Federation of Penny Acres and Wigley Primary Schools – Topic Map
Out of this World Spring 2022
Key Stage 2

Curriculum driver(s) - • Looking to the future of space exploration whilst delving into the past. • Looking at changes in technology, personnel and with black and gender personnel	Aims/Values drivers (taken from school's key aims/values) – • preparing the children for the challenges of life and citizenship in the 21st Century; • providing them with new and exciting experiences, encouraging them to move out of their 'comfort zone' and identifying ways to develop and improve.
Key Question drivers What is happening in space at the moment? History of space travel. Women in space. What are the planets in our solar system?	Authentic Outcome – Plan a display that -s 'Out of this World'. Looking at moon buggies, exploration, art and poetry.
Visits/Visitors - Space Centre - Leicester	Role play – Wigley - Drama

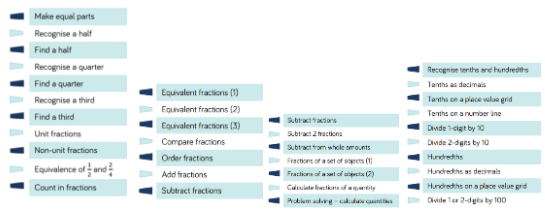
English

Reading (including key texts)	Writing	Spelling and Grammar
Cosmic- Frank Cottrell-Boyce – fantasy/science fiction Dr Maggie's Grand Tour of the Solar System – non-fiction explanation text Science Fiction/fantasy (Iron Man) Blackout poetry	Y3/4 write sentences with more than one clause by using a wider range of connectives commas for lists	Y3/4 present perfect forms of the verb past progressive/present progressive sentence types
	Y5/6 commas for clarity	Y5/6 active and Passive subjunctive modal verbs hyphens
Tiered vocabulary	constellations heliocentric geocentric gibbous celestial	
	spherical sphere eclipse satellite universe solar astronomer sundial rotate orbit axis bodies crescent illuminate lunar galaxy gravity longitude crater equator phase waning waxing expanse crevice visibility vast	
	night light day Earth Sun moon planets star solar system heat movement telescope tide journey	

Numeracy

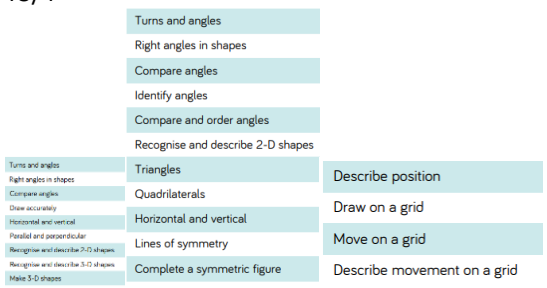
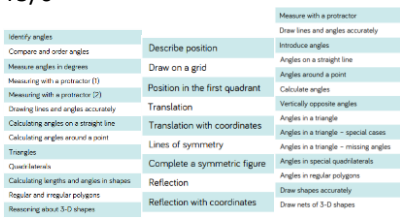
Fractions

Y3/4



Y5/6

Y3 vocabulary: equal, equivalent, parts, whole, unit, fraction, equation, integer, non-unit fraction, numerator, denominator, represent, share, group, mixed number, whole number, divide, set of objects, multiply, tenth, interval, inequality statement,	Y5 vocabulary: equivalent, numerator, denominator, home, fraction, simplify, expand, division, improper, mixed number, convert, sequence, order, greater than (>), less than (<), equal to (=), whole, efficient, common denominator, operator, whole(s), proper fraction, improper fraction, fraction of amount, ratio, proportion, halves, quarters, fifths, decimal, decimal place, tenths, hundredths, thousandths, decimal point, place value, digit, fractions, percent (%), percentages, exchange, column,

Y4 Vocabulary: tenths, hundredths, equivalent, simplify, numerator, denominator, fraction, mixed number, improper fraction, simplest fraction, add, subtract, fraction of an amount, tens, ones, decimal point, tenths, hundredths, greater than, equivalent, less than, decimal, centimetre, millimetre, decimal point, 0.1, 0.01, whole number, greater than (>), less than (<), equal to (=), order, compare, convert, ascending, descending,	Y6 vocabulary: multiply, divide, decimal, decimal place (dp), reoccurring decimal, decimal place, place value, tenths, hundredths, thousandths, products, fraction, percent (%), percentage, parts, whole, decimal, fraction, divide, share, multiply, convert, compare, order, equivalent fraction, simplify, less than (>), greater than (>),
Geometry – properties of shape	
Y3/4 	Y5/6 
Y3 vocabulary: right angle, acute, obtuse, parallel, perpendicular, vertical, horizontal, triangle, quadrilateral, kite, trapezium, rhombus, parallelogram, cuboid, triangular prism, square-based pyramid, cone, cylinder, sphere, edges, spaces, vertices, clockwise, anticlockwise, orientation, north (N), south (S), east (E), west (W), horizontal, vertical, diagonal, right angle, straight line, acute angle, obtuse angle,	Y5 vocabulary: angle, whole turn, right angle, acute angle, obtuse angle, reflex angle, interior angle, degrees (°), clockwise, anticlockwise, orientation, parallel, perpendicular, quadrilateral, view, regular, irregular, 3D shape, pyramid, sphere, cone, hexagon, pentagon, triangle, top view, plan view, side view, regular and irregular polygons, reflection, translation, vertex, vertices, coordinates, mirror line, horizontal axis, vertical axis,
Y4 Vocabulary: : quadrilateral, triangle, regular, irregular, interior angle, angle, acute, obtuse, reflect, right angle, symmetrical, isosceles, scalene, equilateral, line of symmetry, reflective symmetry, equilateral triangle, isosceles, triangle, scalene triangle, pentagon, pentagonal, hexagon, hexagonal, heptagon, octagon, octagonal, quadrilateral, parallelogram, rhombus, trapezium, polygon, parallel, perpendicular, position, horizontal, vertical, up, down, left, right, coordinate, square, rectangle, plot, vertex, vertices, point, grid, north (N), south (S), east (E), west (W), north-east (NE), north-west (NW), south-east (SE), south-west (SW), horizontal, vertical, diagonal, translate, translation, angle measurer, protractor, compass, degree, right angle, straight line, acute, obtuse, reflex, reflection, set square,	Y6 vocabulary: degree, angle, acute, obtuse, reflex, protractor, triangle, right angle, isosceles, equilateral, scalene, regular, polygon, quadrilateral, kite, parallelogram, rhombus, trapezium, diameter, radius, circumference, concentric, perimeter, net, pyramid, tetrahedron, cylinder, prism, vertically opposite angles, cuboid, cube,
Science (Key Vocabulary and links to programmes of study)	
Y3/4 Y3/4 During the rock topic we will….. Study rock collections and precious stones. Compare and group rocks on the basis of simple physical properties. Identify and classify rocks. Relate the properties of rocks to their uses. Observe rocks, including buildings and weathering, and explore how and why they may have changed over time. Describe how fossils are formed when things are trapped within rocks. Find out about sedimentary and igneous rocks. Recognise how soil is made from rocks and organic matter. Investigate different soils. Vocabulary- rock, soil, granite, sandstone, limestone, marble, pebble, absorb, fossil, sedimentary, igneous, organic.	
Y5/6 Use models of sun, earth and moon to show relative sizes and distances. Find out about the movement of the earth and other planets relative to the sun. Create solar system models. Use the idea of the earth's rotation to explain night and day and the apparent movement of the sun across the sky. Compare time of day at different places on the earth. Construct simple shadow clocks and sun dials to show mid-day and the start and end of the school day. Find out about Stonehenge as an astronomical clock. Research famous astronauts eg Neil Armstrong. Describe the movement of the moon relative to the earth. Research a planet and make a presentation about it.	

Vocabulary- planet, orbit, astronaut, satellite, space station, universe, weightlessness, lunar, meteor
Computing
Graphing data and Safer Internet use: • To understand how to use a blog safely to communicate with a wider audience • To consider if what can be read on websites is always true • To know where to get help if I see inappropriate content or have inappropriate communication • To enter data into a graph and answer questions • To solve an investigation and present the results in graphic form
Geography Links to the National Curriculum: human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water Key Vocabulary: agriculturist, landscape, community, settlement, vegetation, hydroponics, natural resources, man-made resources, sustainable, indigenous, development, irrigation, terrain, natural, settlement, subterranean, congestion, land use, import, export, location.
Y3/4 Explain about natural resources e.g. water in the locality. Ask and respond to geographical questions e.g. Describe the landscape. What would you need for a settlement on Mars? Where do we get energy? Water?
Y5/6 Describe and understand key aspects of human geography including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, minerals, food and water. What resources do we trade? How has trading changed?
History Links to the National Curriculum: A significant turn in British history. Devise historically valid questions about change, cause and significance. Key Vocabulary: astronomy, astronomer, atmosphere, economy, dwarf planet, Earth, equator, galaxy, gravity, Jupiter, Mars, Martian, mercury, moon, Neptune, orbit, planet, Pluto, satellite, Saturn, sol, spacecraft, sun, Universe, Uranus, Venus, volcanologist, voyage, yestersol.
Y3/4 Use sources of information in ways that go beyond simple observations to answer questions about the past.
Y5/6 Make comparisons between aspects of periods of history and the present day. Provide an account of an historic event based on more than one source.
RE /Modern British Values (Using the Derbyshire Syllabus)
What does it mean to be a Muslim in Britain today? Vocabulary: Allah, Hajj, headscarf, hijab, Islam, Islamic, jihad, jihadi, Mecca, minaret, mosque, Muhammed, Muslim, prayer mat, prophet, Ramadan, salaam, the Koran, the Qu'ran, veil, yashmak
What matters most to Christians and humanists? Vocabulary: worldview, humanism, humanists, atheist, agnostic, influential, rationality, reason, beliefs, ethical, symbol, dilemma, decisions, culture, naturalist, feminist, scriptures, afterlife, values.
PSHE/Modern British Values (Using PSHE Matters))
Difference and Diversity (people in space)
Being Responsible
Art (Key Vocabulary and links to programmes of study) Join, attach, paper mache, dysfunctional, culture, heritage, family, pattern, batik
Y3/4 Yinka Shonibare Aliens (3D Design)
Y5/6 Yinka Shonibare Aliens (3D Design)
DT (Key Vocabulary and links to programmes of study)
Y3/4 Make a moon buggy, create design sketches. Use pneumatics to move your buggy forward.
Y5/6 Make a moon buggy, create design sketches. Use cams, pulleys and gears to move the vehicle.

Music

appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians

develop an understanding of the history of music.

Penny Acres – flute lessons. Singing – Young Voices

Wigley – singing – Young Voices. Listening and Appraising – Gustav Holst – The Planets

PE

(Key Vocabulary and links to programmes of study)

Wigley – Movement – Space Perform dances using a range of movement patterns.
PE – Rugby - play competitive games, modified where appropriate

Penny Acres – PE taught by Mr Hawke

French

The Planets

appreciate stories, songs, poems and rhymes in the language

broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary

Y3/4 Learn the names of the planets. Learn the days of the week and colours to help describe the planets.

Y5/6 Learn the names of the planets. Revise colours and days of the week. Learn prepositions and antonyms. Write sentences to describe the planets.

HOMEWORK OPPORTUNITIES

1. Make a scale model of the Solar System.
2. Make an acrostic for one of the planets

e.g. M
A
R
S

This could be a list of words beginning with each letter, a sentence for each line or even a rhyme.

3. Find out facts about the space missions –

What was the first creature sent into space?
Who was the first astronaut?
Who was the first man on the moon?
What other interesting facts can you find?

4. Bake your own space themed cookies or biscuits. They could be star, rocket or planet shaped. They could even include space rocks such as popping candy! Write the recipe in your homework jotter. Feel free to share your biscuits with your teacher!
5. Make a 3D model rocket with a parachute to aid re-entry.
6. Keep a sky at night journal for a whole week. Write about everything you can see in the sky. You could draw a picture of the moon every night. Does it change over the course of the week?
7. Prepare a lesson to teach the class about an aspect of Space you enjoy (Be ready to teach it!)
8. Create a timeline to show the history of space travel.
9. Create a new mnemonic that will help others in the class remember the names of the planets and their order from the sun.
10. Use scrap paper, foil, sweet wrappers and other junk around the house to create your own space collage.
11. If you could move somewhere else in the world, where would it be and why?
12. Energy survey around your house.