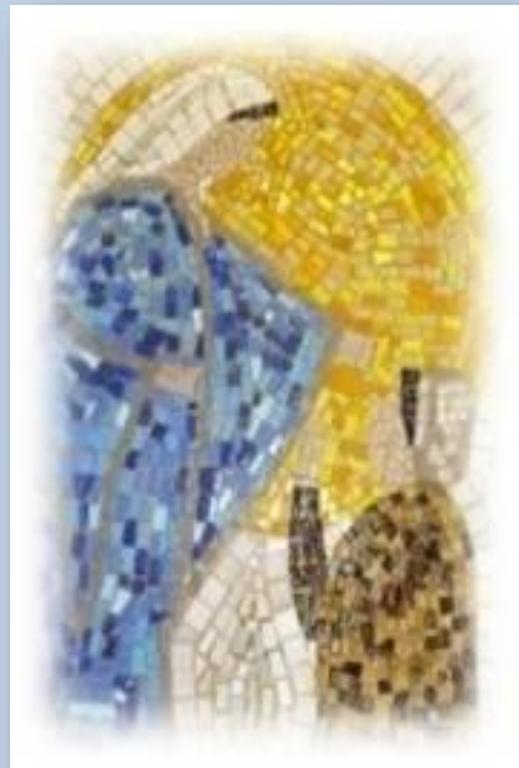


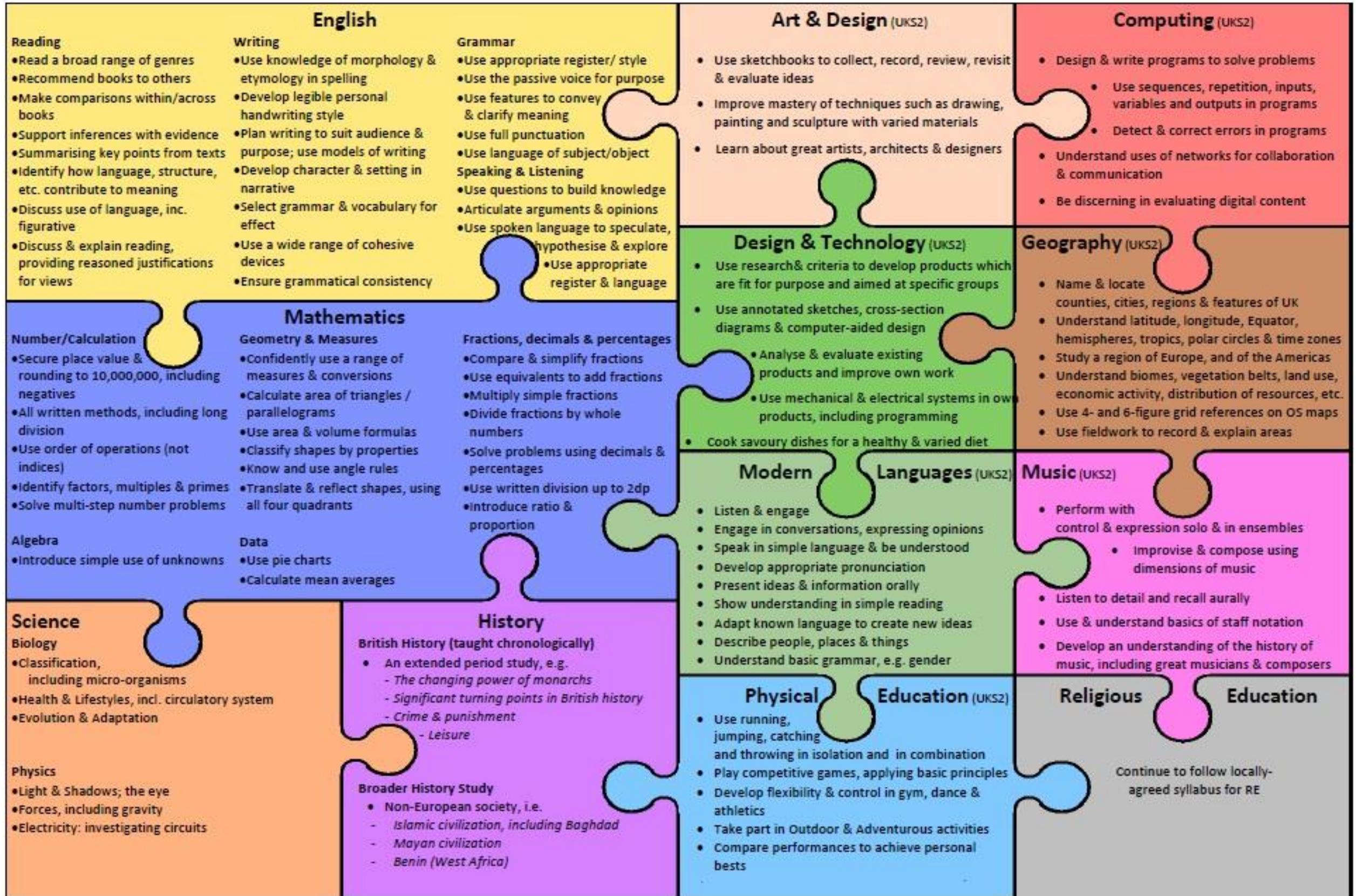
# St. Bernadette's Catholic Primary School

Growing Together in Faith, Love and Learning

## Year 6 Curriculum



## Curriculum Overview for Year 6



## Mathematics

### Place Value

1. Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit. Round any whole number to a required degree of accuracy.
2. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve all of the above.

### Addition and Subtraction, Multiply and Divide

3. Multiply and divide numbers up to 4 digits by a 2-digit whole number using the formal written methods and interpret remainders as whole number remainders, fractions, or by rounding.
4. Identify common factors, common multiples and prime numbers.
5. Use their knowledge of the order of operations to carry out calculations involving the four operations.
6. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

### Fractions

7. Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
8. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
9. Multiply simple proper fractions and simplify the answer (e.g.  $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ). Divide proper fractions by whole numbers (e.g.  $\frac{1}{3} \div 2 = \frac{1}{6}$ ).
10. Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places.
11. Multiply one-digit numbers with up to two decimal places by whole numbers. Use written division methods in cases where the answer has up to two decimal places.
12. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

## Ratio, Proportion & Percentage

13. Solve problems involving the calculation of percentages (e.g. of measures) such as 15% of 360 and the use of percentages for comparison.
14. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

## Algebra

15. Express missing number problems algebraically. Use simple formulae expressed in words.
16. Generate and describe linear number sequences.
17. Find pairs of numbers that satisfy number sentences involving two unknowns. Enumerate all possibilities of combinations of two variables.

## Measures

18. Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. Convert between miles and km.
19. Use, read, write & convert between standard units of measure, converting length, mass, volume & time from smaller to larger units, and vice versa, using decimal notation to up to 3 dec places.
20. Recognise that shapes with the same areas can have different perimeters and vice versa.
21. Calculate the area of parallelograms and triangles. Recognise when it is possible to use formulae for area and volume of shapes.
22. Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ), and extending to other units.

## Geometry

23. Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets.
24. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.
25. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
26. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

## Position & direction

27. Describe positions on the full coordinate grid (all four quadrants).
28. Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

## Statistics

29. Interpret and construct pie charts and line graphs and use these to solve problems.
30. Calculate and interpret the mean as an average.

## Science

### Working Scientifically

1. Interpret data from tables, bar & line graphs etc...to draw conclusions consistent with the evidence *e.g. Use graphs & charts to describe the effects of diet on health.*

2. Evaluate practical investigation methods and suggest improvements. eg *Describe some strengths and weaknesses of the plan/method. Make a comment on reliability.*

3. Use clear sentences and correct scientific words and symbols to describe ideas and observations *eg Describe heat transfer using correct wording*

4. Make sets of observations or measurements and say what the range and intervals are eg *record a set of results and state the highest, lowest measurement*

1. Interpret data from tables, bar & line graphs etc...to draw conclusions consistent with the evidence *e.g. Use graphs & charts to describe the effects of diet on health.*

### Living Things and Habitats

5. Describe how living things are classified into broad groups according to common characteristics, based on similarities & diffs, inc micro-organisms, plants & animals

6. Give reasons for classifying plants and animals based on specific characteristics

### Animals & humans

7. Identify and name the main parts of the human circulatory system.

8. Describe the functions of the heart, blood vessels and blood.

9. Recognise the impact of diet, exercise, drugs and life style on the way their bodies function

10. Describe the ways in which nutrients and water are transported within animals, including humans

## Evolution and Inheritance

11. Understand that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago

12. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents

13. Identify how animals and plants are adapted to suit their environment i different ways and that adaptation may lead to evolution

## Forces

14. Recognise that light appears to travel in straight lines.

15. Use the idea that light appears to travel in straight lines to explain that objects are seen because they give out or reflect light into the eye

16. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes

17. Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that cast them

## Animals and Humans

18. Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of the cells used in the circuit

19. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and on/off position of switches

20. Use recognized symbols when representing a simple circuit in a diagram

## Speaking and Listening

Listen and respond appropriately to adults and peers

Ask relevant questions to extend their understanding and knowledge

Use relevant strategies to build their vocabulary

Articulate and justify answers, arguments and opinions

Give well-structured descriptions and explanations

Maintain attention and participate actively in collaborative conversations

Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas

Speak audibly and fluently with an increasing command of Standard English

Participate in discussions, presentations, performances and debates

Gain, maintain and monitor the interest of the listener(s)

Consider and evaluate different viewpoints, attending to and building on the contributions of others

Select and use appropriate registers for effective communication.

# Writing

## Create and plan writing by ...

Thinking about the audience and purpose.

Making notes and then develop my initial ideas.

Using ideas from how other authors have developed their characters and settings.

## Create a first draft by ...

Selecting grammar and vocabulary to enhance my work.

Précising a passage to create a sentence with the same meaning.

Using details across my texts to help link paragraphs together into a full text.

Using headings and bullet points to structure my writing.

## Evaluate and edit own writing by...

Further describing and develop settings, characters and the narrative atmosphere.

Comparing my texts with the work of others' and exploring whether my writing is the high quality I expect.

Proposing changes to vocabulary, sentence structure, grammar and punctuation.

Ensuring the consistent and correct use of tense throughout a piece of writing.

Ensuring correct subject-verb agreement when using singular & plural, distinguish between the language of speech & writing.

Proof-reading for spelling and punctuation errors.

## Grammar

Use hyphens to ensure the reader understands exactly what I mean. For example: man eating shark is not the same as man-eating shark.

Use formal speech in my writing (subjunctive form) e.g. If I were ...

Use passive verbs to affect the focus of information in a sentence - for example, I can change 'Sam repaired the car' into 'The car was repaired by Sam'.

Recognise synonyms and antonyms.

Link ideas across work by using a range of devices and know how to use ellipsis.

Structure work with appropriate headings, sub-headings, columns, bullets, or tables.

Mark out separate clauses in sentence by using a semi-colon or colon.

Use a colon to indicate the beginning of a list.

Use bullet points accurately when constructing a list.

## Spelling

Confidently use prefixes and suffixes in my spelling

Spell some words with silent letters

Recognise homophones and other words which are often confused

Confidently use a dictionary and a thesaurus.

Confidently use prefixes and suffixes in my spelling

## Handwriting

Join my handwriting with all letters the same height and the correct distance apart.

# Reading

## Retrieve

Secure use of skimming, scanning and text-marking/highlighting to retrieve information.

Confidently retrieve information from the text and make notes using quotation and reference to the text.

Identify key points and main ideas when reading an appropriate text.

Produce written **summaries** of the main points from a passage or a text.

## Infer

Continue to infer meaning using evidence from the text and wider experiences.

Refer to the text to support **inference and deduction** (Point + Evidence + Explanation)

Refer to the text to support **predictions** and opinions (Point + Evidence + Explanation)

Compare and contrast implicit and explicit points of view. (Implicit is indirectly stated or implied. Explicit is directly stated and spelled out.)

Compare and contrast messages, moods, feelings and attitudes using inference and deduction.

## Perform

Prepare and perform poems and plays, using intonation, tone, volume and action

## Choice/Authorial Intent

Identify unknown **words** and seek out their meaning using context clues, discussion and dictionaries.

Describe, with examples, how the author has chosen **a range of vocabulary** to convey different messages, moods, feelings and attitudes.

Identify and evaluate the authors use of expressive, figurative and descriptive **word choice** to create effect.

Comment on the genre-specific **language features** the author has used to convey information in a non-fiction text.

## Decode

Use existing knowledge of a range of different words to help with reading aloud and understanding the meaning of new words.

Is aware that some words sound different to how they are spelt.

## Review and Discuss

Participate in discussion about books they have read and have heard read.

Discuss understanding of what they have read, including through formal presentations and debates,

Provide reasoned justification for views.

# History

## Chronological understanding

1. Uses timelines to place events, periods and cultural movements from around the world.
2. Uses timelines to demonstrate changes and developments in culture, technology & religion.
3. Uses these key periods as reference points: BC, AD
4. Describes main changes in a period in history using words such as: social, religious, political, technological and cultural.
5. Names date of any significant event studied from past and place it correctly on a timeline.

## Knowledge and understanding of past events, people and changes in the past

6. Chooses reliable sources of factual evidence to describe: houses and settlements; culture and leisure activities; clothes, way of life and actions of people; buildings and their uses; people's beliefs, religion and attitudes; things of importance to people; differences between lives of rich and poor. Identifies how any of these may have changed during a time period.
7. Gives own reasons why changes may have occurred, backed up with evidence.
8. Shows identified changes on a timeline.
9. Describes similarities and differences between some people, events and objects studied.
10. Describes how some changes affect life today and make links between some features of past societies.

## Historical interpretation

11. Understands that the past has been represented in different ways.
12. Suggests accurate and plausible reasons for how/why aspects of the past have been represented and interpreted in different ways.
13. Knows and understands that some evidence is propaganda, opinion or misinformation and that this affects interpretations of history.

## Historical enquiry

14. Identifies and uses different sources of information and artefacts.
15. Evaluates the usefulness and accurateness of different sources of evidence.
16. Selects the most appropriate source of evidence for particular tasks.
17. Realises that there is often not a single answer to historical questions.

## Organisation and communication

18. Presents structured and organised findings about the past using speaking, writing, maths, ICT, drama and drawing skills.
19. Forms own opinions about historical events from a range of sources.

# Art

## Drawing

1. Observe and use a variety of techniques to show the effect of light on objects and people e.g. use rubbers to lighten, use pencil to show tone, use tones of the same colour
2. Use a variety of techniques to interpret the texture of a surface e.g. mark making, different textured paint.

3. Produce increasingly accurate drawings of people.

4. Produce increasingly detailed preparatory sketches for painting and other work.

5. Introduce the concept of perspective.

## Colour

6. Explore the use of texture in colour (link to texture unit) with sawdust, glue, shavings, sand and on different surfaces.

6. Explore the texture of paint - very wet and thin or thick and heavy - add PVA to the paint.

7. Consider artists use of colour and application of it (Pollock, Monet, Chagall)

## Texture

8. Develops experience in embellishing, pooling together experiences in texture to complete a piece – applique, drawing, sticking, cutting, paint, weaving, layering et

9. Work collaboratively on a larger scale.

## Form

10. Makes imaginative use of the knowledge they have acquired of tools, techniques and materials to express own ideas and feelings

## Printing

11. Recreate a scene remembered, observed or imagined, through collage printing

12. Explore printing techniques using by various artists.

## Pattern

13. Create pattern for purposes e.g. wallpaper, clothes, puppets, boxes, folders, book covers etc.

14. Look at various artists creation of pattern and discuss effect, ie. Morris, Sol Lewitt, Matisse (pattern within pattern), Bridget Riley, Miro)

15. Discuss own and artists work, drawing comparisons and reflecting on their own creations.

# DT

## Developing, planning and communicating ideas.

Communicate their ideas through detailed labelled drawings

Develop a design specification

Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways

Plan the order of their work, choosing appropriate materials, tools and techniques

## Working with tools, equipment, materials and components to make quality products (inc-food)

Select appropriate tools, materials, components and techniques

Assemble components to make working models

Use tools safely and accurately

Construct products using permanent joining techniques

Make modifications as they go along

Pin, sew and stitch materials together to create a product

## Evaluating processes and products

to evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests

to record their evaluations using drawings with labels

to evaluate against their original criteria and suggest ways that their product could be improved

# Music

## Performing

Sing or play from memory with confidence, expression and in tune and perform alone and in a group, displaying a variety of techniques.

Take turns to lead a group and hold a part in a round.

Confidently sing or play solo and maintain own part with an awareness of what others are playing or singing.

Sing a harmony part confidently and accurately

## Composing

Demonstrate imagination and confidence in the use of sound and use ICT to organise musical ideas.

Show thoughtfulness in selecting sounds and structures to convey an idea.

Use a variety of different musical devices including melody, rhythms, and chords.

## Appraising

Understand how lyrics reflect the cultural context and have social meaning and use this knowledge to enhance own compositions.

Appreciate harmonies and work out how drones and melodic ostinati are used to accompany singing.

Refine and improve own work.

Vary and maintain rhythms to fit style e.g. blues, waltz, African etc.

## Knowledge and Understanding

Know and use standard musical notation to both perform and record my music.

Use musical vocabulary to help me understand how best to combine musical elements. I can quickly read notes and know how many beats they represent.

Understand the different cultural meanings and purposes of music, including contemporary cultural

Use different venues and occasions to vary my performances.

# Geography

## Locational and Place knowledge

1. Use 4 and 6 figure grid references to identify countries and cities in the world, the main mountain ranges and the longest rivers and understand how these features may have changed over time.

2. Select the most appropriate map for different purposes e.g atlas to find a country, Google Earth to find a village.

3. Explain the climates of given countries in the world and relate this to knowledge of the hemispheres, the Equator and the Tropics.

4. Locate the major cities of the world and draw conclusions as to their similarities and differences.

5. Use maps to identify longitude and latitude.

6. Study maps of the USA to identify environmental regions. Compare and contrast these regions.

7. Locate the key physical and human characteristics. Relate these features to the locality e.g. population sizes near tourist landmarks/rivers, transport links to mountains.

8. Locate all the man made features in the USA e.g. Statue of Liberty, Golden Gate Bridge, Grand Canyon, Yosemite National Park, The White House etc. and relate to UK landmarks.

## Human and Physical Geography

9. Study photographs, aerial photographs and maps of local area pre war, post war and present day. Compare maps and aerial photographs.

10. Study population numbers throughout the course of a major war and reflect on the reasons for changes.

11. Study pictures of land used during three different time periods. Draw conclusions and develop informed reasons for the changes.

12. Study one key building in a locality during three periods in time (e.g. hospital) and reflect on the changes.

13. Look at maps on different scales and calculate scales on own maps.

14. Research and present Britain's export trade.

9. Study photographs, aerial photographs and maps of local area pre war, post war and present day. Compare maps and aerial photographs.

## Fieldwork

15. Undertake a traffic survey of the local main road - tally counting, types of vehicle observed, comparing the traffic flow at different times of the day, parking problems, varying needs of different high street users - shopkeepers, children, senior citizens, businesses

16. Collate the data collected and record it using data handling software to produce graphs and charts of the results.

17. Ask Geographical questions e.g. how is traffic controlled? What are the main problems?

18. Analyse evidence and draw conclusions.

# The 3P's

(Pride, Peace and Perseverance)

## Team Worker

Collaborate with others to work towards common goals

Reach agreements, managing discussions to achieve results

Adapt behaviour to suit different roles and situations, including leadership roles

Show fairness and consideration to others

Take responsibility, showing confidence in themselves and their contribution

Provide constructive support and feedback to others

## Reflective Learner

Assess themselves and others, identifying opportunities and achievements

Set goals with success criteria for development and work

Review progress, acting on the outcomes

Communicate learning in relevant ways for different audiences

Invite feedback and deal positively with praise, setbacks and criticism

Evaluate experiences and learning to inform future progress

## Independent Enquiry

Identify questions to answer and problems to resolve

Plan and carry out research, appreciating the consequences of decisions

Explore issues, events or problems from different perspectives

Analyse and evaluate information, judging its relevance and value

Consider the influence of circumstances, beliefs and feelings on decisions and events

Support conclusions, using reasoned arguments and evidence

## Self-Managing

Organise time and resources, prioritising actions

Work towards goals, showing initiative, commitment and perseverance

Seek out challenges or new responsibilities and show flexibility when priorities change.

Anticipate, take and manage risks

Deal with competing pressures, including personal and work-related demands

Respond positively to change, seeking advice and support when needed

## Effective Participation

Discuss issues of concern, seeking resolutions where needed

Present a persuasive case for action

Propose practical ways forward, breaking these down into manageable steps

Identify improvements that would benefit others as well as themselves

Try to influence others, negotiating and balancing different views to reach workable solutions

Act as an advocate for views and beliefs that may differ from their own