argument, geocentric, heliocentric theories, rotate, rotation, axis, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, orbit, movement, night and day, relative.

Key Skills Developed— To describe the Sun, Earth and Moon as spherical., name the planets in the solar system independently., distinguish between heliocentric and geocentric ideas of planetary movement., explain that day and night is due to rotation of the Earth, support the idea that different places on Earth experience night and day at different times with evidence., report and present findings from enquiries and explain how the Moon moves relative to the Earth.

## History/Geography

Unit Title—Anglo Saxons

Key Knowledge—The Anglo Saxon period in history was approx. 500 AD, what a typical Anglo Saxon looked like, the reason the Anglo Saxons invaded, where they came from and why they settled. What part of Anglo Saxon history is still around day (language and place names) What Anglo Saxon homes and villages were like, their religious beliefs and using historical artefacts and primary resources to make conclusions, inferences and theories.

Key Vocabulary— BC, AD, Anglo Saxon, Jutes, Angles, Saxons, settle, invade, settlements, features, boundaries, Picts, Celts, Scots, Gaul, Round house, belief, religion, hillfort

Key Skills Developed—Use an atlas to locate places, to know the key features of a typical Anglo Saxon, to identify Anglo Saxon language in settlements, to design an Anglo Saxon roundhouse , understand Anglo Saxon beliefs, compare these to other religions we know and comment on how they have changed over time. Use a range of Anglo Saxon artefacts to make predictions based on evidence, make conclusions about the past and use primary sources to support your ideas.

## Art/Design Technology

Unit Title—DT Food—Seasonal food

Key Knowledge— The importance of buying seasonal food, to learn where, when and how a variety of ingredients are grown, reared, caught and processed. Children sample some spring seasonal food before designing their own balanced seasonal meal. They will learn how to cook with the seasonal ingredients following their own recipes and using a wide range of preparation and cooking techniques. Finally, children will evaluate their product against their design criteria. Children will learn appropriate hygiene rules for handling foods and safe preparation skills.

Key Vocabulary— seasonal, calendar, in season, food miles, nutrition, balanced, protein, carbohydrate, fat, oils, sugar, healthy, unhealthy, allergy, intolerance, hygiene, preparation, reared, caught, processed, natural, vegetarian, vegan, pescatarian, peel, fry, grate, slice, chop, ingredients, hygiene, temperature.

Key Skills Developed— To understand what seasonality means, name some foods which are grown, reared, caught and processed, design simple seasonal recipes, prepare a range of ingredients hygienically., prepare, assemble/cook ingredients, know when different fruit and vegetables are in season in the United Kingdom, explain where and how a variety of ingredients are grown, reared, caught and processed, generate a range of ideas for balanced seasonal recipes, prepare ingredients hygienically and understand how to store and handle foods correctly an use a wide range of preparation and cooking techniques.

## PE

Key Skills—Net and Court Games (SJ)  
Gymnastics (JP)

Key Vocabulary— invasion , attacking, defending, offense, dribble, pass, tactics

Music—Violins Mr Price

French—Catherine Cheater

Term and Focus—Spring 1

Beowulf —Michael Morpurgo

Christian Value—Trust

PSCHE Focus—Families/People who care for me

## Cross-Curricular Maths

History — Timelines, shapes used in architecture

DT — Measuring, weighing when following recipes

## Cross-Curricular Writing

Invitation to Mead Hall opening

kennings—Anglo Saxon poetry

Recipe/Instruction writing in DT

## Enhancement Ops

Topic themed homework

Internet Safety Day (11/02/20)

God and the big bang (10/02/20)

Chinese New Year (24/01/20)

Chinese Visitors in Mon-Wed week4

## English

Key Texts-Beowulf (retelling)—Michael Morpurgo

Grammatical knowledge using ready to write unit, pronouns, verb/adverb phrases, nouns and noun phrases, fronted adverbials,

Spelling rules—Twinkl Y5 2A word list. Creating nouns using suffixes, homophones and near homophones

Key genres-Traditional stories, myths and legends, Merlin film narrative

Key vocabulary— Traditional tale, myth, legend, fable, factual, moral, dilemma, character; narrative; dialogue; comparison, homophone, suffix, expanded noun phrase (ENP) synonym, pronoun, fronted adverbial

## Maths

Focus—Multiplication and Division, Fractions

Key Knowledge—Multiply and divide numbers mentally drawing upon known facts. Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2-digit numbers. Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context. Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign. Compare and order fractions whose denominators are multiples of the same number. Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.

Key Vocabulary—Multiplication, prime factor, short division, inverse, estimate, common multiple, division, remainder, mental method, multiple, factor pair, decimal, factor, common factor, square number, long division, prime number, rounding, divisible, equivalent, numerator, denominator, improper fraction, mixed number, simplest, tenth, hundredth

## RE

Unit Title—Jesus the teacher

Key Questions—Why did Jesus tell this story? What can we learn from this story? How does this story help us to understand Christian beliefs? How does this story impact on the lives of believers?

Key Knowledge— That Jesus' teaching explains Christian beliefs, that Jesus' teaching makes an impact on people's lives and the elements of Jesus teaching that can be directly linked to our school Christian values and British values.

Key Vocabulary—Parable, Kingdom of God and Imagery

Key Skills Developed—Retell in detail some of the Bible stories covered in this unit, ask important and relevant questions about Jesus teaching, describe and show understanding of the Christian beliefs revealed through these stories, explain how the parables in this unit answer questions about values and commitments and to identify and explain why they think one of Jesus parables has a particularly strong message for the world today

## Computing

Unit Title—Internet Research and Webpage design

Key Knowledge—this unit combines the further development of the children's skills for searching the internet with the introduction of creating and editing a webpage using Google Sites. Children will learn how to use some of the advanced features of Google such as fill in the blanks; and how to create a webpage with a layout of their choosing.

Key Vocabulary— e-safety, search engine, results, ranked, digital content, software, programs, systems, collecting, analysing, evaluating, presenting, bias, hyperlink.

Key Skills Developed— Comment on the features and layout of a webpage, create a new webpage with a chosen layout and format text in the webpage, independently search for images that can be used in documents, insert and format an image in a webpage, create a hyperlink, learn how to share a webpage so it can be viewed by anyone and used the advanced features of Google's web search.

## Science

Unit Title—Forces Focus—Isaac newton, Galileo

Key Knowledge— This ‘Forces’ unit covers forces such as gravity, friction, water resistance and air resistance. Children will also learn about the use of mechanisms such as levers, gears and pulleys. The children will identify forces and find out about Isaac Newton and his discoveries. The children will look for patterns and links between the mass and weight of objects, using newton meters to measure the force of gravity. They will also work collaboratively to investigate air and water resistance, participating in challenges to design the best parachute and boat. They will have the opportunity to work in a hands-on way to explore friction, developing their own brake pad for a tricycle or scooter. During some of the practical science work, the children will discuss how variables other than the one being tested can be kept the same to help make a test fair. Finally, they will find out about different mechanisms, including levers, gears and pulleys, and will design their own marvellous machine

Key Vocabulary— Force, push, pull, air resistance, gravity, buoyancy, upthrust, friction, water resistance, drag, balanced, equal, variable, investigate, material, rough, smooth, grip, lever, gear, pulley, pattern, fair test, Newton (N)

Key Skills Developed—Identify and explain the different forces acting on objects; explain Newton’s role in discovering gravity; accurately measure an object’s weight and mass; explain how to increase the effects of air resistance; explain Galileo’s ‘Tower of Pisa’ experiment into gravity and air resistance; identify streamlined shapes; explain how friction is used in brake pads; investigate the effects of friction; explain how different mechanisms work.

## History/Geography

Unit Title—Exploring France

Key Knowledge—In this unit, children have the opportunity to explore France. Firstly, they will learn about the countries of Europe. They will then look in more detail at some of the contrasting areas of France, finding out about the landscape, climate and locations in each area. Children will bring together their learning about one area of France and create information booklets to share what they have found out. In the final lesson of the unit, children will find out more about Toulouse and our twin school.

Key Vocabulary— Europe, France, continent, region, landscape, climate, contrasting, traditions, land use, trade links, physical/human geography

Key Skills Developed—Use an atlas to find names of cities; identify similarities and differences between a place in France and where I live; identify similarities and differences between the climate of a places in France and where I live; explain the difference between human geography and physical geography; identify similarities and differences between the human geography of a place in France and where I live; find information about flights, accommodation and tourist destinations using the Internet; plan a trip to and research the are of Toulouse and our twin school.

## Art/Design Technology

Unit Title—DT —Marbulous Structures

Key Knowledge— This Marbulous Structures unit gives children opportunities to develop their understanding of more complex free standing structures and how they can be strengthened and reinforced. Children will gain knowledge and understanding about how to join and shape materials. Children will then apply these skills, using an iterative design process, to create their marble runs. Finally, children will test and evaluate their marble runs against design criteria.

Key Vocabulary— structure, free standing, secure, strengthened, reinforce, 3D, 2D, material, design, refine, evaluate, perimeter, area, aesthetics, joining, create, precision.

Key Skills Developed— Explore existing free standing structures and explain what gives them strength, reinforcement and stability, select tools and equipment to join card together, design and build a simple marble run, improve their work, apply their understanding of free standing structures to help build them, use a wider range of tools and equipment to perform practical tasks accurately, use appropriate cutting and shaping techniques that include cuts within the perimeter of the material such as slots, select appropriate joining techniques, design and build a marble run which incorporates some varied bends, consider the aesthetics when building a marble run, consider the views of others to improve their work.

## PE

Key Skills—Hitting and Striking games  
(SJ) Basketball (JP)

Key Vocabulary— hand eye co ordination, competing, fair play, dribble

Music—Violins Mr Price

French—Catherine Cheater

Term and Focus—Spring 2

Clockwork—Philip Pullman

Christian Value—Forgiveness

PSCHE Focus—Respectful relationships

Cross-Curricular Maths

Geography — Planning a journey to France

DT — STEM Amazing Structures constructing stable models

Cross-Curricular Writing

Balanced argument

Letter writing

Setting description

Enhancement Ops

Topic themed homework

World Book Day (05/03/20)

Y5 Class Assembly (26/03/20)

Diversity week w/c (30/03/20)

## English

Key Texts– Clockwork or al wound up—Philip Pullman

Grammatical knowledge using and recognising relative pronouns and relative clauses. Using modal verbs.

Spelling rules—Twinkl Y5 2B word list. Using or sound spelt or, using or sound spelt au and converting nouns and adjectives into verbs using suffixes.

Key genres– Fantasy narrative, Non fiction texts (Forces)

Key vocabulary— Fantasy, prediction, apprentice, suspense, plot, balanced, biased, viewpoint, argument, debate, disease, ailments, justification, suffix, relative pronoun, relative clause, modal verbs.

## Maths

Focus—Fractions, decimals and percentages

Key Knowledge—Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements  $>1$  as a mixed number, add and subtract fractions with the same denominator and denominators that are multiples of the same number, multiply proper fractions and mixed numbers by whole numbers supported by materials and diagrams, read and write decimal numbers as fractions, solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates, read write, order and compare numbers up to 3 d.p. Recognise and use thousandths, round decimals with 2 d.p., solve problems with number up to 3d.p., recognise the % symbol and use percentages as a fraction with a denominator 100 and as a decimal and solve problems which require knowing percentage and decimal equivalents.

Key Vocabulary— Fraction, improper fraction, top heavy fraction, mixed number, numerator, denominator, simplest, simplify, tenth, hundredth, thousandth, place value, decimal point, round, place holder, percentage, % equivalent scale, compare

## RE

Unit Title—Why do Christians believe the Easter is a celebration of Victory?

Key Questions—Why do Christians believe that Easter is a celebration of victory? In what ways is Christ’s death and resurrection a victory? What is Jesus victorious over and why? How does his victory affect us today? What did Jesus do to save human beings?

Key Knowledge— That Christians believe Christ’s resurrection is a victory over death and talk about it with understanding, that Christians believe that the death and resurrection of Jesus restored the relationship between God and people and that the Easter Story is the very heart of Christian belief.

Key Vocabulary—Victory, triumph, resurrection, sacrifice, salvation and redeemer.

Key Skills Developed—Retell the Easter Story in detail and talk with understanding about the Christian belief that Jesus died and rose victoriously and what that means to Christians, talk about and describe feelings in relation to situations of victory; make links between people’s values and commitments and their attitudes and behaviour with regard to situations of victory., ask important questions about Christian belief; reflect thoughtfully on the answers to these big questions and describe the impact of belief in the Easter story on a person’s life.

## Computing

Unit Title— 3D modelling SketchUp

Key Knowledge—In this unit the children extend their drawing skills to create 3D models based on using the software SketchUp Make. This is a free application available for download on Windows or OSX (Mac). Children will learn how to create simple and complex 3D models. They will be able to add detail and manipulate 3D models using a variety of tools.

Key Vocabulary– software, model, line, shape 2D, 3D, warehouse, manipulate, import, edge, inference point, dimensions, tool bar, push, pull, pan, orbit, erase, zoom, fill, concepts, features, scale.

Key Skills Developed– Draw 2D shapes or lines, Draw simple 3D models, manipulate 2D shapes into 3D shapes, Import 3D models from the 3D warehouse, Use a range of Sketchup tools including pan/zoom/erase/push/pull/orbit/fill manipulate 3D models independently, use inference points to draw lines and shapes,

## Science

Unit Title—Changes in Materials —Key Scientists: Ruth Benerito – wrinkle free cotton; Spencer Silver – glue for sticky notes; Leo Baekeland – bakelite plastic; Harry Brearly – stainless steel; John McAdam - tarmac

Key Knowledge– The children will sort and classify objects according to their properties. They will explore the properties of materials to find the most suitable material for different purposes. The children will work scientifically and collaboratively to investigate the best thermal insulator to make a lunch box, making predictions and forming conclusions. Furthermore, they will have chance to find the best electrical conductor, in the context of making floodlights brighter. They will have the opportunity to work in a hands-on way to explore dissolving, identifying the different variables in their own investigations. They will find out about different ways to separate mixtures of materials, using filtering, sieving and evaporating. Finally, they will learn about irreversible changes, and participate in two exciting investigations to create new materials, including casein plastic and carbon dioxide.

Key Vocabulary— Material, property, classify, purpose, thermal insulator, thermal conductor, transparent, translucent, brittle, malleable, variable, fair test, separating, mixture, filter, reversible, irreversible, solid, liquid, gas, particles, electrical conductor, electrical insulator.

Key Skills Developed—To compare materials according to their properties. To investigate thermal insulators and thermal conductors. Investigate which electrical conductors make a bulb shine the brightest. Investigate materials which will dissolve. Use different processes to separate mixtures of materials. Identify and explain irreversible chemical changes.

## History/Geography

Unit Title—Mountain Ranges

Key Knowledge—In this Unit, children find out about the major mountains of the world and the UK. They find out the different ways in which mountains have been formed, and how different features of mountain ranges have been shaped over time. Children will have the opportunity to consider what the weather is like in a mountainous environment and to evaluate the impact that tourism has on a mountainous region.

Key Vocabulary— legend, valley, summit, mountain range, tectonic plate, lava flow, tourism, contours, negative impact, mountain climate, peak, plateau, erosion.

Key Skills Developed—I can use a map to find countries and their key features. I can locate key mountain ranges of the world. I can locate key areas of higher ground in the UK. I can use a map to find and describe key features of the mountains. I can find the key features of a mountain range. I can explain how different types of mountains are formed. I can describe a mountainous climate. I can describe how tourism affects mountainous regions.

## Art/Design Technology

Unit Title—Art —Bridget Riley (Repeated patterns)

Key Knowledge– Bridget Riley was inspired by the black and white tiles in Italy. Furthermore when she saw water run over chequered tiles which distorted them and made them seem to ‘move’. Op” is short for optical. Optical means having to do with the eye. Op Art began in the 1960’s Optical Art is a mathematically-themed form of Abstract art. Abstract meaning it doesn’t have to look like something. The point of optical art is to confuse the eye.

Key Vocabulary— Symmetry, asymmetry, balance, repetition, movement, radial, Op Art, optical illusion, concentric circle, vertical lines, horizontal lines

Key Skills Developed– To explore the use of geometric shapes in art. To develop skills in pattern, creating alternating patterns to contrast. Work with positive and negative shapes. To gain awareness and understanding of optical art and repeated patterns. To produce an A3 piece of optical art and a 3D optical art cube.

## PE

Key Skills—Athletics (SJ) Invasion Games (JP)

Key Vocabulary— attack/attacker defend/defender, mark, dodge, dribbling

Music—Violins Mr Price

French—Catherine Cheater

Term and Focus—Summer 1

Rooftoppers—Katherine Rundell

Christian Value—Compassion

PSCHE Focus—Living in the wider world

Cross-Curricular Maths

Geography — Heights, converting units, comparison graphs

Art — Tessellation, translation, rotation, symmetry, rotational symmetry, shapes in nature

Cross-Curricular Writing

Balanced argument

Letter writing

Setting description

Enhancement Ops

Topic themed homework

Earth Day

Dt. George’s Day

VE day

Road Safety Session

Sports Day (planned)

Quarry Bank Mill trip

## English

Key Texts– Rooftoppers—Katherine Rundell

Grammatical knowledge using and recognising adverbs and using and recognising adverbs to indicate degrees of possibility.

Spelling rules—Twinkl Y5 3A word list. Words containing the letter string ‘ough’. Adverbials of time and adverbials of place.

Key genres– Historical narrative, Non fiction texts (Mountains)

Key vocabulary— Potential, orphan, corruption, breaking rules, Victorian/Edwardian, human rights, justice system, mood, debate, suspense, characterization, character development, dialogue.

## Maths

Focus—Decimals, Geometry: Property of shape

Key Knowledge—Recognise and write decimal equivalents of any number of tenths and hundredths. Find the effect of dividing a one digit number by 10, 100, identifying the value of the digits in the answer as ones, tenths or hundredths. Solve simple money and measure problems including fractions and decimals to two decimal places. Convert between different units of measure (e.g. Kilometre to metre). Identify 3D shapes, including cubes and other cuboids, from 2D representations. Use the properties of rectangles to deduce related facts and find missing lengths and angles. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Key Vocabulary— Place value, PVC, decimal point, d.p., tenths, hundredths, column, place holder, digit, integer, value, Gattegno chart, generalise, sequence, difference, reason, explain, rule, calculate, bar model, mental, written, complements, part whole model, measure, convert, m, cm, mm, km, kg, g, 2D, 3D, cube, cuboid, area, surface, angle, vertex, edge, face, polygon, non polygon, regular, irregular.

## RE

Unit Title—Exploring the lives of significant women in the Old Testament

Key Questions—What can I learn from this story? Why is this a significant moment? Why is this woman important? In which values and beliefs are the actions of the women rooted? Did she do the right thing? Where does this story fit into God’s big story?

Key Knowledge— To know the stories of significant women found in the Old Testament. That worship can be expressed through prayer, dance, compassion and self sacrifice.

Key Vocabulary—Ruth, Ester, Purim, Old Testament, Bible, values and beliefs, significant moments, empathise, reflect, compassion, self sacrifice, salvation.

Key Skills Developed—Respond sensitively to questions about my own experiences and those of others. Make a link between my own values and the values and commitments of the women in the Bible. Ask good questions and suggest answers about belonging, commitment, truth and values. Talk about the impact the lives of the women whose stories we have explored had on God’s great salvation plan. Describe what inspires me about the lives of the women in the Bible.

## Computing

Unit Title— Radio Station

Key Knowledge—This unit allows children to use software and digital devices for recording sound. Based around the theme of a Radio Station, it is designed to encourage a creative approach that includes interviewing, making adverts and using jingles. Other software is incorporated where children write scripts and design additional advertising for their Radio Station. Opportunities are included for children to present, listen, review and evaluate their own/other content.

Key Vocabulary– recording software, sound recording, Audacity, content, reference, jingle, digital device, digital presentation, podcast, design, advert, audience, evaluate, analyse, microphone, headphones, mp3 sound file, wav file

Key Skills Developed– Use software to create own sounds by recording, editing and playing. Combine audio effects to create an original radio jingle. Plan and research digital content for a radio podcast. Use software to create and present digital content for a radio podcast. Design and record a persuasive radio advert for a product or service.

## Science

Unit Title—Scientists and Inventors

**Key Knowledge**— They will learn about the life and work of David Attenborough, and create a documentary about a living thing of their choice. The children will learn about how CSI technicians use scientific techniques to analyse evidence and prove or disprove theories. They will use chromatography to analyse the ink used to write a note, and use this evidence to support their own theories. Children will find out about Margaret Hamilton and her invention of the software&computer code that was used to take Apollo 11 to the Moon. They will create an interactive flap book about her life and her achievements. Furthermore, they will learn about Leonardo da Vinci's ideas about the proportions of the human body seen in his work The Vitruvian Man. The children will measure their height, arm span and other measurements to see whether da Vinci's theories about proportion were accurate. The children will explore the Eva Crane's research into bees and the children will find out about the scientific theories surrounding the construction of Stonehenge.

**Key Vocabulary**— Documentary, CSI, DNA, techniques, prove, disprove, theory, chromatography, computer code, software, Vitruvian man, arm span, proportion, evidence, support, refute.

**Key Skills Developed**—Describe the life and work of David Attenborough. Describe how evidence is used to solve crimes and use chromatography to separate mixtures. To describe Margaret Hamilton's life and work. Carry out an enquiry to answer a question. Use my results to make new predictions. Describe Eva Crane and her work with bees. Identify evidence that supports or refutes scientific theories about Stonehenge.

## History/Geography

Unit Title—Enough for everyone

**Key Knowledge**—In Enough for Everyone, children will think about the needs of a settlement, and the needs of the planet as a whole. They will find out where resource such as power and food come from, and look at ways in which natural resources can be conserved. After discussing the idea of a carbon footprint, children will have the chance to consider how their actions impact on others around the world, and to think about the changes that they could make to try to ensure that natural resources are shared so there is enough for everyone.

**Key Vocabulary**— planet, resources, natural, conservation, finite, carbon footprint, impact, energy, eco, settlement, electricity distribution, renewable, origin, food miles, food wastage, global shortage, import, export, CO2, human geography, economics, politics

**Key Skills Developed**—Explain what settlers need, To explain how electricity is generated and distributed, to explain where electricity is generated in the UK, To explain renewable sources of electricity, To explain where our food comes from, To use digital maps to calculate food miles, To understand the importance of conserving food, water and energy supplies, To understand that access to natural resources varies in different countries.

## Art/Design Technology

Unit Title—Art—Wildlife birds

**Key Knowledge**— This wildlife themed unit of art work will teach the children how to pencil, white pencil, print, make clay tiles, and model to create quality art work that shows a progression in skills. The children will explore the work of the sculptor Brancusi and the paper designer Richard Sweeney.

**Key Vocabulary**— sketch, detail, observe, sculpt, sculpture, exhibition, technique, form, roller, print, block, architect, designer, papier mache, texture.

**Key Skills Developed**— To draw details accurately, To use a sketchbook to produce observational drawings, print patterns based on their own observations, soften clay/make textures in clay and produce a 3D model, Talk about the models of artists Brancusi, apply and use a papier mache technique.

## PE

**Key Skills**—End of year games/skill development (SJ) Rounders (JP)

**Key Vocabulary**— tactic, plan, control, accuracy, possession, skillset

**Music**—Violins Mr Price

**French**—Catherine Cheater

**Term and Focus**—Summer 2

The last wild—Piers Torday

Christian Value—Hope

**PSCHE Focus**—Being safe, your body, puberty talk

**Cross-Curricular Maths**

**Geography** — Food miles, calculating distances and journeys.

**Science** — DaVinci's measurements of the Vitruvian man

**Cross-Curricular Writing**

Persuasive writing

Advertisements

Biographies/Obituaries

**Enhancement Ops**

Topic themed homework

Environment day

Musical Evening

Summer Fair

## English

**Key Texts**— The Last Wild—Piers Torday

**Grammatical knowledge** using brackets, commas and dashes to indicate parenthesis. Recognising, using and creating expanded noun phrases.

**Spelling rules**—Twinkl Y5 3B word list. Unstressed vowels, Adding verb prefixes. Converting nouns/verbs into adjectives.

**Key genres**— Adventure narrative, Biographies/Non chronological reports (Famous Scientists & Inventors)

**Key vocabulary**— Adventure, equality, ethical, narrative, biography, parenthesis, comma, brackets, dashes, expanded noun phrases, concise, unstressed vowel, prefix

## Maths

**Focus**—Geometry: Property of shape, Geometry: Position & Direction, Measurement: Converting Units, Measurement: Volume

**Key Knowledge**—Know angles are measured in degrees, estimate and compare acute, reflex and obtuse angles. Draw given angles and measure them in degrees. Identify angles at a point and one whole turn, angles at a point on a straight line and half a turn and other multiples of 90. Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language and know that the shape has not changed. Convert between different units of metric measure. Understand and use approx. equivalents between metric and common imperial units. Solve problems involving converting between units of time. Estimate volume and capacity. Use all 4 operations to solve problems including measure.

**Key Vocabulary**— angle, degrees, protractor, straight line, point, acute, obtuse, right angle, reflex, quarter, half, turn, measure, estimate, polygon, 3D, line, edge, closed, regular, irregular, equal, line of symmetry, reflection, translation, x axis, y axis, graph, co ordinate, quadrant, negative, convert, metric, imperial, kg, g, mm, m, cm, pound, inch, foot, timetable, volume, capacity, cm<sup>2</sup>, m<sup>3</sup>, ml, l

## RE

Unit Title—Exploring loss, death and Christian hope

**Key Questions**—What is death? What does it mean when something or someone dies? Is death an ending or a beginning? What happens when we die? Where do we go? Where is heaven? What is heaven like?

**Key Knowledge**— To know we (Christians) believe that through the death and resurrection of Jesus we have the promise of living forever with God (eternal life). To know we (Christians) believe that when you die your spirit goes to be with God in heaven.

**Key Vocabulary**—Life, death, heaven, eternal life, funeral and hope

**Key Skills Developed**—To make links between what the Bible says about death and heaven and Christian beliefs. To identify Christian beliefs about God and heaven found in prayers and worship songs. To give their own opinion about what happens when you die. To talk about what they think heaven is and what heaven will be like. To show understanding of the similarities and differences between religions on the subject of death and heaven. To use appropriate religious vocabulary to show understanding of Christian beliefs about heaven. To talk about what the Bible says and what Christians believe heaven will be like.

## Computing

Unit Title Internet Safety

**Key Knowledge**—Children will learn about email safety with a focus on preventing and dealing with spam. They will consider the importance of strong passwords and learn how to create them. Children will build on their knowledge of plagiarism and fair use of people's work by learning how to write citations and references for websites they may use. They will scrutinise photographs that they see online & learn how easy it is to manipulate and present them as reality.

**Key Vocabulary**— spam, junk mail, folder, cite, source, character, strong, alphanumeric, special character, hack, manipulate, plagiarism, reality, scrutinise, respectful, acceptable, unacceptable, consequences

**Key Skills Developed**— To identify spam and what to do with it, to write citations for the websites I use for research, To create strong passwords, To recognise when, how and why online photographs may have been edited, To apply online safety knowledge to real life scenarios.