Billingshurst Primary School Termly Learning Journey

Year: 2022   Term: SUMMER 2   Topic Title: How will you survive?

Date	06.06.22	13.06.22	20.06.22	27.06.22	04.07.22	11.07.22	18.07.22
Learning Hooks	Ladybird larvae arrival	Practical science: flowers exploration.	Practical science: Exploring different types of plants with examples of these in class and vegetative propagation experiment.	TRANSITION DAY GRT History Month Celebration Visit	Attack scene drama linked to Quest Writing	Smoothies Project	Sharing of Quest writing from this half term across Year Groups.
Text	Girl of Ink and Stars by Kiran Millwood Hargrave Kensuke's Kingdom by Michael Morupurgo Other examples of quests as needed, e.g. Pax, The Hobbit etc.						
Book Talk	Discussing and comparing books and story plots to develop a shared understanding of quests and their structures. Identify structures in a range of texts: The call (to action), The Hero's companions, The journey, The helpers, Arrival and Frustration, Final Ordeal, The goal. Ch to bring and discuss their own examples of Quest stories, justifying their opinions with evidence. Girl of Ink and Stars: Blurb. What could the quest be?	Girl of Ink and Stars: an extract to focus on the call, including setting and character development (X 2 sessions). What kind of character is she? What character traits would someone need in order to go on a quest? Pax Chapter 1 extract: How do we know this is not a human character?	Girl of Ink and Stars: extracts to focus on why Isabella goes on her 'quest' (read extract 1 and 2. Use to predict what will happen next). (X 2 sessions). The Hobbit: extract from an unexpected party. Predicting whether Bilbo will participate in the 'adventure' mentioned by Gandalf. What impression does Tolkien give of Bilbo and Hobbits?	Girl of Ink and Stars: extracts signalling Isabella's 'journey' from Forgotten Territories section. Ruined villages extract? The Banished (finding Lupe) Tibicenas (creatures/wolves) Hobbit extracts? Identifying and discussing characteristics of a journey: monsters, temptations etc. Ch to have the opportunity to bring and discuss their own examples of quest journey elements that they have read, justifying their opinions with evidence.	Girl of Ink and Stars: Chapter 11, 14: attacks Girl of Ink and Stars: Chapter 18: The Labyrinth	Girl of Ink and Stars: Somewhere on the Western Sea Section Chapter 25: 'One Year Later. Summarising the resolution. Kensuke's Kingdom resolution and ending extract (flash forward as adult).	Explore other suitable endings in texts, e.g. Harry Potter final chapter: grown-ups. Non-fiction: reporting/recounting a great achievement: https://www.theguardian.com/lifeandstyle/2021/oct/15/a-new-start-after-60-i-set-sail-round-the-world-on-my-own-at-66-and-stayed-at-sea-for-six-years https://www.theguardian.com/world/2010/may/15/jessica-watson-sailed-world-home
Writing	**Writing to inform by creating a survival guide for the local Scout group** Children continue to write an informative guide about an element of survival they have been learning about, to be read by their Scouts. See Summer 1 Learning Journey for specific objectives.	**The call: writing to entertain** Children to draw upon their Book Talk experience and understanding of quest stories to develop a personal quest story idea and develop the 'call' for their quest, developing characters, settings and communicating this through narrative writing, to be shared with their peers. **Oracy** Give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings		**The journey: writing for a range of purposes** Children to continue to draw upon their Book Talk experience and understanding of quest stories to further develop their personal quest story idea, considering the following questions: where do they go? What do they encounter? How do they interact or react to what is encountered? Children to **map the route** of their character's journey and then produce writing inspired by this journey.		**The goal: write to entertain using a flash forward** Children to end their personal quest story idea using what they know about how authors choose to end quest style stories, and drawing from examples of summary-style reports that recount great achievements. Children to consider what it is like for their character/setting now that the ordeal is over, and how this can be communicated through a flash-forward, such as	

	✓ Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments ✓ Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas ✓ Participate in discussions, presentations, performances, role play, improvisations and debates **Vocabulary, Grammar and Punctuation** ✓ Use relative clauses beginning with who, which, where, when, whose, that, or an omitted relative pronoun ✓ Use devices to build cohesion within a paragraph [then, after that, this, firstly] ✓ Link ideas across paragraphs using adverbials of time [later], place [nearby] and number [secondly] or tense choices [he had seen her before] <u>Writing composition</u> **Plan their writing:** ✓ In writing narratives, consider how authors have developed characters and settings in what pupils have read, listened to or seen performed **Draft and write:** ✓ In narratives, describe settings, characters and atmosphere and **integrate dialogue to convey character** and advance the action ✓ Use a wide range of devices to build cohesion within and across paragraphs **Evaluate and edit:** ✓ Assess the effectiveness of their own and others' writing ✓ Perform their own compositions, using appropriate intonation, volume and movement so that meaning is clear	**Writing to inform** their peers about a particular setting, animal or creature encountered. **Writing to entertain** their peers by creating suspense with an attack or action scene narrative. **Oracy** ✓ Ask relevant questions to extend their understanding and knowledge ✓ Articulate and justify answers, arguments and opinions ✓ Give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings ✓ Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas ✓ Participate in discussions, presentations, performances, role play, improvisations and debates **Vocabulary, Grammar and Punctuation** ✓ Use brackets, dashes or commas to indicate parenthesis ✓ Use expanded noun phrases to convey complicated information concisely <u>Writing composition</u> **Plan their writing:** ✓ Identify the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own ✓ Note and develop initial ideas, drawing on reading and research where necessary **Draft and write:** ✓ Select appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning ✓ Use further organisational and presentational devices to structure text and to guide the reader [headings, bullet points, underlining] ✓ In narratives, describe settings, characters and atmosphere and integrate dialogue to convey character and advance the action **Evaluate and edit:** ✓ Assess the effectiveness of their own and others' writing ✓ Propose changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning ✓ Proof-read for spelling and punctuation errors	'one year later'. **Oracy** ✓ Articulate and justify answers, arguments and opinions ✓ Give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings ✓ Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas ✓ Consider and evaluate different viewpoints, attending to and building on the contributions of others **Vocabulary, Grammar and Punctuation** ✓ Use devices to build cohesion within a paragraph [then, after that, this, firstly] ✓ Link ideas across paragraphs using adverbials of time [later], place [nearby] and number [secondly] or tense choices [he had seen her before] ✓ Use the perfect form of verbs to mark relationships of time and cause <u>Writing composition</u> **Plan their writing:** ✓ Identify the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own **Draft and write:** ✓ Select appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning ✓ Use a wide range of devices to build cohesion within and across paragraphs **Evaluate and edit:** ✓ Assess the effectiveness of their own and others' writing ✓ Propose changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning ✓ Ensure the consistent and correct use of tense throughout a piece of writing ✓ Perform their own compositions, using appropriate intonation, volume and movement so that meaning is clear	

| **Maths** | **FRACTIONS:**
Express wholes and parts as mixed numbers

Write mixed numbers as improper fractions | **FRACTIONS:**
Multiply an improper fraction and a mixed number by a whole number (product within a whole and then greater than a whole). | **FRACTIONS:**
Find a non-unit fraction of a quantity (mental calculation and written calculation).

Multiply a whole number by a proper fraction. | **FRACTIONS:**
Know when two fractions represent the same part of the whole (use the language of equivalent fractions) | **FRACTIONS, DECIMALS AND PERCENTAGES**
Explain the relationship within families of equivalent fractions. | **CONVERTING UNITS:**
Apply memorised unit conversions to convert between units of measure: whole number conversions (larger to smaller units) (smaller to larger units) | **CONVERTING UNITS:**
Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. |

Explain the relationship between repeated addition of a proper fraction and multiplication of fractions (unit and then non-unit fractions)

Multiply a proper fraction by a whole number (within a whole and greater than a whole) | Find a unit fraction of a quantity (explain the relationship between finding a fraction of a quantity and multiplying a whole number by a unit fraction).

Explain the relationship between dividing by a whole number and multiplying a whole number by a unit fraction.

Use their knowledge of multiplying a whole number by a unit fraction to solve problems. | Explain when a calculation represents scaling down and when it represents repeated addition.

Find the whole when the size of a unit fraction is known.

Find the whole when the size of a non-unit fraction is known.

Use representations to describe and compare two fractions (1/4 and 3/12, then 1/5 and 5/10). | Explain the vertical relationship between numerators and denominators within equivalent fractions (1/5, 1/3 and equivalent).

Use their knowledge of the vertical relationship to solve equivalent fraction problems.

Explain the horizontal relationship between numerators and denominators within equivalent fractions (1/5, 1/3 and equivalent). | Use their knowledge of equivalent fractions to solve problems.

Represent how to divide 1 into different amounts of equal parts. (fraction, decimal equivalence)

Identify and describe patterns within the number system. (fraction, decimal, percentage equivalence)

Use their knowledge of common equivalents to compare fractions with decimals.

Practice recalling common fraction-decimal and percentage equivalents. | Convert from and to fraction and decimal fraction quantities of larger units.

Derive common conversions over 1

Carry out conversions that correspond to 100 parts

Solve measure problems involving different units. | Convert between miles and kilometres

Solve problems involving converting between units of time. |

Science

Learning objective	**Compare and contrast the life cycle of an insect, amphibian.**

Investigative Skills: Reporting and presenting findings from enquiries Use appropriate scientific forms of language to communicate scientific ideas, processes or phenomena. | **Describe how plants reproduce sexually** | **Investigate asexual reproduction in plants**

Investigative Skills: Planning different types of scientific enquiries to answer questions Set up an investigation by generating, refining and choosing an enquiry question. Consider fair tests. | **I can describe how mammals develop and grow in the womb.**

Investigative Skills: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results | **I can describe the changes as a human foetus develops.**

Investigative Skills: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results | **I can describe the changes as human children develop and grow**
Investigative Skills: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results | **I understand the main changes that occur as humans age.**

Investigative Skills: identifying scientific evidence that has been used to support or refute ideas and arguments. |
| **Learning Opportunity** | Elicit and activate prior knowledge by giving out the lifecycle 'ingredients' to groups to sort into five forms of life cycles (for 5 different creatures). Match the lifecycle with the animal picture. Take photos for each group using the iPad (with children's names). Use the video to support if necessaryhttp://www.bbc.co.uk/education/clips/zwrn2p3 – *The life cycles of different organisms* (6 minutes). **NOTE:** *Share thoughts noting that while most animals reproduce sexually,* | Explain that we are moving away from insects, amphibians, birds and mammals to life cycles of plants now.

 Start with some key questions: What do you know about plants and how they reproduce? Why are flowers and pollen important? To elicit information. What is known about the term reproduce? (If ch don't know about the key 7 life processes use MRS GREN acronym and recap using PPT). Click on pic to explore | Have a bulb, a tuber, a corm and a runner as well as some moss/liverwort, ferns, and pine cones on the tables (or use images) and get ch to make observations and suggest what they think they are and how they might reproduce

Recap that in sexual reproduction, male and female material (gametes) combine to produce offspring, and ask them to remind you how flowering plants ensure successful pollination (perfume, shape, colour etc.). Now explain that some plants (both | *Record asexual reproduction in plants observations.*

Before the lesson, ask children to bring in a recent photo of themselves and one from when they were babies. Also, have photos of the teachers as babies/teenagers and see if they can identify who each one is. What has changed?

Children look at pictures of people at various ages. Have a discussion with the children about the signs which indicate the age of each person. (assessment). | *Record asexual reproduction in plants observations.*

Children use fruit to help them visualise the size of a human foetus as it grows. They match statements to each stage. Watch video and NHS slides.

Play fact or myth game for statements about new-born babies (eg babies can recognise their mother's voice)

Children order pictures of a developing foetus, record in books (sticking or sketching) then label each with key features and write a short | *Record asexual reproduction in plants observations.*

Before lesson- ask children to bring in their red book which has their growth chart in it. They may also have height charts or other records they can bring.

Play 'milestones'- children match the statements about milestones to the age of the child.

Ask the children to talk about what they know about their own milestones.

Look at some growth charts and explain the term centile (i.e. 5oth centile means that | Watch the photos of a family aging over several years.https://www.youtube.com/watch?v=Bk0q-aRkDdk and of the queen over the decades https://www.theguardian.com/uk-news/2016/apr/21/the-queen-at-90-across-the-decades.

Also have some pictures of the teachers growing up (and ageing!).

Children order some photos of an individual ageing. Discuss how they ordered them. What changes are |

there are examples where asexual reproduction occurs in the animal world, e.g. sea anemones and starfish, as well as examples of where the male gives birth (seahorses). Note that we can also clone animals under lab conditions.

Today we are focusing on the sexual reproduction and life cycles of amphibians and insects. What do you know about amphibians? What do you know about insects? Revise using feed in facts: <mark>key facts sheets</mark> and summarisers in a group discussion.

Show examples of insect and amphibian life cycles with the discussion questions: what is the same about all life cycles? What are the differences between insect and amphibian lifecycles?

http://www.bbc.co.uk/education/clips/zgcb4wx – *Life cycle of an ant, BBC*
http://www.bbc.co.uk/education/clips/z283qty – *Life cycle of a frog in spring (watch to 4 mins 50)*

Introduce the ladybird larvae: what changes do you expect to see? How long do you think the changes will take?
How will we record our observations like scientists?

Spend some time setting up observation tables for the coming weeks.

Look at the zoological illustrations: what can they teach us about the lifecycles of insects and amphibians? Do they reproduce sexually or asexually?

In Science Books, ch to use <mark>pencil crayons</mark> to draw and annotate the life cycle of a insect and an amphibian explored in this session.

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pollination and how plants reproduce sexually.

What parts of a flower do you already know? Expect leaf, flower, petal etc. Today is about building on this knowledge to provide scientific names and explanation of parts.

Introduce new vocabulary using feed in facts – sepal, stamen, (anther, filament), stigma, style, ovary (Use diagram on IWB)

 In classroom, in pairs - take flower apart and identify the different parts: stamen, sepal, petal, ovary, style and stigma – use visualise to get a real close up. Layout the parts of the flower with the correct name labels next to it. (photograph)TPS what each part of the flower is for. Which are the female parts? Which are the male parts?

What is pollination and how does it happen?
Role play pollination / the transfer of pollen from one flower's anther (male) to another flower's stigma (female). Explore causes of pollination: wind or animal/insect.

What happens when a flower is pollinated? What is produced? Explore the link between fruit /vegetable growth and pollination.

Ch to draw a diagram of a flower and label the different parts. Include an explanation about the different parts and how the different parts contribute to reproduction, including pollination

Explore the life-cycle of a flowering plant using the additional resources (flexible Friday opportunity -

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flowering and non-flowering) can also reproduce asexually (vegetative reproduction) – ask ch what they think this might mean (clarify that this is where offspring are created from just one plant and there is no combination of male and female gametes). NOTE: most plants that reproduce asexually will also reproduce sexually.

Focus in on cones and seeds in cones:
http://studyjams.scholastic.com/studyjams/jams/science/plants/gymnosperms.htm
Explore similarities with flowers – sexual reproduction.

Explain that it is also possible to force plants to reproduce asexually through ***vegetative propagation*** – the cloning of the parent plant by using different parts of it, other than seeds. Explain the term 'cutting', using root cuttings as an example of cutting a part of the parent plant that can be replanted to form a new plant (which is genetically identical to the parent plant). Can ch suggest other parts of the plant that they think a cutting might come from – leaf or stem cuttings? Note also that bulbs, tubers or corms can be propagated by splitting or cutting them into sections and replanting.

Explain that ch will be investigating vegetative propagation.

Split children into groups.
Lettuce cutting
Celery cutting
Spring Onion cutting
Weed cutting
Sprouting Potato?

Focus on setting up the enquiry question using the

Look at a picture of the foetus in the uterus. How long do babies stay in the mother's uterus and why does it take so long?

Introduce the term 'gestation period' Is this the same for all animals?

Play the gestation game- children match the animal to the gestation period.

In pairs, children research the gestation periods of a range of mammals of their choice and record in a table.

 Ask children to come up with a hypothesis

E.g. Small animals have a shorter gestation period because….

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description of each stage using information provided.

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for every 100 children, 50 will be taller, 50 will be shorter etc.). Show the children how adult height can be calculated from childhood height.

How do scientists know what height we are likely to reach?

What might affect whether we reach our predicted height?

Look at a chart which shows proportions as we grow- not that a baby's head is much bigger in relation to its body than an adult's. Why might this be?

Using their own, or a friend's data if possible, children work out a prediction of their adult height. Find out what centiles in which they lie.

Draw a line graph of their height so far adding in their predicted adult height.

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occurring as the person ages?

At what age do you think people stop growing? (Around 20). We spend most of our lives as adults but continue to change. Discuss with children the main changes as we get older:

Hair colour changes, hair may become thinner, women stop having children, skin becomes wrinkled (less elastic), bones and muscles become weaker, and immune system weakens. Body gets wear and tear.

How do our brains change as we become older- discuss how some older people remain alert and mentally active but some start to lose mental capacity.

Look at some statements about old age stereotypes and discuss.

In pairs, children research one of the following questions:

What happens to our bones as we age?

What happens to our skin as we age?

What happens to our hair as we age?

 Children feedback to their group and then everyone writes a short explanation to answer each question

	NOTE: *Amphibian illustrations need to show clearly in which stages they live on land and in which they live in water.* *Ensure annotations show the details of the life cycle and annotate key words, e.g. metamorphosis, larva, nymph.* Verbal reflection: How are amphibian and insect lifecycles similar/different? Art gallery the life cycle drawings and reflect on standards of scientific communication.	challenge children to record their understanding of this life-cycle. Use of botanical images to support).	'developing useful scientific questions' as inspiration. Ch to choose question and record in Science Books. Set up the investigation and record key elements in science books: Things I could vary/change: Things I could observe or measure: Prediction. Explore how results will be collected through observation over the next 4 weeks. Set expectations for recording and begin this process. Finish by exploring the advantages and disadvantages of sexual and asexual reproduction. Explore the life-cycle of a ferns, tubers, mosses etc. (asexual reproduction) using the additional resources (flexible Friday opportunity - challenge children to record their understanding of this life-cycle. Use of botanical images to support).				
Opportunities for oracy and drama	L: Appropriate vocabulary choices C: Seeking information & clarification through questions C: Summarizing	Drama opportunity to role play pollination. P: Clarity of pronunciation L: Appropriate vocabulary choices C: Seeking information & clarification through questions C: Maintaining focus on task SE: Turn taking	P: Clarity of pronunciation L: Appropriate vocabulary choices C: Building on the views of others C: Giving reasons to support views SE: Turn taking	L: Appropriate vocabulary choices C: Building on the views of others C: Seeking information & clarification through questions C: Giving reasons to support views SE: Turn taking	L: Appropriate vocabulary choices C: Building on the views of others C: Seeking information & clarification through questions C: Giving reasons to support views SE: Turn taking	Children can talk about what they know of their own milestones e.g. when they started to walk, first word etc. L: Appropriate vocabulary choices C: Seeking information & clarification through questions C: Summarizing C: Maintaining focus on task	Children can talk about older people they know and discuss the changes they are aware of. Discuss stereotype statements L: Appropriate vocabulary choices C: Choice of content to convey meaning & intention C: Summarizing C: Giving reasons to support views C: Critically examining ideas & views expressed
Key Questions	What do you know about insects? What do you know about amphibians? Can you name examples of each? What are the similarities/differences between their lifecycles? What can the illustrations teach us about the life cycle	Which parts of a flower do you already know? What do you know about plants and how they reproduce? (What does reproduce mean?)	How do you think these plants might reproduce? What is the difference between sexual and asexual reproduction in plants? Can you name some examples of plants that reproduce sexually/asexually?	What is a mammal? Can you name some examples of mammals? How can we tell the likely age of this person? How does gestation time differ between different mammals?	How does the foetus change and develop during pregnancy? Why is it important for the mother to stay healthy and make sure they do not drink or smoke during pregnancy?	Why do the proportions of a baby and child change as they grow? How can scientists predict our likely growth? What factors might affect our growth?	Why do humans change as they get older? What changes occur? How can you tell the approximate age of a human adult?

	stages, and whether insects/amphibians reproduce sexually/asexually?	Why and flowers and pollen important? What happens when a flower is pollinated? What is produced? What is the life-cycle of a flowering plant?	What are the advantages/disadvantages of sexual/asexual reproduction in plants? What is the life-cycle of a non-flowering plant?				
Learning Outcome	Describe the life cycle of insects and amphibians, noting that they reproduce sexually.	Identify that plants reproduce sexually. Identify the male and female parts of a plant (gametes) and explain how they contribute to sexual reproduction. Explain the process of pollination.	Identify and explain the ways that plants reproduce asexually (naturally and artificially). Set up a 'fair' investigation into artificial asexual reproduction in plants.	Children understand how a baby develops in the uterus and have an understanding of the gestation times of other mammals and how these are related to lifespan and size.	Children understand how a foetus develops to become a live baby. Children use scientific language to describe changes.	Children use their own data to create a line graph of their height. (COMPUTING LINK) Children can describe key 'milestones' of development and explore centiles charts.	Children write about some of the main changes that occur as we age. Children can discuss and respond to stereotypes surrounding older people.

History

Learning objective							
Learning Opportunity							
Opportunities for oracy and drama							
Key Questions							
Learning Outcome							

Geography

Learning objective							
Learning Opportunity							
Opportunities for oracy and drama							
Key Questions							
Learning Outcome							

Art and Design

Learning objective							
Learning Opportunity							
Opportunities for oracy and drama							
Key Questions							
Learning Outcome							

				Computing			
Learning objective				I understand how to insert simple data into a spreadsheet	I can enter labels and numbers into a spreadsheet.	I can create a line graph using scientific data in a spreadsheet	I can create a line graph using my own data. (Could be linked to previous science investigations: asexual plant reproduction or another area).
Learning Opportunity				Introduce simple spreadsheets and have some examples which the children can explore. Guide children through adding data to cells in an Excel spreadsheet They then learn how to change the appearance of a cell by colouring and create a simple picture. Encourage children to ask questions to refine their use of Excel.	Children input a simple table of amounts of fruit eaten each day. They add column headings to the table and enter simple data for the fruit and the days of the week as a guided practice opportunity. Explore how the information can be ordered using the sort and filter tab. Introduce a simple calculation and the Σ symbol and show them how to find the totals for each column and row. As a challenge, change one piece of data and show how this changes the sum. Now provide ch with some time to use learnt skills to create a simple table to present their observations from the *vegetative propagation* investigation (plant height).	Demonstrate how to create a line graph, using the information from science lessons of children's height at different ages. Children insert data and create a line graph. They insert titles for the axes and a title for the graph. (They will need to continue to add ages up to 18 even though they have no height data.) Using the +trendline function, they then extrapolate the data to show their likely height at age 18. *Also provide ch with some time to update their simple table to present their observations from the vegetative propagation investigation (plant height).*	Show children how previously collected data (fruits eaten) can be represented as a graph. Discuss the appropriateness of the range of choices (e.g. pie chart, line graph, scatter graph, block graph). Children then create a block graph using the data. Children can choose how to represent their vegetative propagation plant investigation data. (Ensure reflective discussions about the best means of representation, with reference to continuous and discrete data). They insert a heading and label their axes. They then create their chosen graph, print off and annotate in books. What conclusions can you draw from your data? Encourage use of accurate scientific and mathematical language to report findings.
Opportunities for oracy and drama				Discuss why spreadsheets are used. L: Appropriate vocabulary choices C: Seeking information & clarification through questions C: Summarizing C: Maintaining focus on task	L: Appropriate vocabulary choices C: Choice of content to convey meaning & intention C: Maintaining focus on task C: Time management	L: Appropriate vocabulary choices C: Seeking information & clarification through questions C: Maintaining focus on task C: Time management	Children can discuss how effectively their chosen graph shows their data. L: Appropriate vocabulary choices C: Choice of content to convey meaning & intention C: Maintaining focus on task C: Giving reasons to support views
Key Questions				Why do we use spreadsheets? What kind of information can we add to a spreadsheet?	Why might we need to order the data? How does the spreadsheet help us to organise the data?	How does the spreadsheet help us to interpret our data? How can the data be represented?	How will you arrange the data in your spreadsheet (i.e. rows/columns)? Which representation is most appropriate?

					How does the sum function help us? What are the benefits of presenting this information in Excel? What relationships or conclusions can you draw from your data?	How does the information help us to predict your adult height?	Have you chosen the best type of graph to represent your data? What relationships or conclusions can you draw from your data?
Learning Outcome					Children understand the basic functions of an Excel spreadsheet and can enter data.	Children can add labels to data and can use the sum function to find totals of data.	Children create a line graph of their height. They learn how predictions can be made by extrapolating from known data points.	Children make choices about how to present their science investigation data, giving reasons for their choices. (Final assessment).

Design Technology

Learning objective					Use research and develop design criteria to inform the design of a healthy smoothie. Recognise the importance of correct storage and correct ingredients. *NC: Introduction to the importance of correct storage and correct ingredients, using knowledge of micro-organism.*	**Design a healthy smoothie** *NC: Generate, develop, model and communicate their ideas through discussion*	**Make a healthy smoothie, measuring accurately.** *NC: Measure accurately, with support, and calculate ratios of ingredients to scale up or down form recipe. Create and refine recipes including ingredients, methods, cooking times and temperatures.*	**To evaluate a product against a design criteria.** *NC: Evaluate their ideas and products against their own design criteria. Calculate ratios of ingredients to scale up or down form recipe.*
Learning Opportunity					What is a smoothie? Have you ever tasted one? What ingredients are involved? Which of them are healthy and why? Set brief: MooScoops would like you to design a healthy smoothie that they can sell. Taste test different 3 X different brands of smoothies to compare them (1Xhealthy, 1Xnon-healthy, 1X lactose-free). Ch to record their responses to the tastes in relation to: smell, consistency, flavour, healthy ingredient etc. Feed in facts to support children: information about micro-biotics.	Explore the ingredients lists from the smoothies that were tasted as well as the nutritional value. Which ingredients would you choose to include in your smoothie design and why? What effect would your ingredients have on the body? Use the feed in facts about vitamins and dairy products and their effects on different parts of the body. Ask groups of children to discuss their ingredients and begin to discuss/explore how they might go about making their smoothie. What could your instructions be? What order would you need to do things in and why?	Challenge: to produce enough smoothie for each child in a group to have a full cup to taste, with not waste. Children to work together in groups to follow their instructions and attempt to make the desired amount of smoothie. Teacher to model specific techniques for measuring accurately and using equipment such as knives and blenders safely and sensibly. As ch make their smoothies, discuss how recipes can be adapted to change taste, appearance, texture and aroma. Why is it important to keep tasting the smoothie?	Begin with reflections about the smoothies that were created. If there are any leftovers that have been stored safely, the children could taste and compare each others. Provide the design criteria as a table. Children to evaluate their smoothie against each criteria (teacher to model expectations). I think that the smoothie meets this design criteria because ___ Set a new challenge. Look at the recipe and the quantities: what would you have to do to the recipe to make enough for double the amount of children? What about the whole class? What about the Year Group?

				Use ideas to generate a design criteria. Discuss: what is a design criteria and why are they important when designing a new product?	Use this (and a little role play) to guide towards the importance of imperative verbs and numbered steps. Provide a word bank for key technical vocabulary: blend, chop,	How will you do this safely and hygienically?	Teacher to model scaling up pictorially and relate to multiplication.

Use ideas to generate a design criteria.
Discuss: what is a design criteria and why are they important when designing a new product?

Ch to record their design criteria in their Learning Journies, as well as what has been learnt about healthy vs non-healthy ingredients.

Where should we keep these smoothies in order to keep them fresh so we can continue to drink them? How long can we keep them for?
Predict as a class what would happen if we left the smoothies out of the fridge. Set up a mini-experiment to observe the changes that happen over the next days/weeks (until the samples need removing). Discuss what would happen if we left out the ingredients or smoothie (bacteria growth and effect on our bodies). Play an odd one out game for foods that need to be stored in a fridge.

==3Xsmoothies Photograph the ingredients list and nutrition information Mini-cups for tasting Parent permission/ consideration for food intolerances==

Use this (and a little role play) to guide towards the importance of imperative verbs and numbered steps. Provide a word bank for key technical vocabulary: blend, chop,

Provide a range of smoothie recipe examples to refine recipes (could be good examples that ch have created for homework).

Children to record their own smoothie design in the form of a healthy ingredients list, explanations about choices and simple instructions for producing their smoothie.

At the end of the session, children to get into groups of 6's. Ch to explore each other's recipes and decide on one recipe and ingredients list that they will choose to use in the next lesson. Provide reasons for their views.

Set the challenge for tomorrow's lesson:
Challenge: to produce enough smoothie for each child in a group to have a full cup to taste, with not waste. How much of each ingredient do you predict you will need?

==Use the ideas from the lesson to generate a shopping list of ingredients.==

==T to scan recipes to be used in the next lesson, so that changes can be annotated.==

How will you do this safely and hygienically?

Once the smoothies have been made, ensure annotations are added to the original recipe to show any changes that were made. ==T to photocopy this for ch individual ch books/as photo evidence on target tracker.==

How will we store the smoothies that have been made so that they can saved and tasted in the next session?

Reflective discussion at the end: Does your final product___ as expected? Does it meet the design criteria?

Teacher to model scaling up pictorially and relate to multiplication.
Ch to record new quantities of ingredients for certain numbers of children.

Explore additional ideas for handing the smoothie recipe over to MooScoops. What other information would you need to provide about your smoothie when feeding your recipe and design back to MooScoops? Name? Brand? Advertising? Taste test data? (Computing Link)
This could be explored further during Flexible Friday.

Opportunities for oracy and drama				L: Appropriate vocabulary choices C: Choice of content to convey meaning & intention	P: Clarity of pronunciation L: Appropriate vocabulary choices C: Choice of content to convey meaning & intention	C: Maintaining focus on task C: Time management C: Giving reasons to support views	C: Choice of content to convey meaning & intention C: Building on the views of others C: Summarizing

				C: Summarizing	C: Building on the views of others C: Structure & organization of talk	SE: Guiding or managing interactions SE: Turn taking	
Key Questions				What is a design criteria and why are they important? What is micro-biotic? What is food hygiene? Why do we need to store foods correctly? What would happen to our bodies if we did not store foods correctly? Which foods need to be kept in the fridge and why?	Which ingredients would you choose to include in your smoothie design and why? What effect would your ingredients have on the body? Why do we follow recipes? Why might we refine a recipe? How does your ingredient choice and recipe relate to your design criteria? What quantities of ingredients will you need for ___ children?	What ingredients will you change? How are you hoping to adapt your smoothie? What do you predict will happen when you alter an ingredient? How do you think your changes will alter the overall taste? Does your final product___ (taste, smell, feel) as expected? Does it meet the design criteria?	Did your final product___ (taste, smell, feel) as expected? Does it meet the design criteria? How do you know? What quantities of ingredients will you need for ___ children? What other information would you need to provide about your smoothie when feeding your recipe and design back to MooScoops?
Learning Outcome				Children will have developed an appropriate design criteria for a healthy smoothie. Children will know the importance of correct storage and healthy ingredients.	Children will have designed their own smoothie recipe.	Children will have an understanding about the changes that happen when recipes are adapted. Children will have developed skills for accurate measuring and the safe use of equipment to make their smoothies.	Children will evaluate their smoothies against a design criteria. Children will use scaling to double their recipe, and then adapt for different groups of children.

Languages

Learning objective	To understand that nouns in French can be either male or female.	To know the names of various items of clothing in French.	To write a sentence using the correct pronoun with the verb 'porter'				
Learning Opportunity	Recap that nouns refer to a person, place or thing (a cat, my pens). Explain that nouns work slightly differently in French and can affect the spelling of other words in the sentence. In French nouns can be either masculine or feminine (gender). The gender of some nouns makes perfect sense but some are less obvious. To help us know whether a noun is masculine or feminine (and singular or plural), French nouns always have an article before them. Language Angels: Grammar, Nouns, Lesson 1	Listen to and repeat the names of each item of clothing. Recap from last week and then say the noun including the correct article depending on whether it is male or female. Introduce the article 'some' Du, de la, de l' and des. Language Angels: Intermediate Level Les vetements, Lesson 1 and Lesson 2	Introduce different pronouns: Je — I Tu — You Il — He Elle — She Nous — We Vous — You all Ils — They (mixed or masculine group) Elles — They (female) In pairs match the correct personal pronoun with the verb 'porter' – to wear Language Angels: Intermediate Level Porter – Lesson 3				

Opportunities for oracy and drama	P strand – voice L strand – vocabulary, language C strand – S & L strand – working with others, listening and responding, confidence in speaking, audience awareness	P strand – voice L strand – vocabulary, language C strand – S & L strand – working with others, listening and responding, confidence in speaking, audience awareness	P strand – voice L strand – vocabulary, language C strand – S & L strand – working with others, listening and responding, confidence in speaking, audience awareness				
Key Questions	What are the French words for the, a, some, my?	Referring back to last term can they add the colour of the item?	Can you match the correct personal pronouns with the regular –er verb 'porter'?				
Learning Outcome	Children will know that French nouns have a gender and always have an article before them.	Children are able to describe some items of clothing in French.	Children will know that the verb ending changes depending on the personal pronouns.				

Music

Learning objective							
Learning Opportunity							
Opportunities for oracy and drama							
Key Questions							
Learning Outcome							

Physical Education outdoor

Learning objective	Pupils will learn the correct technique used for throwing accurately.	Pupils will learn the correct technique used for throwing accurately.	Pupils will learn the correct technique to use when throwing for distance.	Pupils will learn the correct technique to use when throwing for distance.	Pupils will learn the correct technique to use when throwing for distance.	I can work effectively as part of a team.	I can work effectively as part of a team.
Learning Opportunity	The focus of the learning is to explore how we can use our bodies to make us throw for accuracy vs distance.	The focus of the learning is to continue to explore throwing for accuracy vs distance.	The focus of the learning is to apply pupils' understanding and application of throwing accurately, into throwing for distance	The focus of the learning is to continue to apply pupils' understanding of throwing accurately into throwing for distance.	The focus of the learning is to bring together the learning for a throwing competition.	The focus of the learning is to work effectively as part of a team. Children will learn correct throwing techniques and be aware of specific game rules.	The focus of learning is to apply pupils' understanding of rounders – specifically using a bat correctly and the importance of following through.
Opportunities for oracy and drama	Discussion of learning points in the activities	Discussion of learning points in the activities	Discussion of learning points in the activities	Discussion of learning points in the activities	Discussion of learning points in the activities	Discussion of learning points in the activities	Discussion of learning points in the activities
Key Questions	Why do we need to be able to throw accurately in sport? Which sports involve throwing? What types of muscle fibres are there (recap	How do we throw? What is the consequence of throwing out of a boundary in a field event? What should we do with our head when we are throwing? Why?	What should we do with our arms when we are throwing? Why? What should we do with our legs when we are throwing? Why? What should we do with our feet when we are throwing? Why?	Which athletic events are field events involving throwing? What is a foul throw? What is the consequence of a foul throw? What should we	Which athletic events are classed as field events? What is a foul throw? What is the consequence of a foul throw?	Why do we need to be able to throw accurately in rounders? Which other sports involve throwing? Which skills are needed in	How do we bat? What is the consequence of missing the ball? What should we do with our head when we are batting? Why? What should we do with our

	previous learning)? What fibres type do field athletes need? Which athletic events are throwing events? How do we throw?	What should we do with our legs and core when we are throwing? Why? Do we throw better when we apply the correct arm technique?	What are the consequences of throwing outside a boundary?	do with our head when we are throwing for distance? Why? What should we do with our arms when we are throwing for distance? Why? What should we do with our legs when we are throwing for distance? Why? What should we do with our feet when we are throwing for distance? Why? What do we mean by aiming?	What should we do with our arms when we are throwing for distance? Why? What should we do with our legs and feet when we are throwing for distance? Why? What should we do with our core when we are throwing for distance? Why?	rounders? How do we throw? Why is listening so important? What are one or two handed techniques? How do they differ? Why is it important watch the object? Why should you keep your head still when throwing?	legs when we are batting? Why? Do we bat better when we apply the correct arm technique?
Learning Outcome	Children learn correct throwing technique	Children learn correct throwing technique	Children learn correct technique for throwing longer distances	Children learn correct technique for throwing longer distances	Children learn to compete in a throwing competition.	Children learn correct throwing technique	Children learn correct batting technique

Physical Education indoor

Learning objective	I know what makes an effective team.	I know how to communicate effectively.	I know how to collaboration and communication effectively.	I know why motivating each other is important when working in a team.	I know how to collaboration and communication effectively.	*I Know* why motivating each other is important when working in a team in an unfamiliar environment.	I can develop my own team building activity.
Learning Opportunity	Cooperation Challenge 1 Cross the River Challenge Cross the River and Back Challenge Cross the River and Back Competition	Recap prior sequence of learning, what makes an effective team. Why do we need to cooperate when we work in a team? Cooperation Challenge 2 Around the Clock Challenge Developing Communication	Cooperation Challenge 3 Place the Pen Challenge Place the Pen Competition. Throughout the challenge ask questions from the key questions.	Cooperation Challenge 4 Structure the game as in suggested sequence of learning part 1. River Rope Challenge	Before the practical lesson begins, discuss with the class about what, "caving," is. Explain it is a sport that men and women participate in by exploring dark narrow tunnels in real caves. What is a cave like? Single Caves Crossing Cave Challenge	Recap prior sequence of learning part 5 showing what we know about caving at the start of the lesson. Can pupils cave safely and quickly? Single Caves: Blindfolded In teams of 4, set up caves the same as in suggested sequence of learning part 5. Crossing Cave Challenge: Part 2	From the games the children have been playing and learning from, encourage them to adapt or devise their own game to lead with another group.
Opportunities for oracy and drama	Discussion and feedback time during session.	Discussion and feedback time during session.	Discussion and feedback time during session.	Discussion and feedback time during session.	Discussion and feedback time during session.	Discussion and feedback time during session.	Discussion and feedback time during session.
Key Questions	What makes an effective team? What are the characteristics of an effective team member? Why do we need every team member to participate in order to	Why do some teams win and some teams lose? Who is creating ideas? Are pupils' ideas successful? If so why are they successful? What do we mean by being responsible? What are your responsibilities? What are the consequences	What are the consequences of not collaborating effectively? Which team member should hold and place the pen down? Why? Which team member should link themselves to the pen holder? Why? What attributes do these players need?	What are the consequences of not collaborating effectively? What is the best way to swing across? Who should swing across first? Why? What should the pupils	What is the correct body position for caving? How should we organise ourselves when we have to cave with two team members going through a cave at the same time?	Why do some teams win and some teams lose? Who is creating ideas? Are pupils' ideas successful? If so why are they successful? What do we mean by being responsible? What are your responsibilities?	What strategies and tactics can we use? Are we thinking about our ideas collectively? Why do some teams win and some teams lose? Who is creating ideas? Are pupils' ideas successful? If so why are they successful?

	win? What strategies and tactics can we use? Are we thinking about our ideas collectively? Why do some teams win and some teams lose? Who is creating ideas? Are pupils' ideas successful? If so why are they successful?	of not collaborating effectively? What is the best tactic for replacing the cards? Why does everyone need to know this tactic?	Where should the rest of the team be positioned?	who have swung across do to help their team?		What are the consequences of not collaborating effectively? What is the correct body position for caving? How should we organise ourselves when we have to cave with two member going through a cave at the same time?	
Learning Outcome	The focus of the learning is to look at what makes an effective team with the focus on cooperation and responsibility.	The focus of the learning is to look at what makes an effective team with the focus on communication.	The focus of the learning is to look at what makes an effective team with the focus on collaboration and communication.	The focus of the learning is to look at what makes an effective team with the focus on collaboration and communication. Pupils will learn why motivating each other is important when working in a team	The focus of the learning is to look at what makes an effective team with the focus on collaboration and communication.	The focus of the learning is to look at what makes an effective team with the focus on collaboration and communication. Pupils will learn why motivating each other is important when working in a team in an unfamiliar environment.	The focus of the learning is to look at what makes an effective team with the focus on collaboration and communication.

E4S – Relationship and Sex Education

Learning objective	**I can identify some changes and signs of puberty and know that they are ongoing.** **Year 4 objectives recap** To understand changes that happen both physically and emotionally as they grow older To understand that some changes will happen without choice To identify that the changes in puberty are ongoing and usually happen between the ages of 8-17 years To be able to identify parts of the reproductive system in males and females and describe their functions Identify where to get help and support about the changes that happen at puberty	**To know the stages of a human life cycle including birth** *Y5 family and friendship relationship objectives to be threaded through as discussion points.* *To understand that all babies, human and animals have mothers and fathers* **COVERED IN SCIENCE IN DETAIL**	**To be able to identify parts of the reproductive system in males and females and describe their functions** *Consider how expectations are different in different relationships* *To feel empowered to end relationships when they become unhealthy*	**To use appropriate terminology for genitalia, for use in different contexts** *Recognise that no one has the right to tell people who they must marry or force them to marry someone they do not want to (this includes people's parents and their family)* *explain the importance of people reporting forced marriage, including if someone feels threatened or worried, and even if it might upset other people in the family or community*	**Explain what happens during periods (menstruation) and ejaculation and how to manage both**	**Explain why it is important and how to keep themselves clean during puberty** *Recognise that two people who love each other can also be in a committed relationship, and not be married* *identify why a couple might choose to marry or have a civil partnership and that this decision might be based on the couple's personal beliefs or values, (including cultural, religious, financial values)*	**To know it is ok not to be the same as the people you see online or in the media**

Learning Opportunity	Sharing baby pictures to initiate discussions about changes: physical and emotional. Children to use the labelling diagram activity as a discussion point for identifying changes that have happened from birth to now, and what they expect to see during puberty (e.g. hair growth, body odor etc, mood swings). Collate a class list of emotional and physical changes for puberty. Discuss that these changes stay with adults.	Children to know that babies in humans and the animal world are produced by a male and a female.	Using images and the cartoon interactive app children will learn what makes up the female and male reproductive system. https://bodytalk.org.au/puberty/puberty-explorer/	As a class, children will compile a list of words or names for their genitals that are not scientific (winky, foofoo) and know that these are slang words and are not correct terminology.	Children will understand why they menstruate. Children will know that there are a range of period products (sanitary towels, tampons, menstrual-cup, period pants) to use. Children will know where they can dispose of sanitary products around school (year 5, year 6 and disabled toilet). https://www.bbc.co.uk/iplayer/episode/m000t0zd/newsround-specials-lets-talk-about-periods	Children will focus on knowing the importance of taking control of keeping your own bodies clean. They will know that as they grow they will start to produce more sweat and bodily hair. They will realise they are responsible for their own hygiene. They will discover that various products are available for different parts of the body (bars of soap, shower gel, deodorant, toothpaste) to help keep clean. The children will understand the importance of changing underwear daily and washing clothes more frequently (school polo shirts, jumpers, pe kits due to sweat)	Children will realise that young people on television, in magazines, on social media, in adverts, video games and movies have been made to look and act differently. The children will discover that using makeup, camera angles, special effects, image editing, specialised language use and unsuitable behaviours portrays them to look younger, slimmer, taller, shorter, smarter or tougher than in reality.
Opportunities for oracy and drama	SE: Listening actively & responding appropriately SE: Turn taking C: Maintaining focus on task P: Fluency & pace of speech	SE: Turn taking C: Seeking information & clarification through question	P: Facial expression & eye contact C: Maintaining focus on task P: Clarity of pronunciation C: Seeking information & clarification through questions	L: Appropriate vocabulary choices L: Appropriate vocabulary choices SE: Turn taking SE: Listening actively & responding appropriately	SE: Listening actively & responding appropriately SE: Self-assurance L: Appropriate vocabulary choices C: Building on the views of others	SE: Listening actively & responding appropriately C: Seeking information & clarification through questions C: Structure & organization of talk	C: Maintaining focus on task C: Critically examining ideas & views expressed SE: Taking account of level of understanding of the audience L: Rhetorical techniques such as metaphor, humour, irony & mimicry
Key Questions	What types of change have you come across? Have they been big changes or little changes?	What is a human life cycle? What is pregnancy? Are all pregnancies the same length? (humans, cats, dogs, elephants)	What is a reproductive system? Why do we have one? Are female and males reproductive system the same?	What are the scientific words for the female and male genitals? Why do we use slang/made up names for them?	What is the menstrual cycle? Why is it important? What products do you know are available? What is a wet dream? Why do they happen? What is a normal penis?	What is personal hygiene? Why is it important? What body parts should you keep clean? What areas are of more importance? (armpits, genitals, teeth, feet)	Should you change yourself to fit in? Should you change yourself to feel comfortable with yourself?
Learning Outcome	Children will consider changes in their lives, how they felt and how they coped with it. Children will link this to puberty, identifying changes that will occur (physical and emotional)	Children will understand that our body will change in different parts of our life cycle (baby, toddler, child, teenager…). Children will know that to make a baby an egg from a female and a sperm from a male is needed.	Children to know the scientific names for the reproductive system in males and females and understand their functions.	Children to know the correct vocabulary of their genitalia (Vagina and Penis, Testes).	To understand the menstrual cycle and know what products are available. To understand ejaculation and why it occurs.	Children to understand the importance of personal hygiene (body, armpits, hair, feet, genitals, teeth, ears, nails)	Children to realise that social media and media sources portray young people in a glamorous way.

	and that these are ongoing.						
RE							
Learning objective							
Learning Opportunity							
Opportunities for oracy and drama							
Key Questions							
Learning Outcome							