

SCIENCE

**AT SHALFLEET AND YARMOUTH CHURCH OF ENGLAND
PRIMARY SCHOOLS**

NATIONAL CURRICULUM STATEMENT

Purpose of study

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Aims

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.



OUR INTENT

By the time our children leave our school, our science provision will have encouraged them to develop a questioning mind about ways in which science influences everyday life.

Our children will ask important questions about how things work and why things happen in a certain way. We aim to foster curiosity and excitement about the natural world in our children, as well as understanding that their skills in science can be used today and in the future.

They will be able to understand the world they are growing up in and gain life skills to better access it; becoming adults who strive to seek solutions to problems and answers to life's questions.

We strive to promote a joy and excitement for learning and to approach unknown and unexplainable phenomenon with awe and wonder.



The Federation of the Church Schools of Shalfleet and Yarmouth - Curriculum for Learning Overview

What are we trying to achieve?

Lifelong Achievement and Wellbeing

Curriculum Values

Design principles to inspire & challenge

How do we implement?

Components

Teaching for Learning

Approaches

EYFS/National Curriculum

What is the impact?

Successful Learning

Our curriculum impact can be measured by...

Our purpose is to educate children in an atmosphere of Christian love where all achieve the very best they can, now and throughout their lives

Conscious Community, Community Map, Cultural Capital

Relationships

We have strong partnerships and positive relationships

Determination

We are determined to do our very best to achieve

Respect

We show respect to others and the environment

Coherent learning links and pathways

Strong working partnerships

High quality outcomes, deep learning

Valuing all children, learning is accessible to all

Challenging, engaging and motivating

Opportunities for memorable experiences

Promotes independence and curiosity

Broad, relevant and balanced
Local, Mainland, Global

The curriculum as the entire planned learning experience

Lessons

Topics

Events/Trips

Environment

Enrichment/Inspire

Partnerships

Clear understanding of cognition and learning – Good subject knowledge – Skilful instruction, coaching and facilitating – Flexible and responsive teaching strategies – Stimulating and well organised learning environments – Effective use of assessment - High expectations and productive interactions

Sequences of learning that link key ideas in subject domains - rich connected learning journeys – clear progression of learning – flexible inclusion strategies to tackle educational disadvantage - social, moral, spiritual, cultural education

CLL

PSED

PD

Literacy

Maths

UW

EAD

Eng

Ma

Sci

Comp

D&T

Hist

Geo

A&D

Music

PE

MFL

PSHE

RE

Positive relationships and interactions

Appropriate learning opportunities understood by pupils

Children understand how to be successful

Oral and written feedback that has impact

Dialogic talk and rich questioning

Developing meta-cognition

Moderation underpins standards

Effective use of assessment driving tailored learning

Target setting and review

Systematic monitoring, action and review : Do design principles translate into an inspiring and challenging curriculum for all?
Evidenced by...

High achievement and outcomes for all across the curriculum

Good behaviour, positive attitudes and high attendance

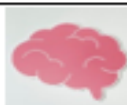
Teaching that is engaging and consistently good for all

Motivated teams & positive learning culture

Confident, kind, respectful, determined learners

Federation Vision for Science – Intention for Children
By the time our children leave our school, our science provision will have offered our children an understanding of the world through the disciplines of biology, chemistry and physics. Through scientific enquiry, the children will have explored processes and relationships building eagerness and inquisitiveness surrounding natural phenomena.

Big Ideas



Working scientifically – questioning, formulating investigations, performing tests, recording, concluding and evaluating

Biology – habitats, living things, animals, evolution, humans, plants,

Chemistry – materials and their properties, uses of materials, rocks, states of matter,

Physics – forces, Earth and space, light, electricity, sound, seasonal changes

Content and Sequencing (Broad, relevant and balanced)



Animals (including humans) - name common animals, draw parts of the human body, notice they have offspring, describe basic needs for animals and importance of exercise for humans (KS1) animals and humans needing the right nutrition, having muscles and skeletons for a purpose, know the human teeth, know the human digestive system, create food chains, describe changes to humans up to old age, identify and name the circulatory system, the impact of exercise, drugs and lifestyle on humans, and how nutrients and water are transported in humans and animals (KS2)

Plants – identify, name and describe plants and trees and observe plant growth (KS1) Identify and describe plant functions, their life cycle, and requirements for life (KS2)

Living things and their habitats – identify plants' and animals' habitats and how they suit them, explore differences between things alive, dead and that have never been alive, create simple food chains (KS1) living things can be grouped, use classification keys, recognise environments can change, describe reproduction in plants and animals, look at differences in life cycles, classify living things into broad groups, give reasons for animal and plant classification (KS2)

Electricity – learn about common appliances, create simple circuits with lamps and switches, name parts of a circuit, find insulators and conductors (LKS2) use symbols to draw circuits, explain how a buzzer's volume and bulbs brightness can be affected (UKS2) **Forces** – focusing on the forces created by magnets, attracting and repelling and their strength (LKS2) explain gravity, water and air resistance, friction, and forces in mechanisms (UKS2)

Materials – identify everyday materials, describe and group everyday materials, find out how solid shapes can be changed, compare suitability of materials (KS1) materials can change state when heated or cooled, group based on their properties, reversible and irreversible changes, dissolving materials (KS2)

Vision for the Federation Learning Principles in Science

Coherent Learning Links and Pathways:	Strong Working Partnerships:	High Quality Outcomes/Deep Learning:	Valuing All Children/Accessible Learning:	Challenging, Engaging and Motivating:	Opportunities for Memorable Experiences:	Promotes Independence and Curiosity:	Local, Mainland and Global:
Science work is underpinned by strong maths skills and report writing language skills.	Children will be able to perform scientific enquiry working together on range of experiments and investigations.	Children will be encouraged to use their scientific language fluently and confidently to explain concepts and phenomena.	All children have an opportunity to explore scientific processes at their level of understanding.	Children will be motivated through the use of practical investigations to bring the science to life in front of their eyes.	Engaging trips that build on scientific knowledge, encompassing a range of investigations.	Giving children ownership to explore scientific questions and natural phenomena that interests them.	Exploring different processes and concepts across local, mainland and global environments.

Links with English and Maths



Maths – measurement, data analysis, decimals, fractions, percentages, four operations, shape.

Literacy – report writing, research skills,

Progress



Evidence will be seen in books showing development within scientific enquiry.

Investigations will be recorded and evaluated in a depth suitable for the year group.

Scientific vocabulary will be shown to progress in complexity throughout the year groups.

Support



Everyone has access to the science National Curriculum. Activities adapted in accordance to previous assessment, where a child may not have got the background knowledge from a previous year group. This would be seen in a number of ways from using more visual links, to recapping key vocabulary etc.

PROGRESSION OF SKILLS

1. Knowledge
2. Skills
3. Vocabulary
4. Resources
5. Overview of coverage

SCIENCE	Links to EYFS	Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge	<ul style="list-style-type: none"> - Knowing similarities and differences in relation to places, objects, materials and living things. - Knowing features of their own immediate environment and how environments might vary from one another. - To make observations of animals and plants, explaining why some things occur and talk about changes. 	<p>Plants</p> <ul style="list-style-type: none"> - To be able to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. - To be able to identify and describe the basic structure of a variety of common flowering plants, including trees. <p>Animals including humans</p> <ul style="list-style-type: none"> - To be able to identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals - To be able to identify and name a variety of common animals that are carnivores, herbivores and omnivores - To be able to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) - To be able to identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense <p>Everyday Materials</p> <ul style="list-style-type: none"> - To be able to distinguish between an object and the material from which it is made - To be able to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock - To be able to describe the simple physical properties of 	<p>All living things and their habitats</p> <ul style="list-style-type: none"> - To be able to explore and compare the differences between things that are living, dead, and things that have never been alive - To be able to identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other - To be able to identify and name a variety of plants and animals in their habitats, including micro-habitats - To be able to describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. <p>Plants</p> <ul style="list-style-type: none"> - To be able to observe and describe how seeds and bulbs grow into mature plants - To be able to find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. <p>Animals, including humans</p> <ul style="list-style-type: none"> - To be able to notice that animals, including humans, have offspring which grow into adults - To be able to find out about and describe the 	<p>Plants</p> <ul style="list-style-type: none"> - To be able to identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers - To be able to explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant - To be able to investigate the way in which water is transported within plants - To be able to explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. <p>Animals, including humans</p> <ul style="list-style-type: none"> - To be able to identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat - To be able to identify that humans and some other animals have skeletons and muscles for support, protection and movement. <p>Rocks</p> <ul style="list-style-type: none"> - To be able to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties 	<p>Living things and their habitats</p> <ul style="list-style-type: none"> - To be able to recognise that living things can be grouped in a variety of ways - To be able to explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment - To be able to recognise that environments can change and that this can sometimes pose dangers to living things. <p>Animals, including humans</p> <ul style="list-style-type: none"> - To be able to describe the simple functions of the basic parts of the digestive system in humans - To be able to identify the different types of teeth in humans and their simple functions - To be able to construct and interpret a variety of food chains, identifying producers, predators and prey. <p>States of matter</p> <ul style="list-style-type: none"> - To be able to compare and group materials together, according to whether they are solids, liquids or gases - To be able to observe that some materials change state when they are heated or cooled, and measure or research the 	<p>Living things and their habitats</p> <ul style="list-style-type: none"> - To be able to describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird - To be able to describe the life process of reproduction in some plants and animals. <p>Animals, including humans</p> <ul style="list-style-type: none"> - To be able to describe the changes as humans develop to old age. <p>Properties and changes of materials</p> <ul style="list-style-type: none"> - To be able to compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets - I know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution - To be able to use knowledge of solids, 	<p>Living things and their habitats</p> <ul style="list-style-type: none"> - To be able to describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals - To be able to give reasons for classifying plants and animals based on specific characteristics. <p>Animals, including humans</p> <ul style="list-style-type: none"> - To be able to identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood - To be able to recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function - To be able to describe the ways in which nutrients and water are transported within animals, including humans. <p>Evolution and inheritance</p> <ul style="list-style-type: none"> - To be able to recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago - To be able to recognise that living things produce

	<ul style="list-style-type: none"> a variety of everyday materials To be able to compare and group together a variety of everyday materials based on their simple physical properties. <p>Seasonal Changes</p> <ul style="list-style-type: none"> To be able to observe changes across the four seasons To be able to observe and describe weather associated with the seasons and how day length varies. 	<ul style="list-style-type: none"> basic needs of animals, including humans, for survival (water, food and air) To be able to describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>Uses of everyday materials</p> <ul style="list-style-type: none"> To be able to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses To be able to find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 	<ul style="list-style-type: none"> To be able to describe in simple terms how fossils are formed when things that have lived are trapped within rock To be able to recognise that soils are made from rocks and organic matter. <p>Light</p> <ul style="list-style-type: none"> To be able to recognise that they need light in order to see things and that dark is the absence of light To be able to notice that light is reflected from surfaces To be able to recognise that light from the sun can be dangerous and that there are ways to protect their eyes To be able to recognise that shadows are formed when the light from a light source is blocked by a solid object To be able to find patterns in the way that the size of shadows change. <p>Forces and magnets</p> <ul style="list-style-type: none"> To be able to compare how things move on different surfaces To be able to notice that some forces need contact between two objects, but magnetic forces can act at a distance To be able to observe how magnets attract or repel each other and attract some materials and not others describe magnets as having two poles To be able to predict whether two magnets will attract or repel each other, depending on which poles are facing. To be able to compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials 	<ul style="list-style-type: none"> temperature at which this happens in degrees Celsius (°C) To be able to identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. <p>Sound</p> <ul style="list-style-type: none"> To be able to identify how sounds are made, associating some of them with something vibrating To be able to recognise that vibrations from sounds travel through a medium to the ear To be able to find patterns between the pitch of a sound and features of the object that produced it To be able to find patterns between the volume of a sound and the strength of the vibrations that produced it To be able to recognise that sounds get fainter as the distance from the sound source increases. <p>Electricity</p> <ul style="list-style-type: none"> To be able to identify common appliances that run on electricity To be able to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers To be able to identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery To be able to recognise that a switch opens and 	<ul style="list-style-type: none"> liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating To be able to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic To be able to demonstrate that dissolving, mixing and changes of state are reversible changes To be able to explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. <p>Earth and Space</p> <ul style="list-style-type: none"> To be able to describe the movement of the Earth, and other planets, relative to the Sun in the solar system To be able to describe the movement of the Moon relative to the Earth To be able to describe the Sun, Earth and Moon as approximately spherical bodies To be able to use the idea of the Earth's rotation to 	<ul style="list-style-type: none"> offspring of the same kind, but normally offspring vary and are not identical to their parents To be able to identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. <p>Light</p> <ul style="list-style-type: none"> To be able to use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye To be able to 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 To be able to use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. <p>Electricity</p> <ul style="list-style-type: none"> To be able to associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit To be able to compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches To be able to use recognised symbols when representing a simple circuit in a diagram.
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					<p>closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <ul style="list-style-type: none">- To be able to recognise some common conductors and insulators, and associate metals with being good conductors.	<p>explain day and night and the apparent movement of the sun across the sky.</p> <p>Forces</p> <ul style="list-style-type: none">- To be able to explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object- To be able to identify the effects of air resistance, water resistance and friction, that act between moving surfaces- To be able to recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	
<p>Skills (Investigations)</p> <ul style="list-style-type: none">- To run as a thread throughout all scientific work.	<ul style="list-style-type: none">- Enquiry skills.- Questioning skills – asking and responding to questions posed.- Exploration and observational skills – using first hand experience and secondary sources to explore and gather information to answer to question.	<ul style="list-style-type: none">- Asking simple questions and recognising that they can be answered in different ways- Observing closely, using simple equipment- Performing simple tests- Identifying and classifying- Using their observations and ideas to suggest answers to questions- Gathering and recording data to help in answering questions.	<ul style="list-style-type: none">- Asking relevant questions and using different types of scientific enquiries to answer them- Setting up simple practical enquiries, comparative and fair tests- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions- Identifying differences, similarities or changes related to simple scientific ideas and processes- Using straightforward scientific evidence to answer questions or to support their findings.	<ul style="list-style-type: none">- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs- Using test results to make predictions to set up further comparative and fair tests- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations- Identifying scientific evidence that has been used to support or refute ideas or arguments.			

Vocabulary	<ul style="list-style-type: none"> - Environment - Living things - Materials - Change - Animal - Plant - Observation - Feature - Similarity - Difference 	<p>Working scientifically – question, answer, observe, observing, equipment, identify, classify, sort, diagram, chart, map, data, compare, contrast, describe, biology, chemistry, physics, group, record.</p> <p>Plants – wild plants, garden plants, deciduous, evergreen, tree, plant, bud, root, bulb, seed, stem, blossom, petal, growth.</p> <p>Animals including humans – habitat, food chain, living, dead, amphibian, reptile, mammal, bird, fish, carnivore, herbivore, omnivore, survive, human and animal body parts, animal names.</p> <p>Everyday materials – wood, plastic, glass, metal, water, rock, hard, soft, stretchy, stiff, twist, push, pull, rough, smooth, bendy, waterproof, absorbent, brick, paper, fabric, elastic, foil, properties, rigid, flexible.</p> <p>Seasonal changes – summer, spring, autumn, winter, seasons, weather, difference</p>	<p>Working scientifically – as Year 1.</p> <p>Plants – water, light, temperature, grow, healthy, germination, reproduction.</p> <p>Animals including humans – adult, nutrition, survival, reproduce, lifecycle, grow, hygiene, exercise, water, food, air, and further animal names.</p> <p>Living things and their habitat – micro-habitat, food chain, healthy, seashore, woodland, shelter, ocean, rainforest, conditions.</p> <p>Everyday materials – cardboard, squashing, bending, twisting, types of metal objects, types of wooden objects, types of spoons (not glass), opaque, translucent, transparent.</p>	<p>Working scientifically – Research – relevant, scientific enquiry, comparative and fair test, systematic, careful observation, accurate, measurements. Equipment – thermometer, data logger, Data – gather, record, classify, present. Record – drawings, labelled diagrams, keys, bar charts, tables, oral and written explanations, conclusions, predictions, differences, similarities, changes, evidence, improve, secondary sources, guides, construct, interpret.</p> <p>Plants – functions, flowering plants, structure, nutrient, transported, fertiliser, pollination, seed formation and seed dispersal.</p> <p>Animals including humans – food groups – carbohydrate, fat, protein, vitamins, nutrients, minerals, fibre, fruit and vegetables, diet. Skeleton (common names for bones and major organs), protection, support, structure, joint, cartilage, muscles, movement, pull, contract and relax.</p> <p>Rocks – igneous, sedimentary, metamorphic, fossil, appearance, physical, organic matter, absorbent, non-absorbent, grains, crystal. Mary Anning.</p> <p>Light – reflection, dark is the absence of light, dangerous, shadow, spectrum, natural, artificial, surface, blocked, light source, straight, protect, patterns</p> <p>Forces and magnets – attract, repel, magnetism, magnetic, non-magnetic, magnetic field, poles, north, south, strength, surface, cobalt, iron, metal, aluminium, tin.</p>	<p>Working scientifically – as Year 3.</p> <p>Living things and their habitats – moss, nature reserve, fern, population, human impact, development, litter, deforestation, vertebrate, invertebrate.</p> <p>Animals including humans – human digestive system, tongue, saliva, oesophagus, stomach, acid, enzymes, intestines (small and large), waste product, faeces, anus, transport, teeth, incisors, canines, molars, grind, tearing, ripping, chewing, slicing, predators, prey.</p> <p>States of matter – solid, melt, freeze, liquid, evaporate, condense, gas, container, changing state, degrees Celsius, thermometer, temperature, water cycle, condensation, water vapour.</p> <p>Sound – vibrate, vibration, vibrating, air, medium, volume, pitch, faint, loudness, string, percussion, brass, insulate, woodwind, patterns, strength, distance, waves.</p> <p>Electricity – circuit, cells, wires, bulbs, switches, buzzers, lamp, battery, motor, voltage, loop, switch, series circuit, brightness, conductor, insulator, common, open circuit, closed circuit,</p>	<p>Working scientifically – Plan, variables, measurements, accuracy, precision, repeat readings, Record data – scientific diagrams, labels, classification keys, scatter graphs, bar graph and line graph, further comparative and fair test, casual relationships, degree of trust. Evidence – support, refute ideas or arguments, identify, classify and describe, patterns, systematic.</p> <p>Living things and their habitats – reproduction, plants – sexual and asexual prehistoric.</p> <p>Animals including humans – puberty, lifecycle, gestation, growth, foetus, fertilisation, length, mass, life expectancy, adolescence, adulthood, childhood.</p> <p>Properties and changes of materials – transparency, conductive, electrical and thermal, dissolve, solution, filtering, sieving, evaporating, reversible changes, irreversible changes, chemists, quantitative measurements, conductivity and insulation.</p> <p>Earth and Space – Earth, sun, moon, astronomy, telescope, planets (names), planet, solar system, rotate, orbit, axis, spherical, heliocentric, geocentric, hemisphere, season tilt, Aristotle, Ptolemy, Galileo, Copernicus, Brahe, Alhazem.</p> <p>Forces – air resistance, water resistance, gravity, theory of gravitation, accelerate, friction, decelerate and accelerate,</p>	<p>Working scientifically – as Year 5.</p> <p>Living Things and their habitats – micro-organisms, classification,</p> <p>Animals including humans – heart, lungs, liver, brain, kidney, skeletal, muscular, blood vessels, human circulatory system, impact, damage (alcohol/substances).</p> <p>Evolution and inheritance – inherited traits, adaptive traits, natural selection, offspring, vary, non identical, characteristics, genes, DNA, evolution, adaption, inherit, fossilisation, environment, Charles Darwin, palaeontology,</p> <p>Light – periscope, filters.</p> <p>Electricity – consolidate vocabulary learnt so far.</p>
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						direction, mechanism, pulley, gear, spring, break, Isaac Newton.	
Resources – Including link to Reading	<ul style="list-style-type: none"> - Outdoor classroom - Non-fiction and fiction books - Whole class internet use to research and find images - Pens and other recording materials - iPads for pictures - Reading labels and captions - Consumables - Visits 	<ul style="list-style-type: none"> - Outdoor classroom - Animal pictures/models - Online research - Book research - Online videos - Posters - Outside visitors - Material samples - Everyday objects using curriculum specific materials - iPads for pictures - Magnifying glasses - Consumables - Visits 	<ul style="list-style-type: none"> - Outdoor classroom - Animal pictures/models - Online research - Book research - Online videos - Posters - Outside visitors - Material samples - Everyday objects using curriculum specific materials - iPads for pictures - Magnifying glasses - Gardening equipment - Seeds and bulbs - Consumables - Visits 	<ul style="list-style-type: none"> - Outdoor classroom - Seeds and bulbs - Plant diagrams - Animal pictures/models - Online research - Book research - Online videos - Posters - Outside visitors - iPads for pictures - Different rock samples - Torches - Mirrors - Magnets - Magnetic/non-magnetic objects - Everyday objects/materials using curriculum specific materials. - iPads for pictures - Skeleton model - Consumables - Dark tent - Visits 	<ul style="list-style-type: none"> - Animal internal pictures/models - Teeth pictures/models - Online research - Book research - Online videos - Posters - Outside visitors - iPads for pictures - Musical instruments - iPads for pictures - Data logger - Apps relevant to sound and light capture - Thermometer - Examples of different liquids, gases and solids - Digital scales - Electrical circuit kit - Bulbs and batteries - Tape measure - Heating and cooling equipment - Filter paper - Sieve - Solar system model - Space camp equipment - Torches - Lever - Pulleys - Gears - Water tray - Stop watch - Consumables - Visits 	<ul style="list-style-type: none"> - Lifecycle pictures - Outdoor classroom - Diagrams of reproduction - Online research - Book research - Online videos - Posters - Outside visitors - iPads for pictures - Data logger - Thermometer - Examples of different liquids, gases and solids - Digital scales - Electrical circuit kit - Bulbs and batteries - Tape measure - Heating and cooling equipment - Filter paper - Sieve - Solar system model - Space camp equipment - Torches - Lever - Pulleys - Gears - Water tray - Stop watch - Consumables - Visits 	<ul style="list-style-type: none"> - Outdoor classroom - Pictures of humans, animals and micro-organisms - Animal organs for dissection - Scalpel - Model/pictures of the human circulatory system - Online research - Book research - Online videos - Posters - Outside visitors - iPads for pictures - Data logger - Digital scales - Electrical circuit kit - Bulbs and batteries - Tape measure - Torches - Mirrors - Stop watch - Consumables - Visits

OUR IMPLEMENTATION - ASSESSMENT



Class teachers use assessment to track the achievements of pupils through the computing subsections. This can influence next steps for pupils and the level of support needed.

I will use assessment to analyse summative data through the monitoring and evaluating process.

Key computing targets for each sequence of lessons and children should be assessed against these.

The assessment model is designed to support all pupils to access the computing curriculum and also challenge higher attaining pupils.

The assessment of computing is supported by the targets from the computing progression map and the assessment document is designed to support staff with accurate assessment measures by identifying children who have achieved targets and importantly inputting the names that have yet to achieve a target.

<div>  FEDERATION CURRICULUM ASSESSMENT  </div>									
Y	Computing			PE		RE		Art	
	INFORMATION TECHNOLOGY			DANCE		COMMUNICATE		KNOWLEDGE	
	INFORMATION TECHNOLOGY - GENERAL	Use the keyboard confidently to type at a suitable pace		Beginning to recognise dance movements and modify existing sequences when moving		Describe/ explain my own responses to the concept of belonging.		Give detailed observations about notable artists', artists' and designers' work	
		Use common keyboard shortcuts		Describe/ explain my own responses to the concept of interpretation.				Offer facts about notable artists', artists' and designers' lives	
		Organise files effectively using folders (p. 1)		Confident flexibility, techniques and movements to create a final sequence.		Describe/ explain my own responses to the concept of storytelling.		SKILLS	
	DATA	Use line and dot plots using more complex axes		Move appropriately and with the required style in relation to the situation, e.g. using various levels, speed of travelling and modify.		Describe/ explain my own responses to the concept of justice.		Use a variety of techniques to add effects, e.g. shading, reflection, labelling and cross-hatching	
		Design and create a dot plot		Beginning to show a change of pace and timing in their movements.		Describe/ explain my own responses to the concept of sound patterns.		Display movement and progression in drawings	
		Create a graph from a data (both dot plots and appropriate)		Use the space provided to his maximum potential.		Describe/ explain my own responses to the concept of space.		Use a variety of tools and extend the most appropriate	
								Use key vocabulary to	



FEDERATION CURRICULUM ASSESSMENT



Key area
of subject

Individual
target

Insert
names of
individuals
not
achieving
target

Key sub-
area of
subject

Y E	Computing INFORMATION TECHNOLOGY			PE DANCE		RE COMMUNICATE		Art KNOWLEDGE		
	INFORMATION TECHNOLOGY - GENERAL	Use the keyboard confidently to type at a suitable pace		Recognising the appropriate finger movements and multi-finger sequences when writing		Described/ explained my own responses to the concept of technology		Give detailed observations about suitable artists', artists' and designers' work		
		Use common keyboard shortcuts		Demonstrate strong movements throughout a dance sequence.		Described/ explained my own responses to the concept of interpretation.		Offer facts about suitable artists', artists' and designers' lives		
		Organise files effectively using folders [or S]		Combine flexibility, technique and movement to create a fluid sequence.		Described/ explained my own responses to the concept of storytelling		SKILLS		
	DATA	Generate a database using more complex queries		Move appropriately and with the required style in relation to the situation, e.g. using various levels, ways of travelling and multi.		Described/ explained my own responses to the concept of justice.		DRAWING	Use a variety of techniques to add effects, e.g. shadows, reflection, halftone and cross-hatching	
		Design and create a database		Recognise the value of range of pace and timing in their movements.		Described/ explained my own responses to the concept of sound/picture.			Draft movement and progression in drawing	
		Create a graph from a data [both databases and spreadsheet]		Use the space provided to his maximum potential.		Described/ explained my own responses to the concept of space.			Use a variety of tools and select the most appropriate	
									Use key vocabulary to	

MONITORING AND EVALUATING

Impact of the implementation of the computing curriculum is measured in a variety of ways.

These include:

- Pupil Conferencing
- Work Scrutiny – alongside teacher's planning
- Assessment data
- Learning walks
- Learning environment

EVIDENCE ATTAINED FROM THESE FOLLOWS ON THE NEXT SLIDES (SPLIT INTO YEAR GROUPS)



OUR IMPLEMENTATION: Long Term Planning

Link to Federation Long Term Planning for Science

https://drive.google.com/file/d/1IRl2MiDhbQMxMnoO6qwqI-B3_wEdMWXb/view?usp=sharing

OUR IMPLEMENTATION

Link to Federation Planning for Autumn Term:

https://drive.google.com/drive/folders/1DFAdU4cC3Th4VbvQPhs_NvgYPnVFWQx_?usp=sharing

Link to Federation Planning for Autumn 2 Term:

<https://drive.google.com/drive/folders/1ftShBRHwNXPc0b1l0ZkAZ-r4Cp4c0Cu7?usp=sharing>

Link to Federation Planning for Spring Term:

https://drive.google.com/drive/folders/1MnhojTvV2RhpG7L_R0T6ZC9s0J1LQVUD?usp=sharing

Link to Federation Planning for Summer Term:

<https://drive.google.com/drive/folders/1hOSxmQ20DtX52JAHW6QCws1w2Sl8Ksox?usp=sharing>



FEDERATION COVERAGE – AUTUMN TERM

EYFS Shalfleet



FEDERATION COVERAGE – AUTUMN TERM

Science Evidence Beach Class Autumn 1

Understanding the World

The Natural World:

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Guided activities linked to children's interests and the time of the year.

This half term we have started to explore the change in season from summer to autumn, making observations of the world around us to see physical changes between the seasons. We also update the weather on our calendar each day and this also allows us to think about changes in weather conditions and temperatures as we move into Autumn.

On a blackberry walk and a walk around the school premises, children looked at changing leaves, observing colour and the noises of decaying leaves. We have also been avidly watching the geese on the river Yar, using stories and information videos to understand their migration with the changing season.

Plants and growing were also key interests this half term with children working to plant new bulbs for the forthcoming spring.

EYFS Yarmouth



FEDERATION COVERAGE – SPRING TERM

EYFS Yarmouth



January 2022

Changing states – solids and liquids.

Continuing our learning with the story of Supertato, we decided to make some jelly. In the story, jelly is used to trap vegetables. We explored the concept of a solid and liquid and how we could change a solid block of jelly to a liquid and then to a solid. How solid would the jelly be? How could we describe what we saw at each stage of making the jelly?

Children used observational skills to describe what happened to the jelly cubes when we added water to them. Did the same happen with hot and cold water? We introduced children to the word 'dissolved.' What did we notice about the colour of the water? What had happened?

The children thought of different ways to speed up dissolving the jelly. Some children suggested stirring the jelly would make it dissolve quicker. Children also commented that the hotter the water the quicker it dissolved.

FEDERATION COVERAGE – SPRING TERM

EYFS Yarmouth



January 2022

Science Evidence Spring 1

Using inspiration from the story of Supertato and Supertato Evil Pea Rules, the children arrived to find that vegetables had been frozen in ice. We started to think about the best ways to free the vegetables. Some children thought the ice needed to be placed somewhere warm. Other children thought they could free the vegetables quicker by hammering the ice to break it up. We considered if larger or smaller pieces of ice would melt quicker and placed various pieces in the sunshine to see if our predictions were correct.

FEDERATION COVERAGE – SPRING TERM

EYFS Shalfleet



FEDERATION COVERAGE – SPRING TERM 2

EYFS Shalfleet: Magnets and Mixing Colours



FEDERATION COVERAGE – SPRING TERM 2

EYFS Yarmouth



FEDERATION COVERAGE – SUMMER TERM

EYFS Yarmouth

Link to evidence for the Summer Term:

Dental Nurse visit
Floating and Sinking
Changing states
Eggs and habitats
Growing plants
Our bodies

FEDERATION COVERAGE – SUMMER TERM

EYFS Shalfleet



SCIENCE SKILLS IN KEY STAGE I

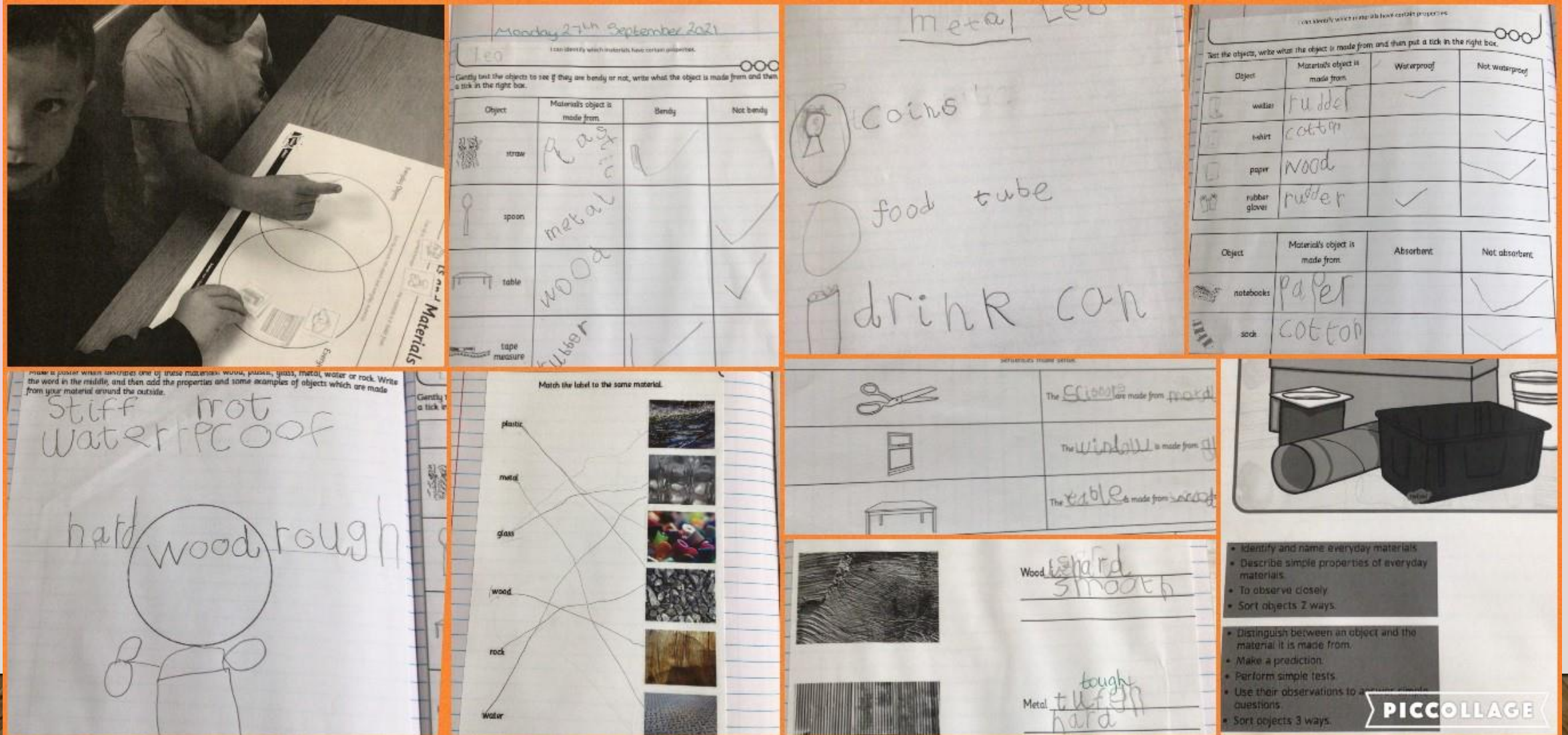
- Asking simple questions and recognising that they can be answered in different ways
- Observing closely, using simple equipment
- Performing simple tests
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions.

SCIENCE IN YEAR I

- Everyday materials
- Seasonal changes
- Animals including humans
- Plants

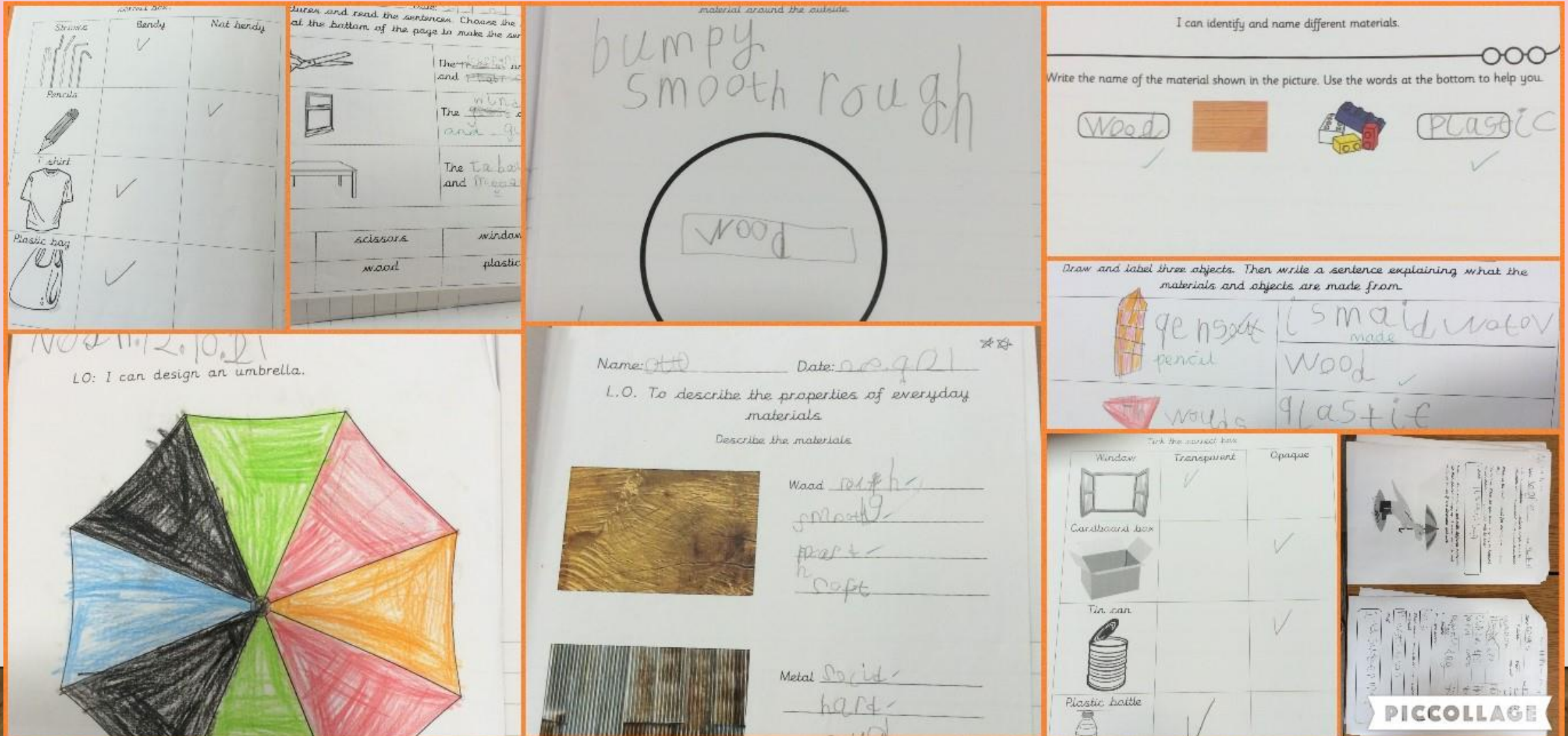
FEDERATION COVERAGE – AUTUMN TERM

Year One Yarmouth



FEDERATION COVERAGE – AUTUMN TERM

Year One Shalfleet



FEDERATION COVERAGE – AUTUMN TERM

Year One Shalfleet Umbrella experiment investigating suitable materials



FEDERATION COVERAGE – AUTUMN 2 TERM

Year One Yarmouth: Seasonal Changes



FEDERATION COVERAGE – SPRING TERM

Year One Yarmouth: Plants

How to Plant a Bean

Equipment

beans
watching can
soil
pots

What Do Plants Need?

soil
sun
water

Plants!

- I can describe how to plant a bean.
- To ask simple questions and recognise that they can be answered in different ways in the context of considering what plants need to grow.
- I can suggest a question about plants and a way we could answer it.
- To identify and name common wild plants.
- To find plants in the wild and identify them by a picture
- To say the name of some wild plants that I see.
- To collect information.
- To identify and name some garden plants
- To name some garden plants that I remember
- To identify trees by their leaves
- To identify and classify by classifying leaves as a deciduous or evergreen
- To sort deciduous and evergreen leaves
- To look closely at the leaves and match the description to what I see.
- To identify and describe the basic structure of a variety of common flowering plants by planting a bean.
- To identify and name a variety of common wild plants by going on a wild plant hunt.
- To talk about how my bean plant has grown.
- To say what plants need to grow well and give reasons for this.

To sort trees by their leaves

alder

ash

Deciduous or Evergreen?

Deciduous

oak
sycamore
hedge
chestnut

Evergreen

cedar
juniper

Plant Parts and Plant Needs

Plant Parts	Plant Needs
seeds leaves stems flowers roots fruit	sunlight water air soil

Monday 14th February 2022

To name parts of a plant

Monday 14th February 2022

The needs of plants

Monday 14th February 2022

Identify and name common garden plants

Sunlight
Water
Air
Soil

FEDERATION COVERAGE – SPRING TERM

Year One Shalfleet: Plants







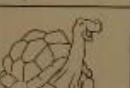

FEDERATION COVERAGE – SPRING TERM 2

Year One Yarmouth: Seasonal Change



FEDERATION COVERAGE – SUMMER TERM

Year One Yarmouth:

	Animal: Guinea pig Problem: Scratch near whiskers		Animal: fish Problem: Torn and red fins
	Animal: dog Problem: Sprained tail		Animal: Budgie Problem: Broken wing
	Animal: Tortoise Problem: Claws growing too long		Animal: cat Problem: Sore ears

Monday 4th

ole kirk Christiansen



He invented Lego
I like Lego because
I can build things of
old things

Inventors

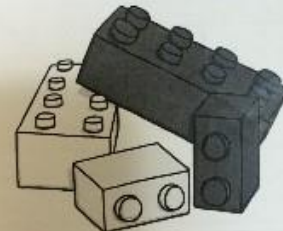


- To describe the simple physical properties of a variety of everyday materials, by identifying the properties of plastic in the context Lego.
- To describe the properties of Lego.
- To use observations to suggest answers to questions, by thinking about why Lego is made plastic.
- To ask simple questions and use simple secondary sources to find answers, by role playing an interview with Mae Jemison.

Wednesday 8th June 2022

properties of Lego

stiff



hard rough

shiny

water proof

Monday 20th June 2022

To ask & answer questions

Think of three questions that you could ask Mae Jemison about her life and her work as a scientist and an astronaut. Use the question words and phrases to help you. Then read Mae Jemison's story to see if you can find the answers to your questions.

Who...? How...? What...? When...? Why...?

How long...? Why did you...? What made you...? When was...?

Question 1: Why did you want to be an astronaut?

Mae's answer: I loved looking out at the window at all the stars

Question 2: How did you travel into space?

Mae's answer: I applied to NASA

Question 3: What were your hobbies when you were a child?

Monday 27th June

counting animals

Animals with wings	Animals with fur	Animals with fins	Animals with more than 4 legs
duck Penguin	Bear lion meerkat	shark clownfish	cat spider scorpion spider

FEDERATION COVERAGE – SUMMER TERM

Year One Shalfleet:



SCIENCE IN YEAR 2

- All living things and their habitats
- Plants
- Uses of everyday materials
- Animals including humans

FEDERATION COVERAGE – AUTUMN TERM

Year Two Yarmouth: All Living Things and Their Habitats



FEDERATION COVERAGE – AUTUMN TERM

Year Two Yarmouth: working scientifically living things

The collage displays six photographs of children's work, each showing a handwritten list of living and non-living things, often with small drawings.

- Top Left:** A note with two columns. The left column is titled 'LIVING' and lists 'Spider', 'Puking', and 'Kabel'. The right column is titled 'NON LIVING' and lists 'Sild', 'Grap', 'Briks', and 'Freddie'.
- Top Middle:** A note with two columns. The left column is titled 'LIVING' and lists 'ants', 'Wood', 'Lise', and 'Spider'. The right column is titled 'NON LIVING' and lists 'Ebony' and 'Shantika'.
- Top Right:** A note with two columns. The left column is titled 'non living' and lists 'bricks', 'rocks', and 'cheres'. The right column is titled 'LIVING' and lists 'pumpkin', 'flowers', and 'spider'. There are small drawings of a brick, rocks, and a spider.
- Middle Right:** A note with two columns. The left column is titled 'LIVING' and lists 'Grass', 'pumpkin', and 'spider'. The right column is titled 'non living' and lists 'Sink', 'House', and 'Tyre'. There are small drawings of a grass blade, a pumpkin, and a spider.
- Bottom Left:** A note with two columns. The left column is titled 'LIVING' and lists 'running', 'ants', 'plants', and 'sweet peas'. The right column is titled 'non living' and lists 'Scaffolds', 'Ladders', and 'Olivia', 'Amelle', 'Taliya', 'Seahorse'. There are small drawings of a running ant and a scaffolding structure.
- Bottom Middle:** A note with two columns. The left column is titled 'LIVING' and lists 'FLY', 'Grass', 'Bird', 'bush', 'Spider', 'leaf', and 'pumpkin'. The right column is titled 'non living' and lists 'cklake', 'Sild', 'smutls', 'blo tly', 'medem', 'stick', and 'Kassapacon'. There are small drawings of a fly, a grass blade, a bird, a bush, a spider, a leaf, and a pumpkin.
- Bottom Right:** A note with two columns. The left column is titled 'living' and lists 'grass', 'Spider', 'Pumpkin', 'Benji', and 'Frankie'. The right column is titled 'nonliving' and lists 'bricks', 'Plastic', 'Bath tub', 'Shoes', and 'met'. There are small drawings of a grass blade, a spider, a pumpkin, and shoes.

9th Sept 2021
Recording findings:
Living, Non-Living.
Location: School
garden.

PICCOLLAGE

FEDERATION COVERAGE – AUTUMN TERM

Year Two Yarmouth All Living Things and Their Habitats



FEDERATION COVERAGE – AUTUMN TERM

Year Two Shalfleet All Living Things and Their Habitats

Microhabitat Enquiry Programme

To gather and record data to help in answering questions by investigating the preferred habitat of microhabitat.

Diagram to show the number of microhabitats in a ...

	1	2	3	4	5	6	7	8
1								
2								
3								
4								
5								
6								
7								
8								

Microhabitat icons: Woodlice, Fly, Beetle, Spider, Ant, Earthworm, Ladybug, Caterpillar, Moth, Frog, Toad, Snail, Slug, Worm, etc.

What things might you find in a garden habitat?

ladybirds, squirrels, snails, rabbits, sun, hedgehogs, foxes, bees, grass, moss, plants, trees, fence, garden, etc.

Microhabitat Enquiry Programme

To identify animals within their habitats including microhabitats. To gather and record data to help in answering questions by investigating the preferred habitat of microhabitats.

Look carefully at your two habitats. Count up the number of each kind of microhabitat that you find in

Microhabitat	Habitat 1	Habitat 2
Woodlice		
Slug		
Snail		
Spider		
Ant		
Beetle		
Fly		
Worm		
Millipede		
Butterfly		
Caterpillar		
Wasp		
Beet		
Dragonfly		

My Habitat

LO: To identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants.

Draw your habitat, think about inside your habitat as well as all the things outside your habitat. Then label how they provide the basic needs.

How Do I Survive?

Plants and animals live in habitats that suit them. They have special features that help them to survive in their habitat. This is why animals that live in cold places have thick fur, and why animals that live in or near water are good swimmers.

FEDERATION COVERAGE – SPRING TERM

Year Two Yarmouth: All Living Things and Their Habitats revisit



FEDERATION COVERAGE – SPRING TERM

Year Two Yarmouth: Plants – investigating seeds and the parts of a plant

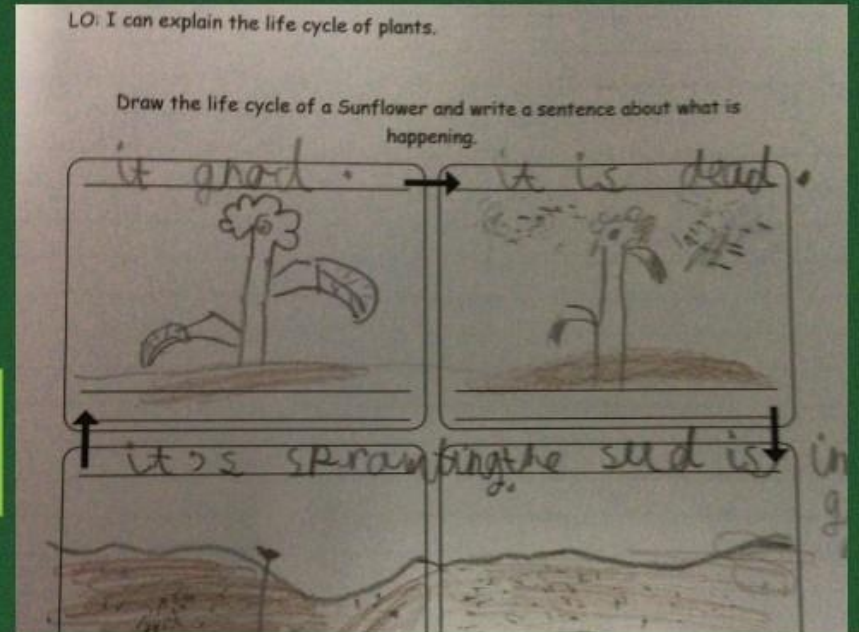


FEDERATION COVERAGE – SPRING TERM

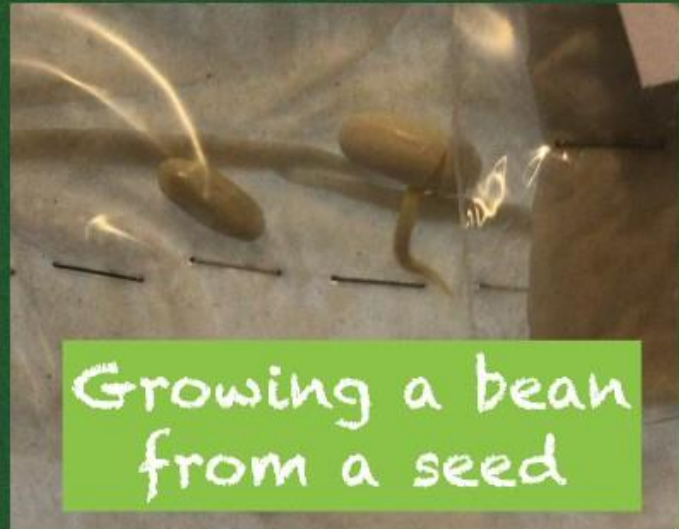
Year Two Yarmouth: Plants – What do plants need to grow? Growing our own healthy plant



Experiment to find out what a cress plant needs to grow into a healthy plant



Plant Growth Table		
LO: I can predict which plants will grow well and which will not		
Name: <u>Basil</u>		
Measure your plants with a ruler each week and record their heights in		
	What does it look like?	How tall is it?
Week 1	it's just a teen.	①
Week 2		
Week 3		
Week 4		



Growing a bean from a seed



FEDERATION COVERAGE – SUMMER TERM

Year Two Yarmouth:

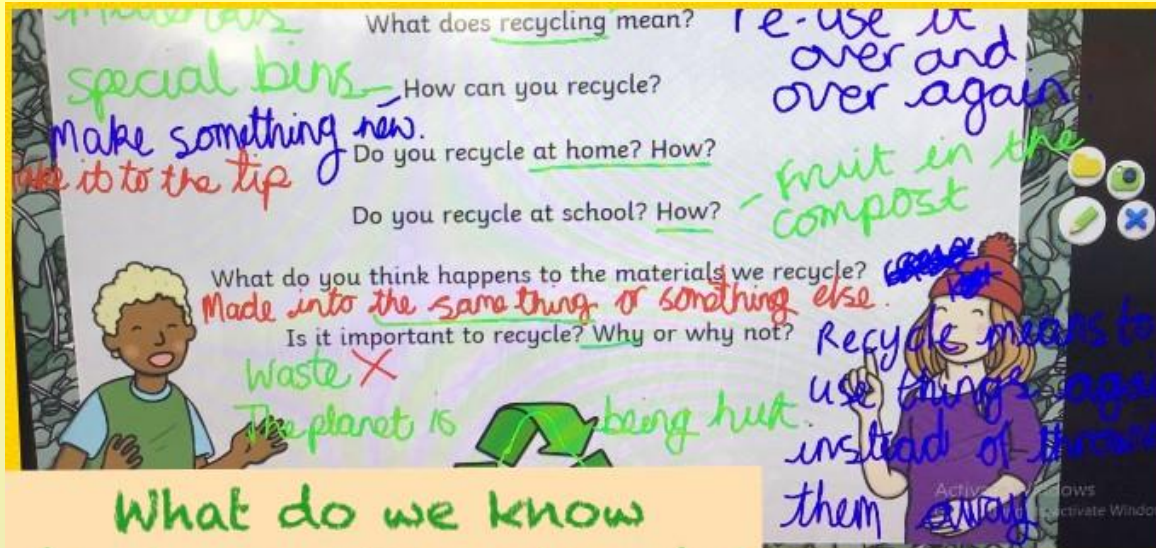


To celebrate the Platinum Jubilee we created crowns fit for a Queen using natural materials and photographic design.



FEDERATION COVERAGE – SUMMER TERM

Year Two:



FEDERATION COVERAGE – SUMMER TERM

Year Two Yarmouth:



SCIENCE

SKILLS IN KEY STAGE 2

- Asking relevant questions and using different types of scientific enquiries to answer them
- Setting up simple practical enquiries, comparative and fair tests
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identifying differences, similarities or changes related to simple scientific ideas and processes
- Using straightforward scientific evidence to answer questions or to support their findings.

SCIENCE IN YEAR 3

- Plants
- Animals including humans
- Rocks
- Light
- Forces and magnets

Year Three Yarmouth: Plants



FEDERATION COVERAGE – AUTUMN TERM

Year Three Shalfleet: Plants

L.O. To label parts of a flower and explain their function.

Can you match the parts of a flower to the job they do?

Petal	The 'neck' that holds up the stigma.
Stamen	Brush up the anther.
Stigma	Contains the pollen.
Style	Brightly coloured to attract insects.
Ovary	Catches grains of pollen.
Anther	Contains the pollen.
Pistil	Has two parts, the anther and the pistil.

the cross was made

L.O. To explore how seeds are dispersed.

Wind

acorn, poppy, dandelion

Eaten by animals

apple, nut, berries

Water

coconut

Absent parts of a plant

23.09.2021

L.O. To explore what plants need to grow

Movement	✓
Reproduction	✓
Sensitivity	✓
Growth	✓

I predict that plants can't grow in the dark because they might need light for food.

I predict that plants ~~can~~ will grow in artificial light but ~~can't~~ will turn yellow.

What experiment will we do?

They use their roots to get water. What do we already know?

Gerrinton, They need water, They need to sunlight.

How will we measure?

We will use a ruler to measure the height of the cross after 1 week.

	Week 1	Week 2	Week 3
Day 1	0	0	0
Day 2	0.5	2	2.5
Day 3	1	5	6
Day 4			
Day 5			

Why do we think the cross didn't grow?

Flower

Fruit

Leaves

Stems

Roots

I think the roots are for getting water from the soil.

I think the leaves absorb the sunlight to make food.

Exploring

peas, Himalayan balsam

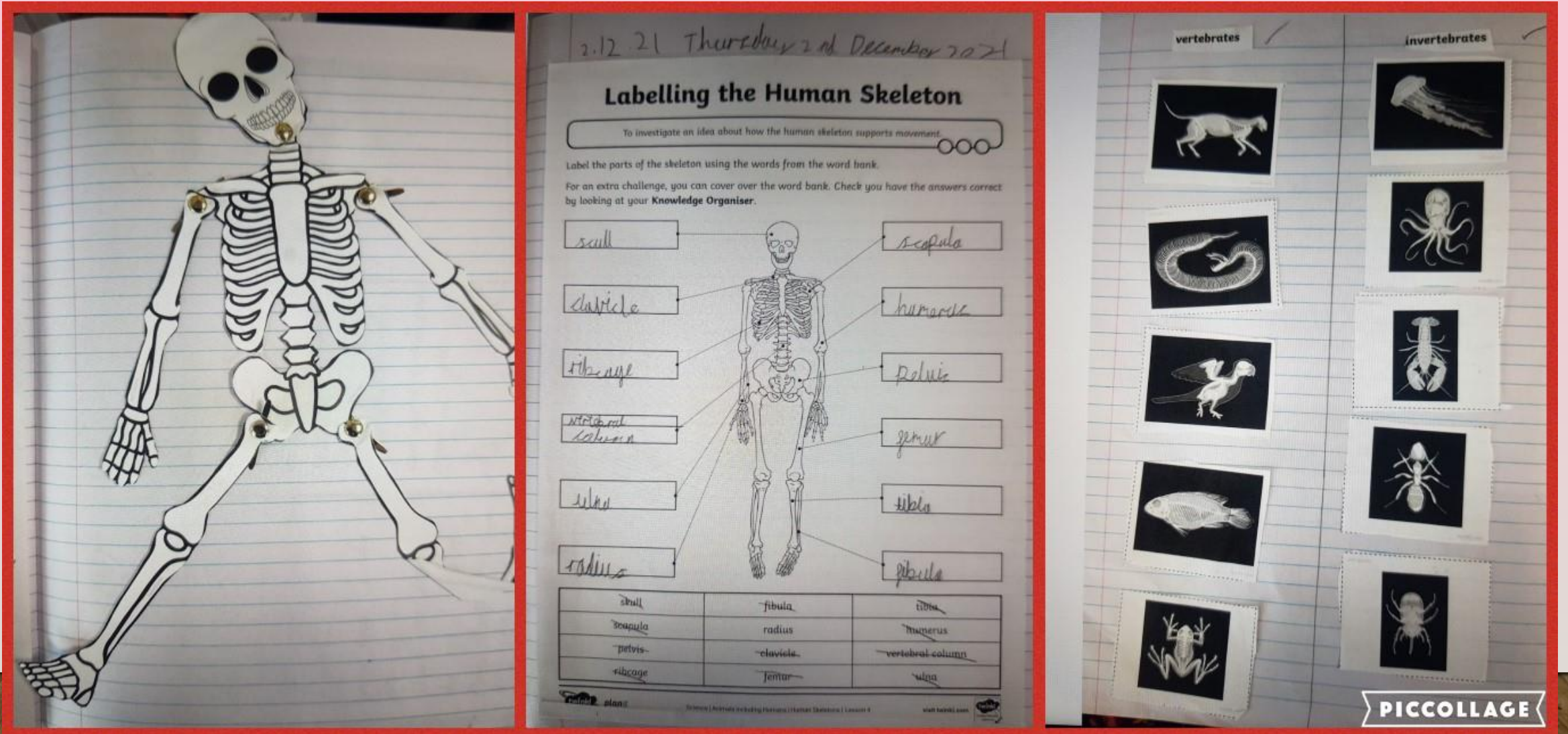
Catching a light

horse chestnut, burdock

L.O. To label parts of a plant and explain their function.

FEDERATION COVERAGE – AUTUMN 2 TERM

Year Three Yarmouth:



FEDERATION COVERAGE – SPRING TERM

Year Three Yarmouth: Rocks

Rock Identification Key

Start here

Do you see many crystals (if it)?

Yes: Does it feel waxy/slippery?

Yes: Marble (Sedimentary)

No: Do you see small grains or pebbles?

Yes: What colour are the pebbles?

Small grains: Sandstone (Sedimentary)

Large pebbles: Conglomerate (Sedimentary)

No: Does it have holes?

Yes: Pumice (Igneous)

No: Does it feel waxy/slippery?

Yes: Is it bright/shiny?

Yes: What is the surface like?

Shiny: Slate (Metamorphic)

Dull: Limestone (Sedimentary)

No: Does it have layers?

Yes: Chalk (Sedimentary)

No: Limestone (Sedimentary)

Y/N Chalk Granite Limestone Slate Sandstone Marble

/X /

Task Sheet 2

I know how fossils are formed

Draw pictures to show the stages of how a fossil is formed and write a sentence or two beneath each picture to explain.

1. An animal dies and its body is buried in mud.

2. More rocks come over the mud and all the bones are covered.

3. The mud turns to stone and the fossil is formed.

4. The fossil is found and the animal is brought back to life.

Science Working Wall

rocks

igneous

metamorphic

sedimentary

volcanic

plutonic

igneous

metamorphic

sedimentary

volcanic

plutonic

Friday 21st January 2022

I predict sandstone will be the most permeable and clay soil will be the least permeable because clay soil is really hard and sandy soil is really soft.

Thursday 3rd February 2022

Feedback

Thursday 3rd March 2022

Fossils are found in sedimentary rocks because fossils are fragile and over a lot of years layers cover it.

Fossils like bones they are dinosaurs so the animal would die first and

I can make careful, scientific observations of rocks

Rock Detectives Name: Tilly

1. granite crystallised

2. slate plane

3. chalk

4. limestone rough, grey, speckly

5. marble smooth, shiny, crystallised

6. sandstone rough, speckly

Friday 21st January 2022

I can test and compare three different soils

Soakers and Drainers Name: Tilly

Look at the 3 soil samples. Think about how they are different. Write some notes to describe each one.

Soil 1	Soil 2	Soil 3
lumpy sticky brown muddy crumbly dark	gritty light very dry	soiled dark brown sticky light roots wood seeds

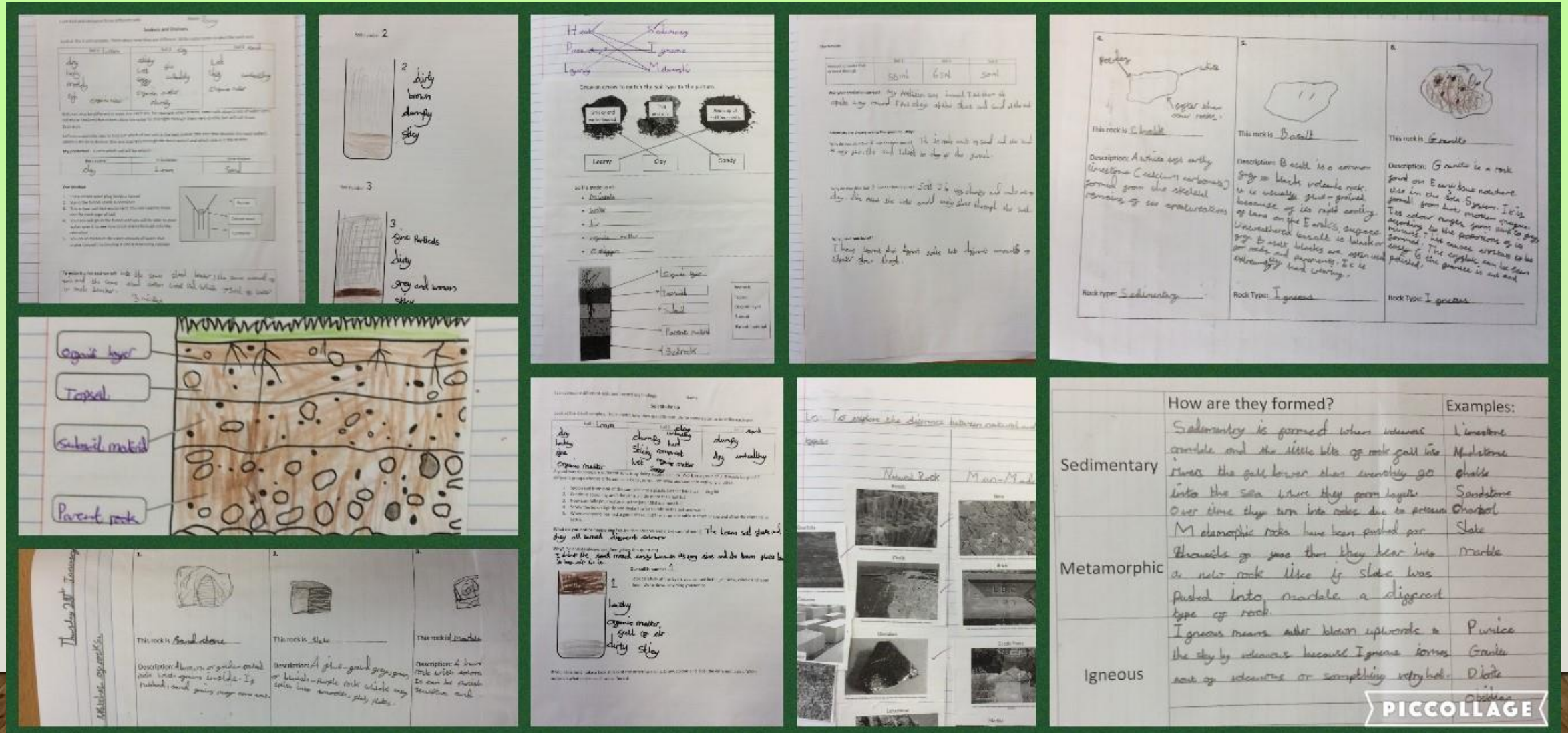
Soils can also be different in ways you can't see, for example when it rains, some soils absorb lots of water (let's call these Soakers) but others allow the water to drip right through them very quickly (we will call these Drainers).

Let's do a scientific test to find out which of our soils is the best soaker (the one that lets the most water through) and which is the best drainer (the one that lets the most water through) and which is the best soaker (the one that lets the most water through) and which is the best drainer (the one that lets the most water through).

My prediction - Guess which soil will be which!

FEDERATION COVERAGE – SPRING TERM

Year Three Shalfleet: Rocks



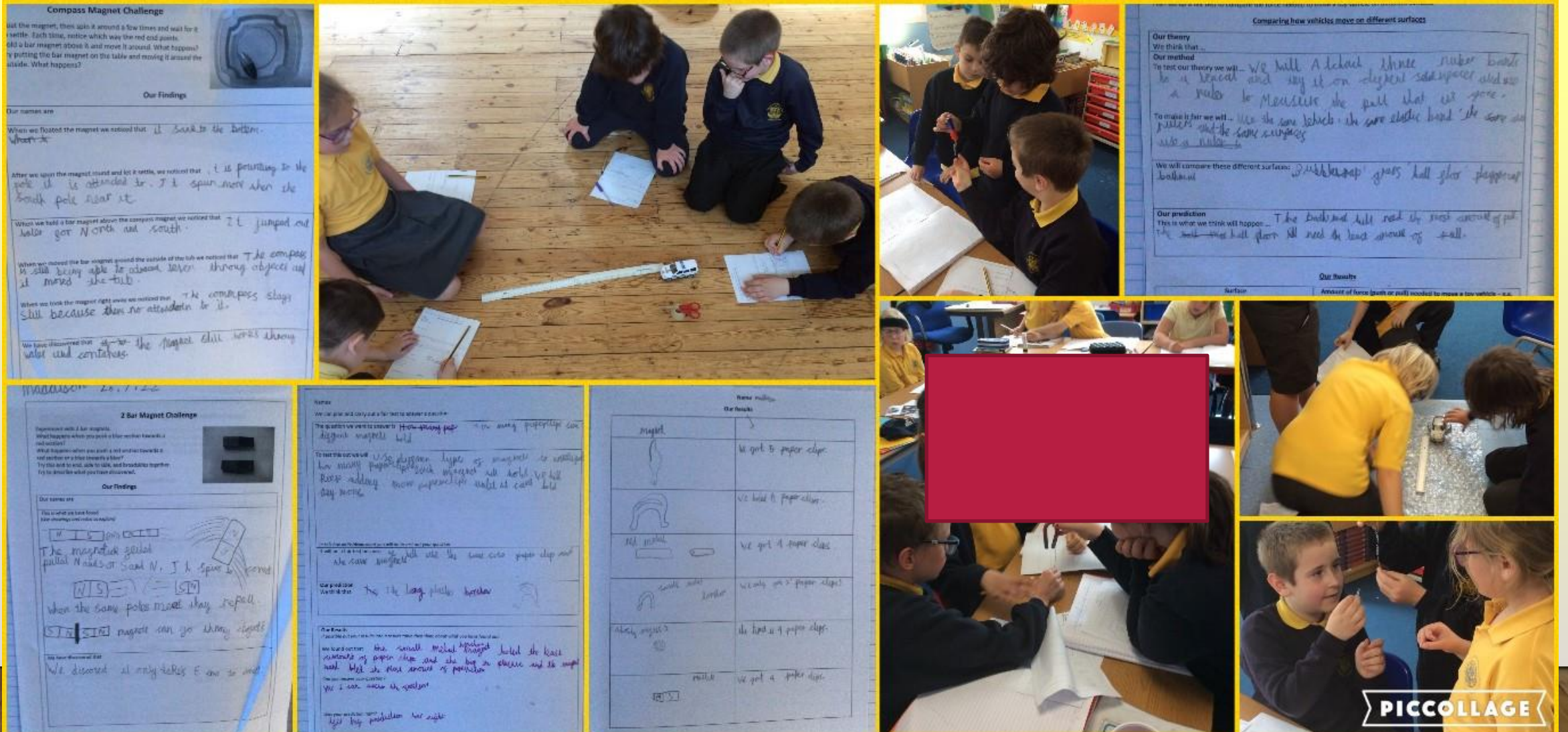
FEDERATION COVERAGE – SPRING TERM

Year Three Shalfleet: Rocks



FEDERATION COVERAGE – SUMMER TERM

Year Three Yarmouth: Forces



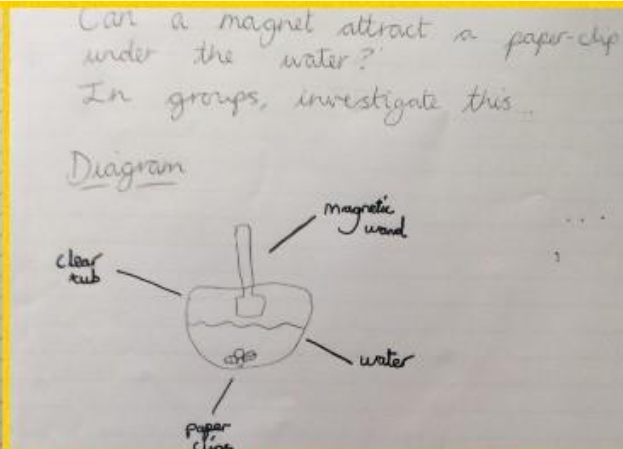
FEDERATION COVERAGE – SUMMER TERM

Year Three Shalfleet: Forces and Magnets

How strong are magnets? Could it pull a person off the ground?

Attracted not	Not Attracted
Other Magnets	Ruler's, Glue sticks, Purple pen, pencils.
Scissors	books.
Table legs	Paper
Radiator	Chairs
The Bell	Tables
Pins	Plastic water bottles

Other magnets, scissors, Table legs, Radiators, the bells and pins have not been attracted to a magnet.



NAME: Emilia

We can plan and carry out a test that to answer a question.

This question we want to answer is:

Which type of magnet is the strongest?

To test this out we will:

use four types of magnet and we will investigate how many paper clips each will hold.

In this box write/show what you will do to test and your answer.

It will be a fair test because:

the only thing we will change is the different Magnets.

Our prediction is:

the bar magnet will be the strongest magnet.



NAME: Emilia

Attractive Objects – Guessing Game

Object	My Guess (✓ or ✗)	Attracted to magnet? (✓ or ✗)
	✓	✓
	✗	✗
	✗	✗
	✓	✓
	✓	✓
	✓	✓
	✗	✗
	✗	✗
	✓	✓
	✓	✓
	✗	✗
	✗	✗



1. A push is a force.

2. A pull is a force.

3. Magnets attract metal, not plastic.

4. A magnet attracts which is a force.

5. If you get a piece of paper and 2 magnets, one on each side and move them closer together, more than one they both will move.

6. A force is when something moves forwards, backwards and to the side.

What would I like to find out?

1. How does a magnet attract another magnet?

2. What is a magnet?

3. What are magnets used for?

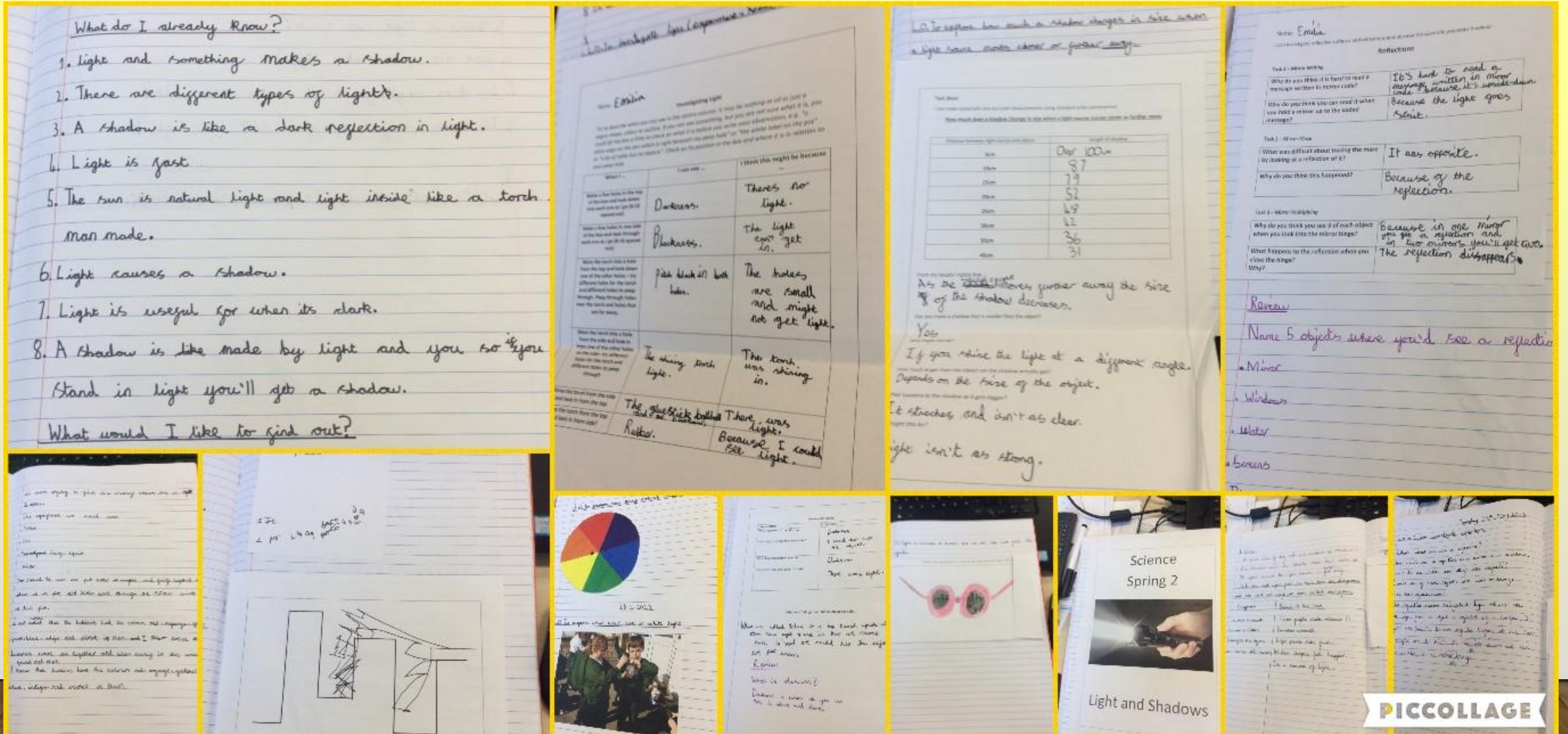
Materials	Are Magnetic
Table leg	Ruler
Spoon	Coat Hock
peg	Paper
paper clips	Glue
wire	Pencil
magnets	

The only objects that are magnetic are made of steel or have a part of it that is made of steel (scissors).



FEDERATION COVERAGE – SUMMER TERM

Year Three Shalfleet: Light and Shadows



SCIENCE IN YEAR 4

- Living things and their habitats
- Animals including humans
- States of matter
- Sound
- Electricity

FEDERATION COVERAGE – AUTUMN TERM

Year Four Yarmouth: Plants



Year Four Shalfleet: Plants

[illegible]

FEDERATION COVERAGE – AUTUMN 2 TERM

Year Four Yarmouth: Animals including Humans

LO: To investigate how the human skeleton supports movement.

Investigation

To investigate how the human skeleton supports movement.

Questions: Can people with longer femurs jump further?

Equipment: A measuring tape or ruler, a chalk, a jumping pit or a surface you can mark.

What are we learning in our investigation?

What are we measuring in our investigation?

What are we going to keep the same in our investigation?

Circle the correct answer.

the length of femur of the person (jumping) ✓

the type of jump

the type of surface

Circle the correct answer.

height of jumpers ✓

length of jump

length of foot

Circle the correct answer.

the surface, surface on ✓

the length of femur ✓

Describing How Muscles Work

To explain how bones and muscles work together to create movement.

Draw your model here

Next, fill in the gaps with words from the word bank.

You will need to use some words more than once.

When the arm raises up, the biceps contracts.

This means that the biceps gets shorter.

At the same time that the biceps contracts, the triceps relaxes.

Wednesday 1st December 2021

LO: To be able to recognise parts of the human skeleton.

Labelling the Human Skeleton

To learn, get on facts about how the human skeleton supports movement.

Label the parts of the skeleton using the words from the word bank.

For an extra challenge, you can cover over the word bank. Check you have the answers correct by looking at your Knowledge Organiser.

Wednesday 8th Dec 2021

LO: To explain how bones and muscles work together to create movement.

Client's name _____ Researchers' names _____

Do some people have stronger muscles because they use them more?

Our prediction is... yes

We think this because... if someone was lifting a book and someone was lifting a weight the person lifting the weight would have stronger muscles.

To investigate this question we will collect data on...

Either use this table to collect your data, or draw your own on the back of this sheet.

Title:

Person	Height	Weight
Summer	6.00	50
Evangelina	4.00	50
Jacob	6.50	50
Rileigh	6.00	77

Results (What happened?)

Name of Person Jumping	Length of Femur	Distance Jumped
Summer	43 CM	143 CM
Faye	41 CM	91 CM
Dylan	39 CM	115 CM
Marie	44 CM	87 CM
Jacob	45 CM	146 CM

Write down the people in order, starting with the person who did the longest jump and finishing with the person who did the shortest jump.

1st Jacob 45cm 146cm

2nd Marie 44cm 87cm

3rd Summer 43cm 143cm

4th Faye 41cm 91cm

5th Dylan 39cm 115cm

6th Jacob 45cm 146cm

Conclusion (What have we found out?)

Looking at these results, I can see that the length of someone's femur does/does not affect how far they can jump. Some of the children with small femurs can jump quite far.

Statement to investigate: Food with more sugar contains more sugar.

Food	Nutrient Information 1: Sugar	Nutrient Information 2: Sugar	Does this food support the statement? (✓ or ✗)
bananas	18g ✓		✗ ✓
Blackberries	7g ✓		✗ ✓

Is this statement true or false? false

How do you know? because bananas have 18g of sugar and blackberries have 7g of sugar.

Investigating Statements

Statement to investigate: Foods with more than 4 grams of protein get every 100g are always high in fat.

Food	Nutrient Information 1: Protein	Nutrient Information 2: Protein	Does this food support the statement?
------	---------------------------------	---------------------------------	---------------------------------------

Number of teeth (x-axis)

Number of legs (y-axis)

Science

Sorting into Food Groups

PICCOLLAGE

FEDERATION COVERAGE – AUTUMN 2 TERM

Year Four Yarmouth: Animals including Humans

Food

Food	Main Food Group	Nutrient
cucumber	Vegetables	Vitamins
wholegrain rice	Grains	Vitamins
chicken breast	Protein	Protein
tomatoes	Vegetables	Vitamins
bananas	Fruit	Vitamins
strawberries	Fruit	Vitamins
grapes	Fruit	Vitamins
Yoghurt	Dairy	Protein

Sorting into Food Groups

Sort foods into food groups and find out about the nutrients that different foods provide.

Look carefully at the foods that each of these meals contain. Write down the name of each food, the main food group that it is in and the nutrients that it provides (remember more than one nutrient).

Meal 1	Food	Main Food Group	Nutrient
Meal 1	Roasted chicken	Protein	Protein
	Chips	Carbohydrates	Carbohydrates
	Chocolate sauce	Sugar	Sugar
	Cherry	Fruit	Vitamins
	Chocolate cream	Dairy	Protein
	Ice cream	Dairy	Protein

What it does/they do

Energy

Growth and repair

Helps you to digest the food you have eaten

Energy

Keeps you healthy

Keeps you healthy

Nutrients around the body and helps to get rid of waste

Investigating Statements

To explore the nutritional values of different foods by gathering information from food labels.

Use the Food Labels Sheet to investigate if the statements are true.

1. Foods that are high in fat are always also high in salt.
2. Fruit snacks contain no sugar at all.
3. Foods that are high in fat are always high in saturated fat.
4. Foods which have 5g or more of fibre for every 100g are always low or medium in sugar content.
5. Foods with more than 5g of protein for every 100g are always high in fat.

Statement to investigate: Foods that are high in fat are always also high in salt.

Food	Nutrient Information 1	Nutrient Information 2	Does this food support the statement? (✓ or ✗)
Crisps	27g high	1.5g high	✓
Crunchy	28g high	1.5g high	✓
Crunchy	21.1g high	0.2 low	✗
Crunchy	63.5g high	Three low	✗

Is this statement true or false? **false**

Sorting into Food Groups

Sort foods into food groups and find out about the nutrients that different foods provide.

Look carefully at the foods that each of these meals contain. Write down the name of each food, the main food group that it is in and the nutrients that it provides (remember more than one nutrient).

Found in... (examples)

Carbohydrates

Protein

Fats

Sugars

Water

What it does/they do

Energy

Growth and repair

Helps you to digest the food you have eaten

Energy

Keeps you healthy

Keeps you healthy

Nutrients around the body and helps to get rid of waste

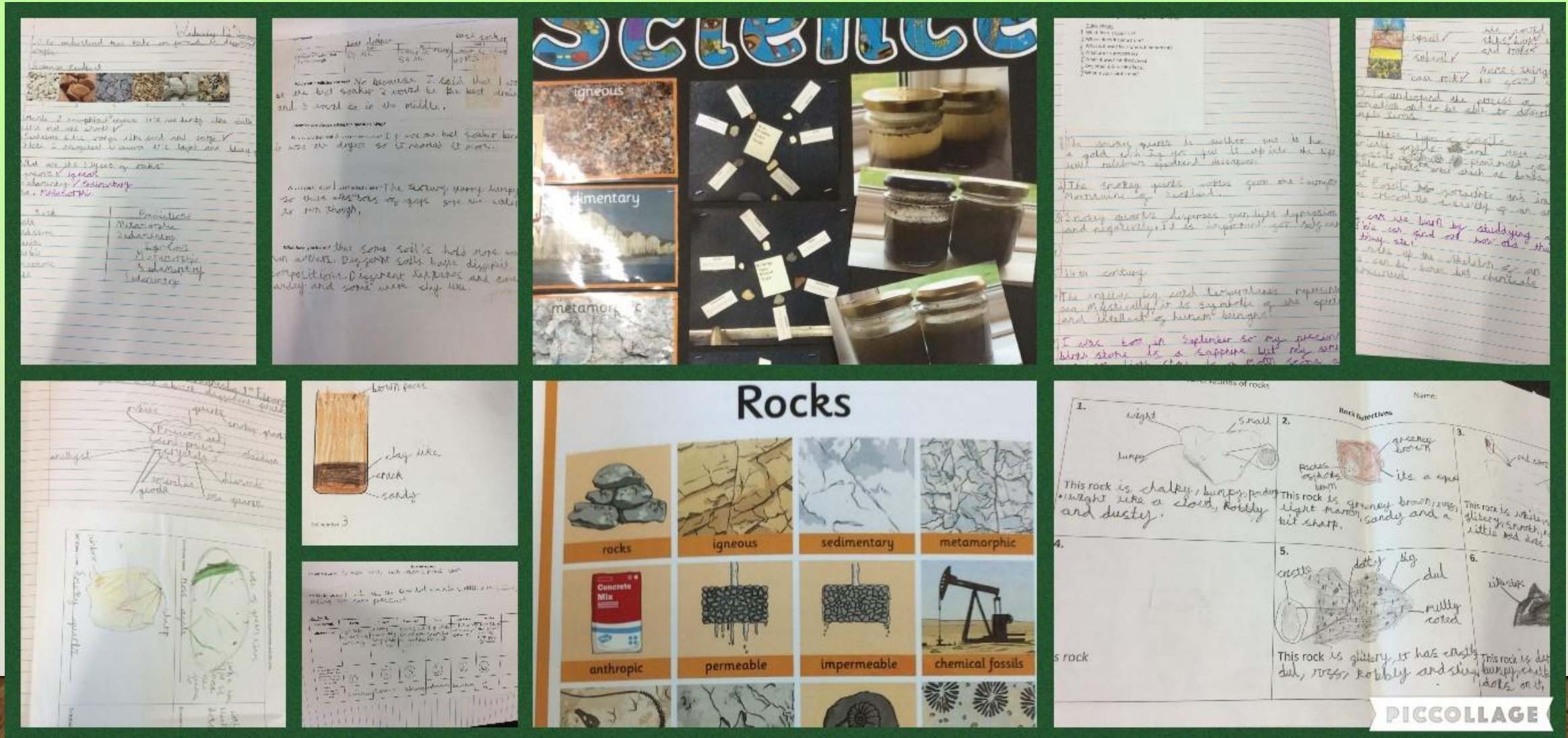
Remember It Quiz

Fill in the gaps on this nutrient grid.

Nutrient	Found in... (examples)	What it does/they do
carbohydrates	rice, pasta	provides energy
protein	chicken, fish	helps growth and repair
fiber	apples, butters	helps you to digest food
fats	oils, butter	provides energy
vitamins	carrots, leeks	keep you healthy
minerals	bananas, water	keep you healthy
water	tap water, bottled water	keeps you healthy

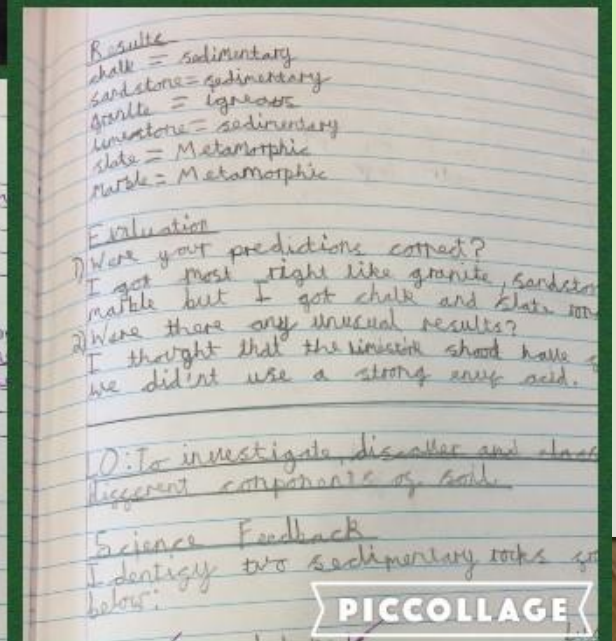
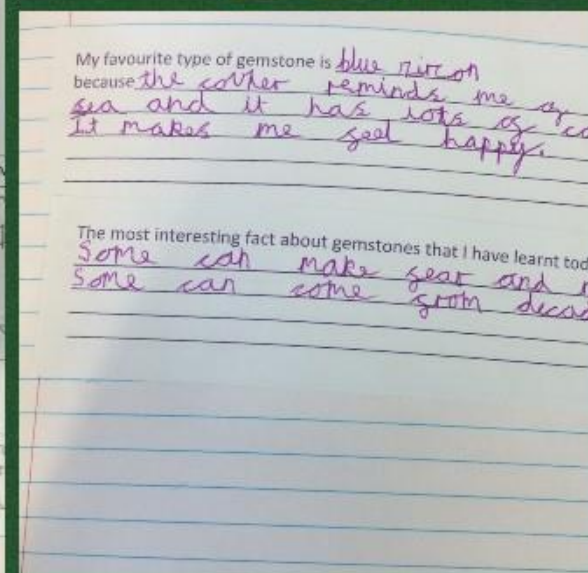
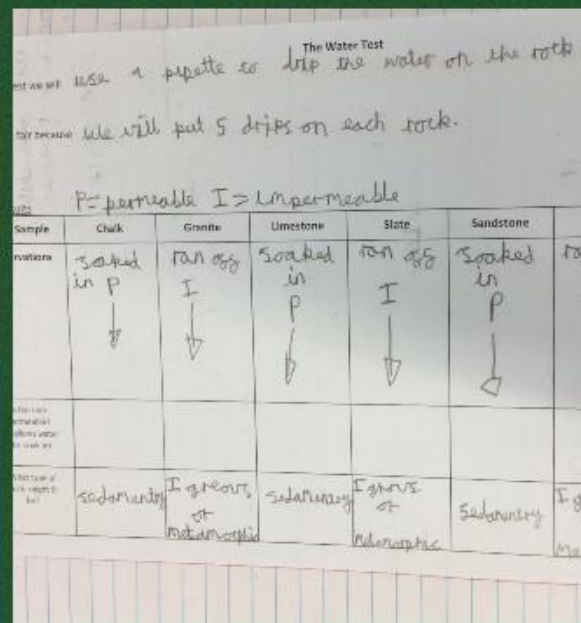
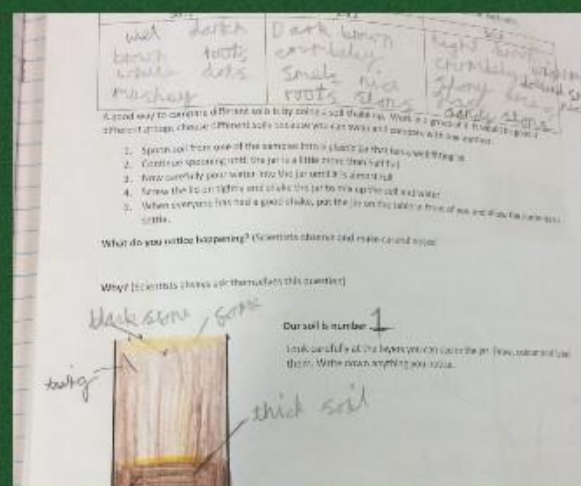
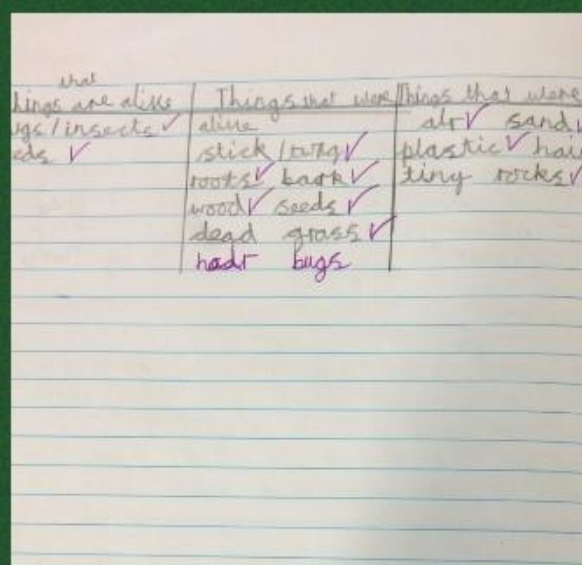
FEDERATION COVERAGE – SPRING TERM

Year Four Yarmouth: Rocks



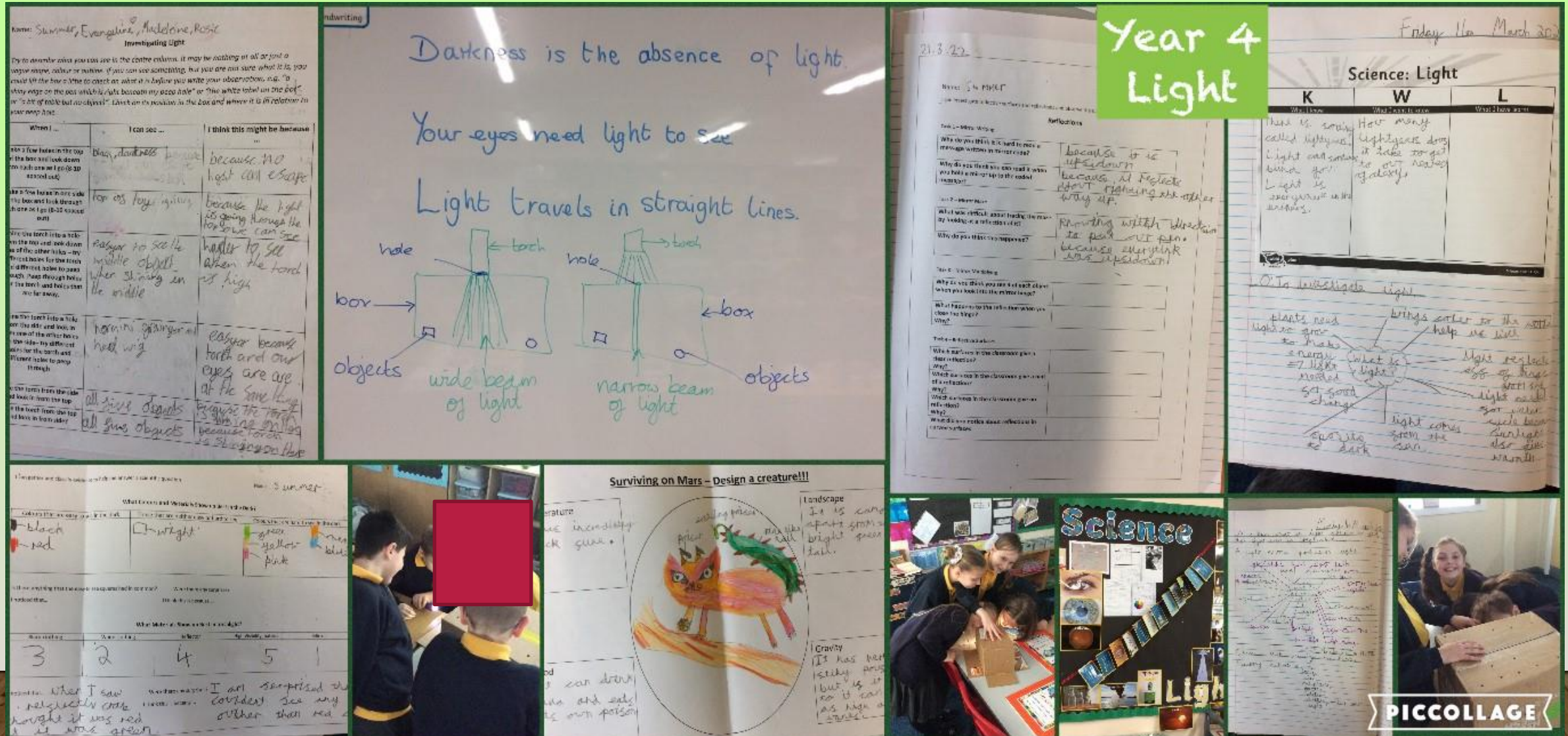
FEDERATION COVERAGE – SPRING TERM

Year Four Yarmouth: Rocks



FEDERATION COVERAGE – SPRING TERM 2

Year Four Yarmouth: Light




FEDERATION COVERAGE – SUMMER TERM 2

Year Four Yarmouth: Forces and Magnets

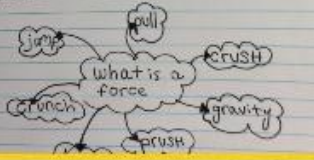
Monday 16th May 2022

LO: To explore forces and discover that a magnet can act without contact



When the ball is thrown it's been pushed. The ball is pushed down and is then pushed upwards to bat the ball so it's been pushed and pulled.

LO: To set up and conduct a comparative fair test, record measurements and discuss results.



serene Rylee Harry


When the ball is thrown it's been pushed. The ball is pushed down and is then pushed upwards to bat the ball so it's been pushed and pulled.

9.5.2022

Science: Forces and Magnets

K	W	L
What I know	What I want to know	What I have learnt
Sometimes magnets stick together and sometimes they move away from each other. Crushing is a type of forces. Magnets stick to some metals. Magnets try to stick to each other through some materials.	I would like to know what the strongest magnets and forces are.	It takes more force to make a vehicle start moving on rough surfaces than smooth ones.

LO: To set up and conduct a comparative fair test, record measurements and discuss results.

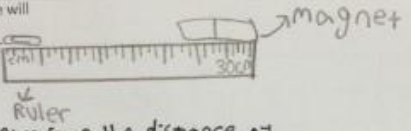


Names: Serene Sophie Faye Maddie Harry

We can plan and carry out a fair test to answer a question

The question we want to answer is which magnet is the strongest?

To test this out we will

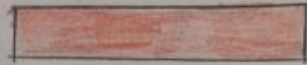




We will measure the distance of the magnet to the paper clip when it starts to move the clip.

In this box write/draw what you will do to test out your question

It will be a fair test because we will use the same ruler, same paper clip and the paper clip always starts on 0cm and so does the magnet.

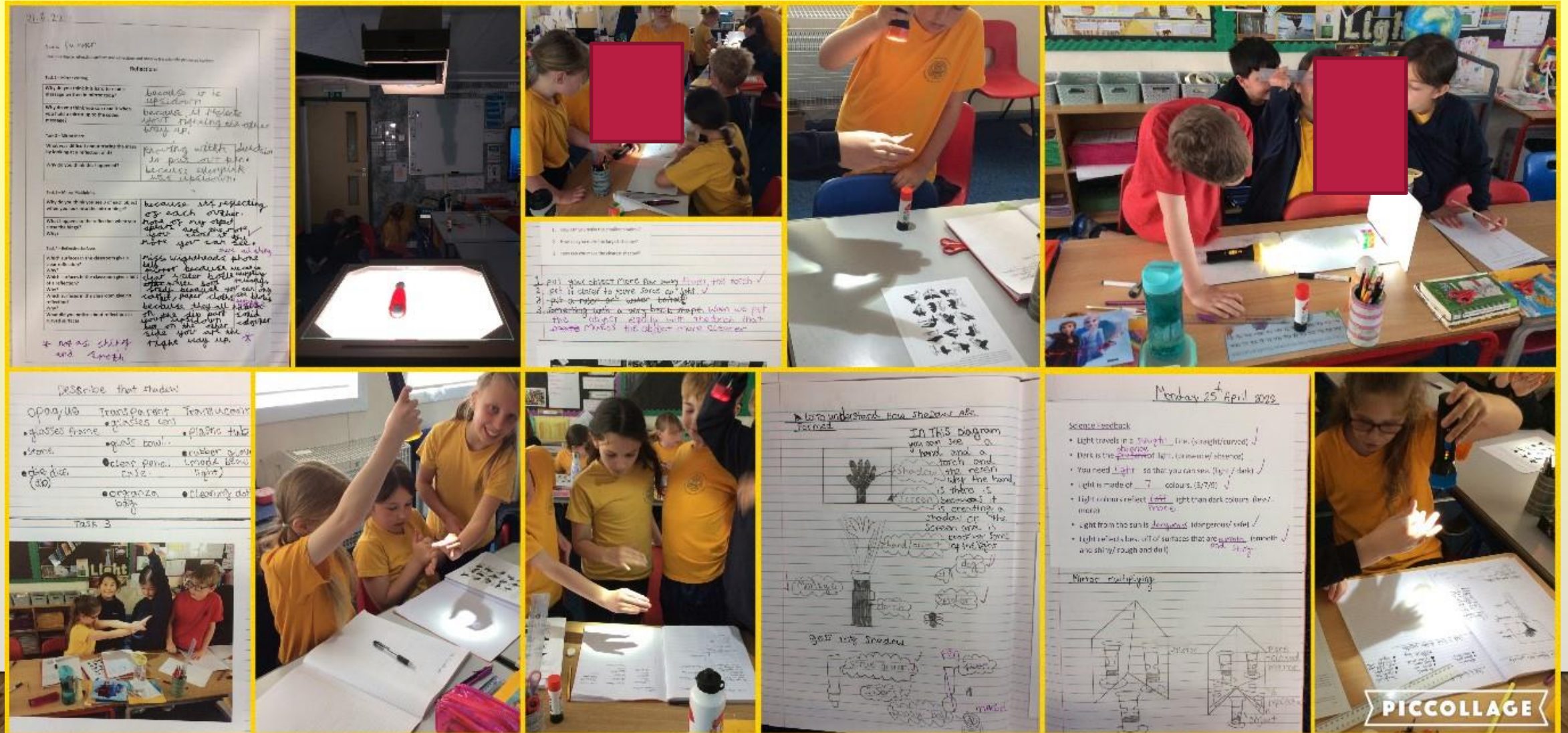
Forces and Magnets

Magnet type	Distance
	2.2cm
	1.5cm
	0

PICCOLLAGE

FEDERATION COVERAGE – SUMMER TERM 2

Year Four Yarmouth: Light

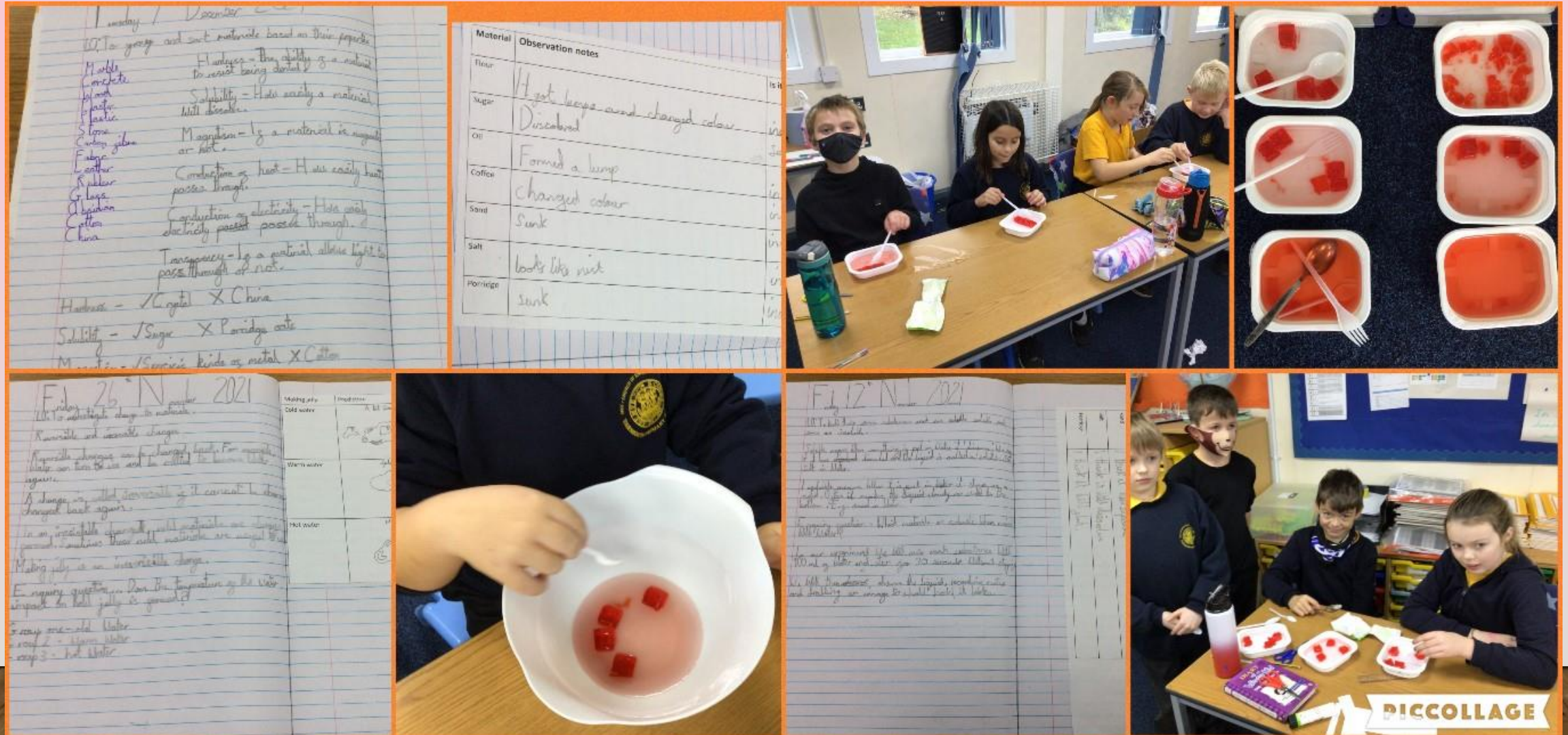


SCIENCE IN YEAR 5

- Living things and their habitats
- Animals including humans
- Properties and changes of materials
- Earth and space
- Forces

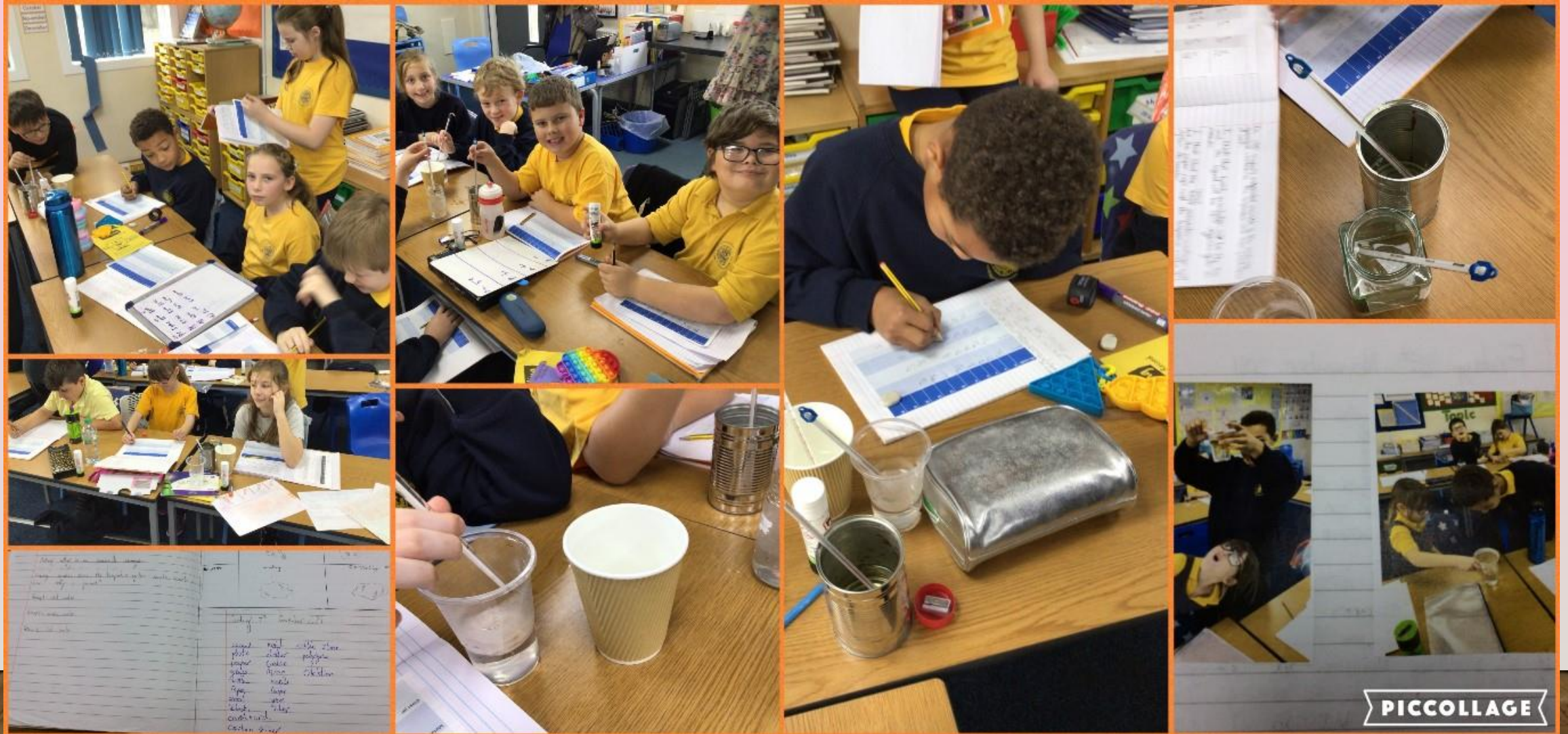
FEDERATION COVERAGE – AUTUMN TERM

Year Five Yarmouth:



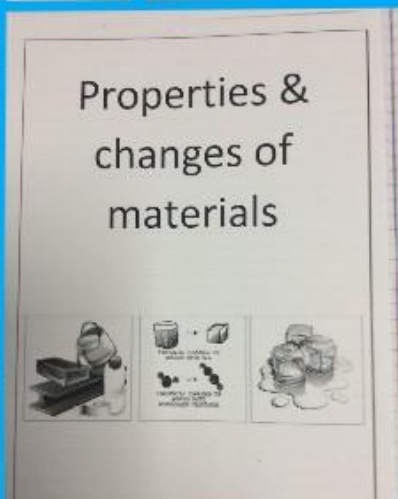
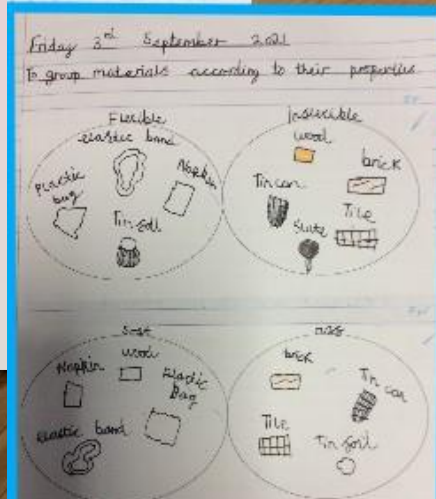
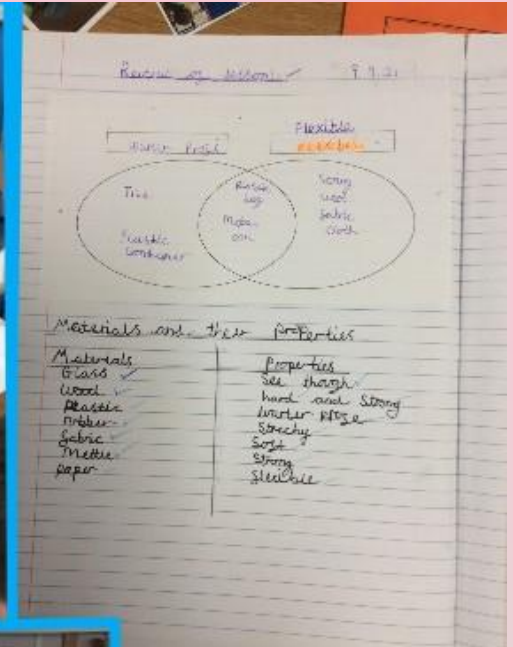
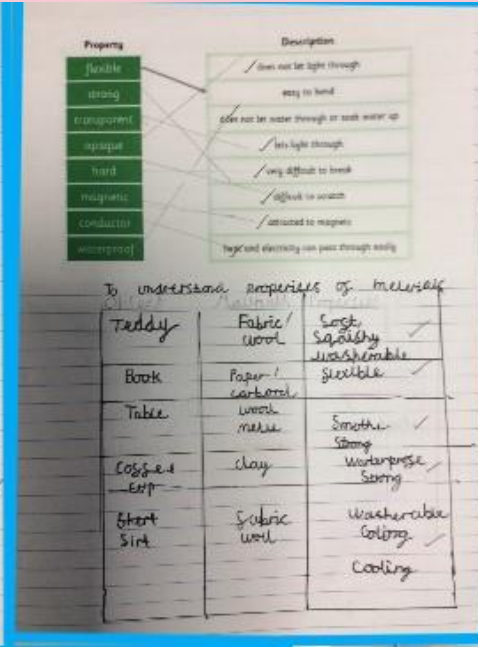
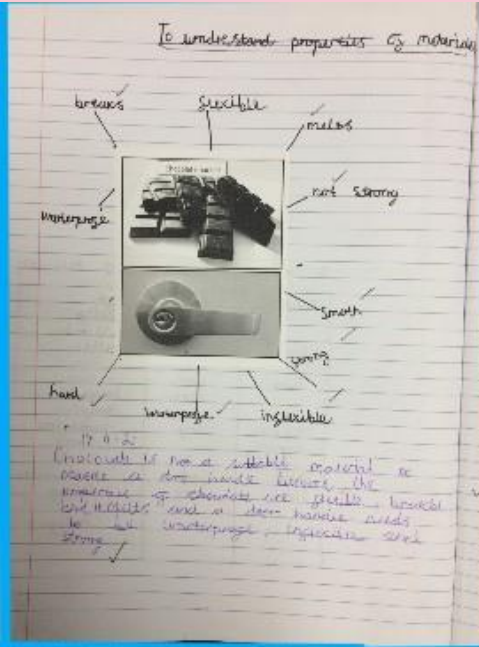
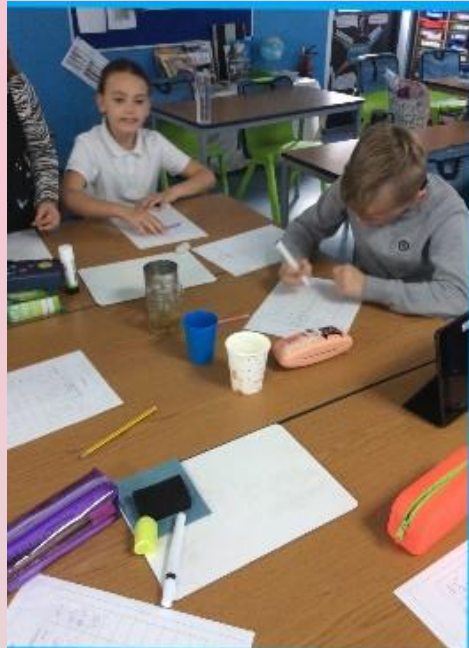
FEDERATION COVERAGE – AUTUMN TERM

Year Five Yarmouth:



FEDERATION COVERAGE – AUTUMN 2 TERM

Year Five Shalfleet: Properties and Changes of Materials



FEDERATION COVERAGE – AUTUMN 2 TERM

Year Five Shalfleet: Properties and Changes of Materials

Waterproofing

maintained in a sound condition and be easy to clean and, where necessary, to disinfect.

- This means that surfaces need to be made of materials that are smooth, washable, corrosion-resistant and non-toxic, unless you can satisfy your local authority that other materials are appropriate.

<http://www.food.gov.uk/sites/default/files/multimedia/pdfs/publication/hygieneguidebooklet.pdf>

Further guidance

Food contact surfaces of equipment should:

- be made of materials that are corrosion resistant, smooth, non-absorbent, durable, with no toxic effect, and do not pass on colours.

Material
23.8m
1.0m
0.1m

Field 1 water
23.8m
1.0m
0.1m

Field 2 water
23.8m
1.0m
0.1m

Field 3 water
23.8m
1.0m
0.1m

Field 4 water
23.8m
1.0m
0.1m

Field 5 water
23.8m
1.0m
0.1m

Field 6 water
23.8m
1.0m
0.1m

Results table

Time (minutes)	Glass jar	Plastic		Tin can	Card cup
		Thin	Thick		
2 mins	38°C	20°C	40°C	23°C	22°C
4 mins	34°C	19°C	40°C	22°C	20°C
6 mins	14°C	18°C	15°C	13°C	18°C
8 mins	10°C	13°C		12°C	13°C
10 mins	10°C	12°C		11°C	13°C

Which is the best material to use for food preparation?

Which Materials are waterproof?

Which Materials are hard?

Where the Materials can be scratched?

How hard I will scratch it?

The Materials

Plastic
cork
brick

Tile
crass

Conductor
Metal
allows heat to leave

Field 1 water
23.8m
1.0m
0.1m

Field 2 water
23.8m
1.0m
0.1m

Field 3 water
23.8m
1.0m
0.1m

Field 4 water
23.8m
1.0m
0.1m

Field 5 water
23.8m
1.0m
0.1m

Field 6 water
23.8m
1.0m
0.1m

Temp

Thin plastic
Card
Tin can

Conductor
a material that allows heat to pass through

Insulators
Plastic
black's heat
Polystyrene

Conductor
a material that allows heat to pass through

Field 1 water
23.8m
1.0m
0.1m

Field 2 water
23.8m
1.0m
0.1m

Field 3 water
23.8m
1.0m
0.1m

Field 4 water
23.8m
1.0m
0.1m

Field 5 water
23.8m
1.0m
0.1m

Field 6 water
23.8m
1.0m
0.1m

Temp

Thin plastic
Card
Tin can

Conductor
a material that allows heat to pass through

FEDERATION COVERAGE – SPRING TERM

Year Five Yarmouth: Living Things and Their Habitats, Plants



FEDERATION COVERAGE – SPRING TERM

Year Five Shalfleet: Living Things, Plants

Living things and their habitats – Year 5

Learning requirements

Pupils should be taught to:

- describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- describe the life process of reproduction in some plants and animals

Notes and guidance (non-sticking)

Pupils should study and take questions about their local environment throughout the year. They should observe life-cycle changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment. They should find out about the work of naturalists and animal behaviourists, for example David Attenborough and Jane Goodall.

Pupils should find out about different types of reproduction, including asexual and sexual reproduction in plants, and sexual reproduction in animals.

Pupils might work scientifically by observing and comparing the life cycles of plants and animals in their local environment with other plants and animals around the world (in the garden, in the oceans, in desert areas and in polar regions), asking pertinent questions and suggesting reasons for similarities and differences. They might try to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, cuttings. They might observe changes in an animal over a period of time (for example, by hatching and rearing chicks), comparing how different animals reproduce and grow.

Animals

Mammals
 Hedgehog
 Badger
 Rabbit
 Fox
 Squirrel
 Weasel
 Mole
 Otter
 Beaver
 Badger
 Rabbit
 Fox
 Squirrel
 Weasel
 Mole
 Otter
 Beaver

Amphibians
 Frog
 Toad
 Salamander
 Newt

Reptiles
 Snake
 Lizard
 Tortoise
 Crocodile
 Alligator

Birds
 Pigeon
 Sparrow
 Robin
 Starling
 Finch
 Crow
 Magpie
 Rook
 Jackdaw
 Raven
 Osprey
 Eagle
 Hawk
 Kestrel
 Buzzard
 Owl
 Heron
 Kingfisher
 Grebe
 Duck
 Goose
 Swan
 Loon
 Gull
 Tern
 Puffin
 Murre
 Seal
 Whale
 Dolphin
 Manatee
 Narwhal
 Walrus
 Polar bear
 Brown bear
 Black bear
 Grizzly bear
 Kodiak bear
 Giant panda
 Red panda
 Snow leopard
 Amur leopard
 Bengal tiger
 Malayan tiger
 Sumatran tiger
 Javan rhino
 Sumatran rhino
 Indian rhino
 African rhino
 Hippopotamus
 Elephant
 Giraffe
 Zebra
 Wildebeest
 Kudu
 Antelope
 Gazelle
 Oryx
 Addax
 Kudu
 Antelope
 Gazelle
 Oryx
 Addax

We know that plants can reproduce through sexual reproduction. Plants can also reproduce asexually by splitting or cuttings. The new plants are clones of the parent plant.

Plants can also reproduce asexually but with seeds. By taking a cutting of a plant - a stem, for example - it can be replanted in the ground to grow into a clone of the plant.

Frog

The tadpole grows first legs and then a tail. The froglet jumps out of the water onto land.

The female lays a mass of eggs that are fertilised by the male.

After 2-3 days the tadpoles hatch from the eggs.

The tadpole swims and eats algae. It breathes through gills.

The tadpole develops lungs and hind legs.

Butterfly

Fertilised eggs are laid by the female.

The eggs hatch into caterpillars. The caterpillars eat leaves and grow bigger.

The caterpillar forms a hard case around itself called a chrysalis.

Inside the chrysalis, the caterpillar transforms into a butterfly.

The adult butterfly breaks out of the chrysalis and reproduces.

Placental

The young grow inside the mother's body & are born fully developed.

The female has a placenta which the young are attached to. The young are born fully developed.

Marsupials

After they are born, the young move into the female's pouch on the stomach, where they are fed until they are fully developed.

Monotremes

Platypus and echidna are the only mammals that lay eggs. They hatch their young from eggs.

These mammals are slightly different as they lay eggs.

Feedback

What is the difference between a monotreme and a placental mammal? The difference is that monotremes lay eggs and a placental has eggs which it feeds from.

An example of a monotreme mammal is a platypus. An example of a placental is a human.

There are three types of mammal: Placental, Marsupial and Monotreme.

They are warm-blooded. Most have fur or hair on their bodies. They reproduce through sexual reproduction.

Start

Make a list of the parts of a flower.

leaf

They absorb water and make food for the plant.

roots

They absorb water from the ground.

stem

It becomes the fruit or seed after fertilisation.

anther

They produce pollen while it is still growing.

petal

It protects the flower from the sun.

ovule

It contains the egg cell which will be fertilised by the pollen.

sepal

It protects the flower while it is still growing.

Stop

10. To understand the structure of the parts of a flower

Start

Make a list of the parts of a flower.

leaf

They absorb water and make food for the plant.

roots

They absorb water from the ground.

stem

It becomes the fruit or seed after fertilisation.

anther

They produce pollen while it is still growing.

petal

It protects the flower from the sun.

ovule

It contains the egg cell which will be fertilised by the pollen.

sepal

It protects the flower while it is still growing.

Stop

Cross-section of a flower

Pollen

Petal

stamen (Anther, Filament)

stigma

Style

Ovary

Carpel

sepal

ovule

PICCOLLAGE

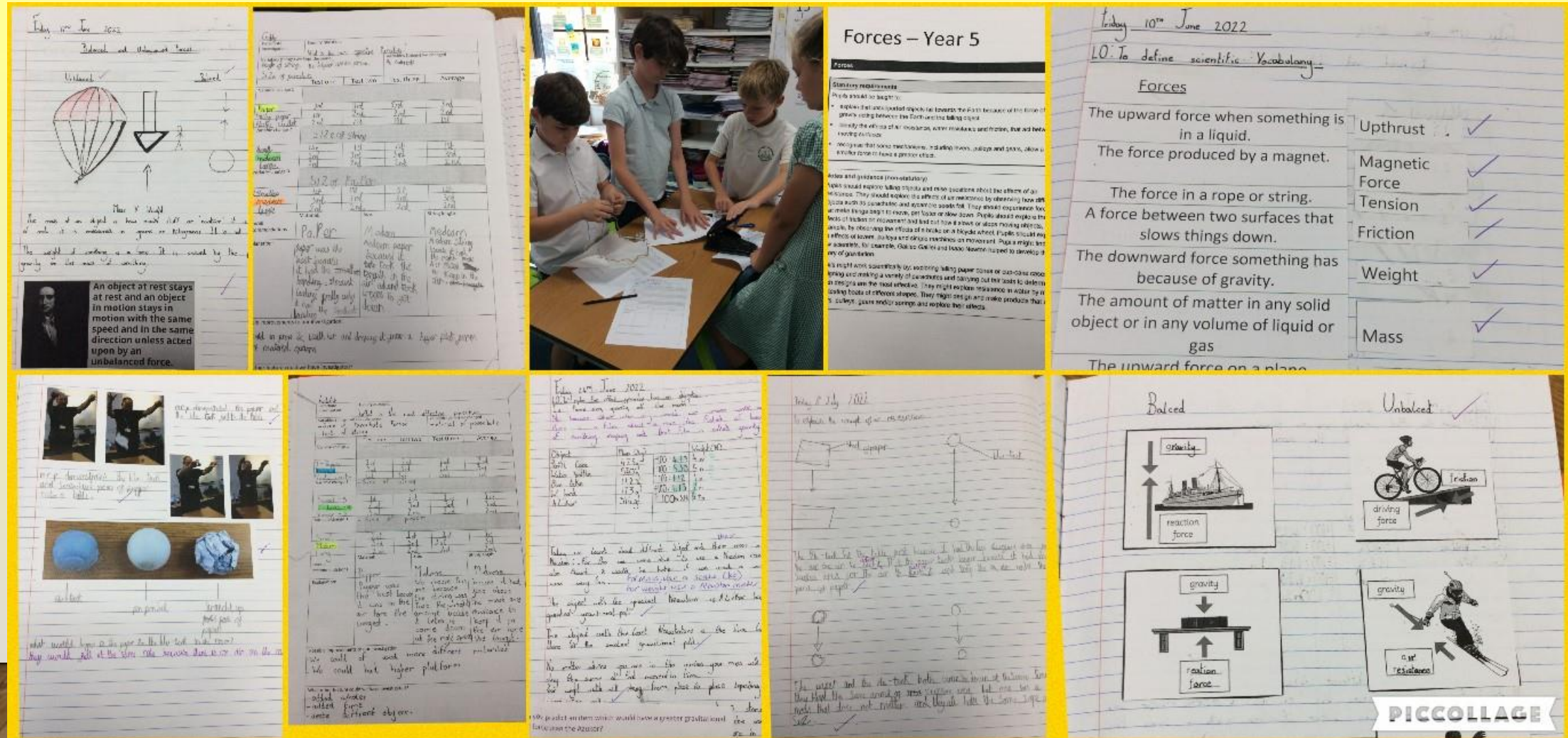
FEDERATION COVERAGE – SPRING TERM 2

Year Five Yarmouth: Forces



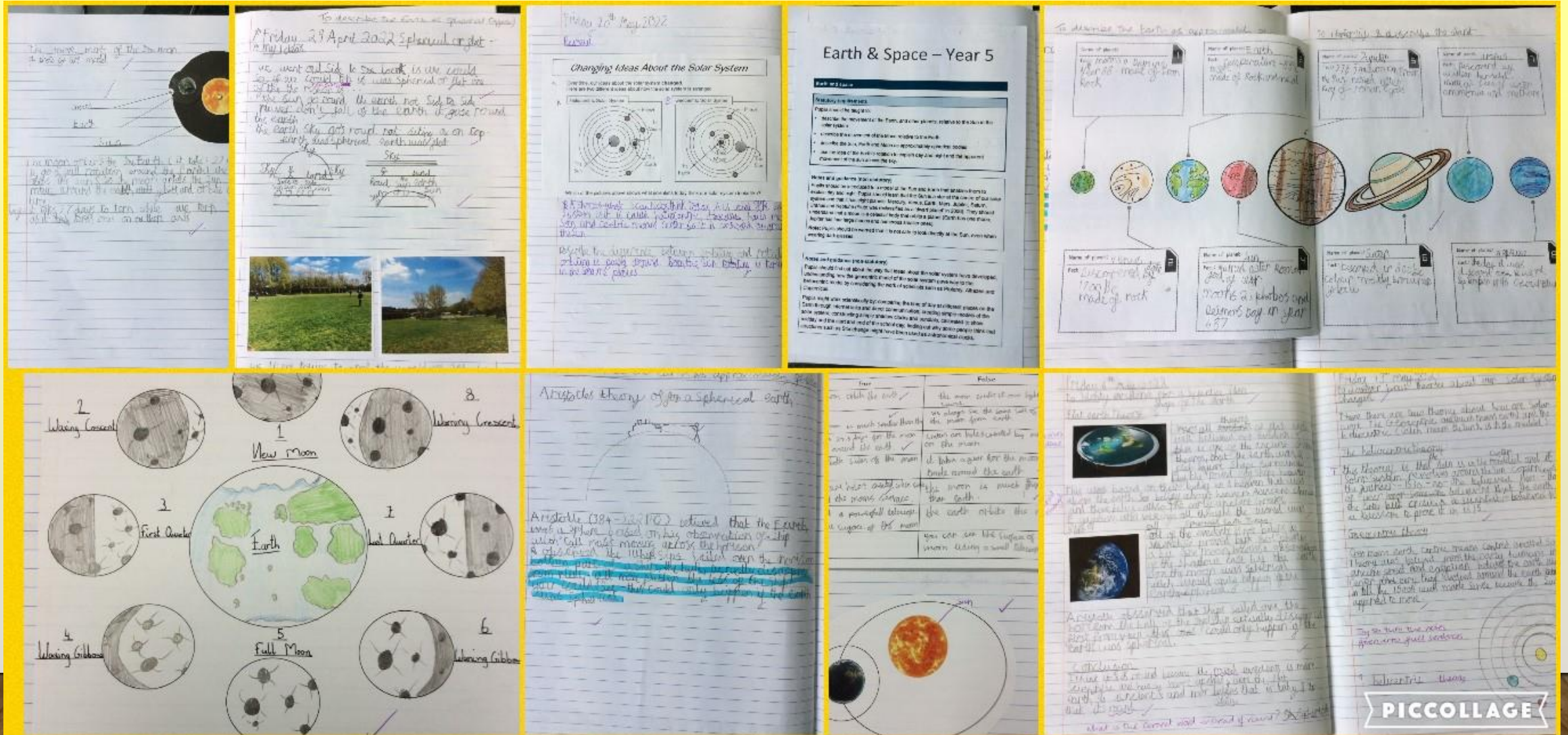
FEDERATION COVERAGE – SUMMER TERM

Year Five Shalfleet: Forces (additional video evidence link:)



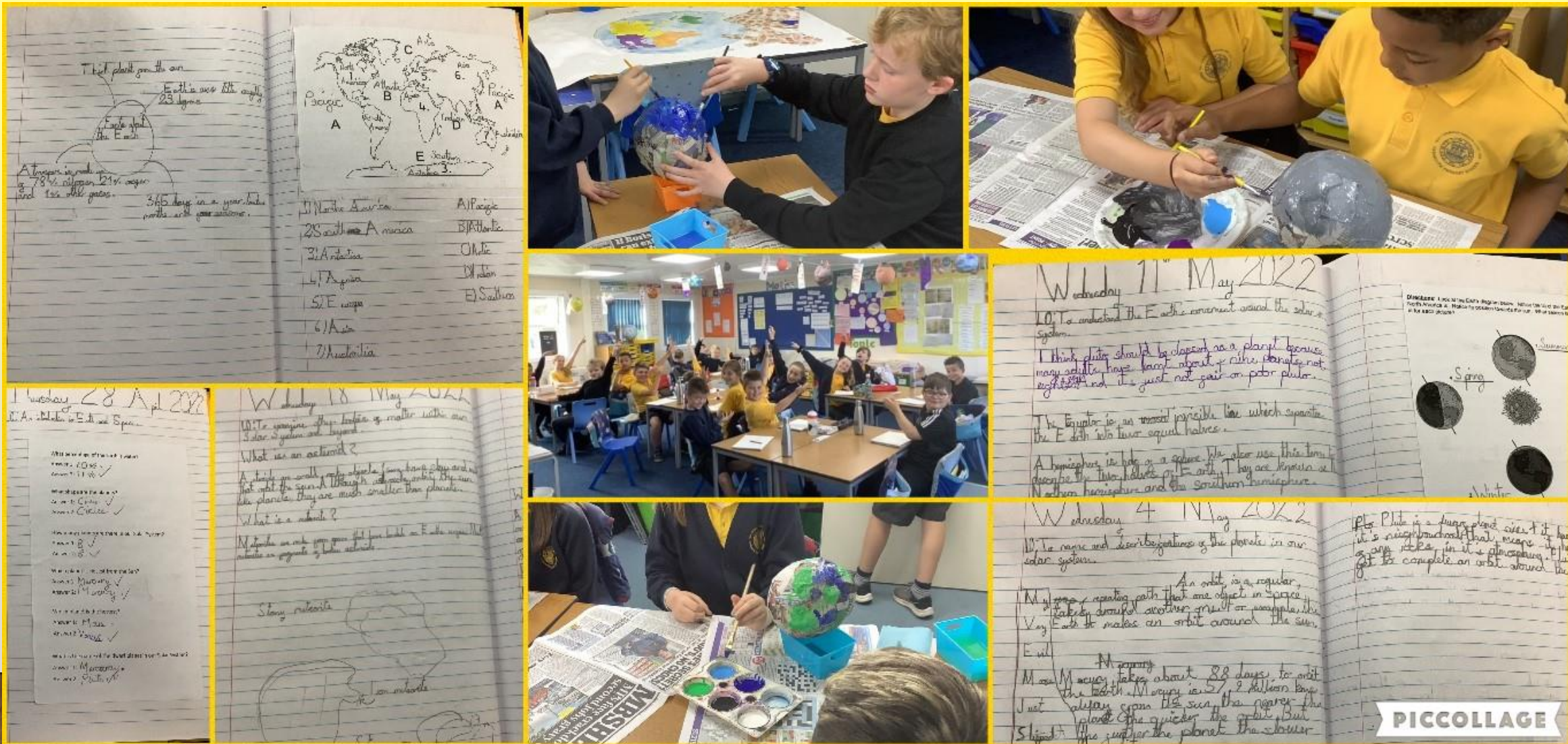
FEDERATION COVERAGE – SUMMER TERM

Year Five Shalfleet: Earth and Space



FEDERATION COVERAGE – SUMMER TERM

Year Five Yarmouth: Earth and Space



FEDERATION COVERAGE – SUMMER TERM

Year Five Yarmouth: Investigations



FEDERATION COVERAGE – SUMMER TERM

Year Five Winchester Science Centre Trip:



SCIENCE IN YEAR 6

- Living things and their habitats
- Animals including humans
- Evolution and inheritance
- Light
- Electricity

FEDERATION COVERAGE – AUTUMN TERM

Year Six Yarmouth:

They have to walk miles with the weight on their back.

Physical impact on your back.

no people get very tired and hungry.

on a steep road

Narrow path

It is a very long way up.

It is very steep so the cattle slip.

Squashed tomato challenge

Plan


- Blue tack
- Cup
- News paper
- Tube
- Success.

Penal

Challenging

Resistance (air)


gravity



The force between the person and the air is unbalanced.


Resistance (hands)

Gravity



Resistance (Table Floor)


gravity



The forces of the lamp and table are balanced.

Friday 1st October 2021

to be able to identify and design pulleys



Fixed Pulley

Movable Pulley

Compound Pulley system

Complex Pulley

One potential problem is that the pulley will eventually tear through the tube and eventually break.

Deceleration	a decrease in speed
Acceleration	an increase in speed
Evidence	bits of information you have gathered about something you are investigating
Variables	something which could change in value, such as time or temperature
Gravity	attraction between physical objects, easily noticeable when one of the objects is massive, such as the Earth
Water resistance	a force which resists motion through water
Air resistance	a force which resists motion through air
Friction	a force which resists the motion of objects sliding over each other


We carried 13 tomatoes in 2 min Part (S)

The most effective parts of our design the string attached to the tube so could control the movement.

I would change the cup for a bag because it meant we could get more tomatoes and wouldn't squash them.

I would use the tubes to keep string running smoothly.

The resistance and slows down the human thought air



The flat paper falls slower because it has more area so the more air catches more air area

The ball of paper falls faster because it is more streamlined so cutting through the air

down.

but still allows air resistance.

style improvements to our investigation

A better cup to cushion the egg. Also a better material to stop the egg from cracking.

What else could we have investigated?

We could look at the impact on the egg.

FEDERATION COVERAGE – AUTUMN TERM

Year Six Shalfleet:

Wednesday 15th September 2021

To investigate how do we see things

Challenge 1

Does light travel in straight or curved lines?

Light can travel in straight lines if you shine it through lines but if you don't it would go on a bit.

Challenge 1

If you shine light through a prism a small amount of blue appears and a little bit of a rainbow goes round the rim.

Challenge 2

Can you identify two sources of light?

How does light enter the eye?

The cornea helps your eye to focus as light comes through.

Feedback 13.10.2021

Light travels in straight lines because there is no substance that can bend or even touch light to make it go in a curved line.

To create a shadow you need to block light. You can't create a shadow with something transparent or translucent.

Light is made of colours when you shine it through a prism. It can make different colours with different shapes and angles.

Challenge 2

What causes a shadow to form?

When you put anything solid in front of a light source it will create a shadow.

The light is blocked by an object.

Successes

Distance of object from light source	Length of shadow
20 cm	45 cm
25 cm	38 cm
30 cm	30 cm
35 cm	27 cm
40 cm	25 cm
45 cm	22 cm
50 cm	19 cm
55 cm	17 cm
60 cm	15 cm

* The results show us, the nearer the object is to the light source, the larger the shadow.

* The further away the object, the smaller the shadow.

Green = Lime green
Red = Pink
Blue = Sky & blue
Red + Blue = Dark pink
Green + Red = Orange
Green + Blue = Turquoise
Green + Red + Blue = Peach

Wednesday 22nd September 2021

To understand and explain how the eye works

Optic nerve: A nerve called the optic nerve carries the image to your brain which turns it the right way round.

Retina: When light goes into our eyes it hits the back of the eye, it is very sensitive to light.

We shone a torch onto the mirror and it reflected onto the ceiling. When we moved the mirror it made the light beams move in different directions.

If the surface is not shiny smooth or flat the reflected light is...

Wednesday 22nd September 2021

To explain how the size of a shadow can be changed

To determine what affects the colour of a shadow

The results show us, the nearer the object is to the light source, the larger the shadow.

To predict, question, explain and thinking about light and how light travels from its source

Light sources

Which is the odd one out and why?

Light source	Why?
White lines in the road.	
A car headlight.	A car headlight is the odd one out as it produces light not reflects light like the others.
A bike reflector.	
'Cat's eyes' in the road.	
A piece of paper.	
A picture.	
A television.	A television is the odd one out as it's electrical and creates a light.
A mirror.	
A Christmas tree decoration.	
Aluminium foil.	
A traffic warden's coat.	
A torch.	A torch creates its own light whereas the others reflect.
The sun.	
The moon.	
The Earth.	
The planet Venus.	
A knife.	
A belt buckle.	
A burning candle.	The sun is the odd one out as it shines and makes light and the others don't.
A rawing pin.	
A burning candle.	A burning candle burns and makes light.

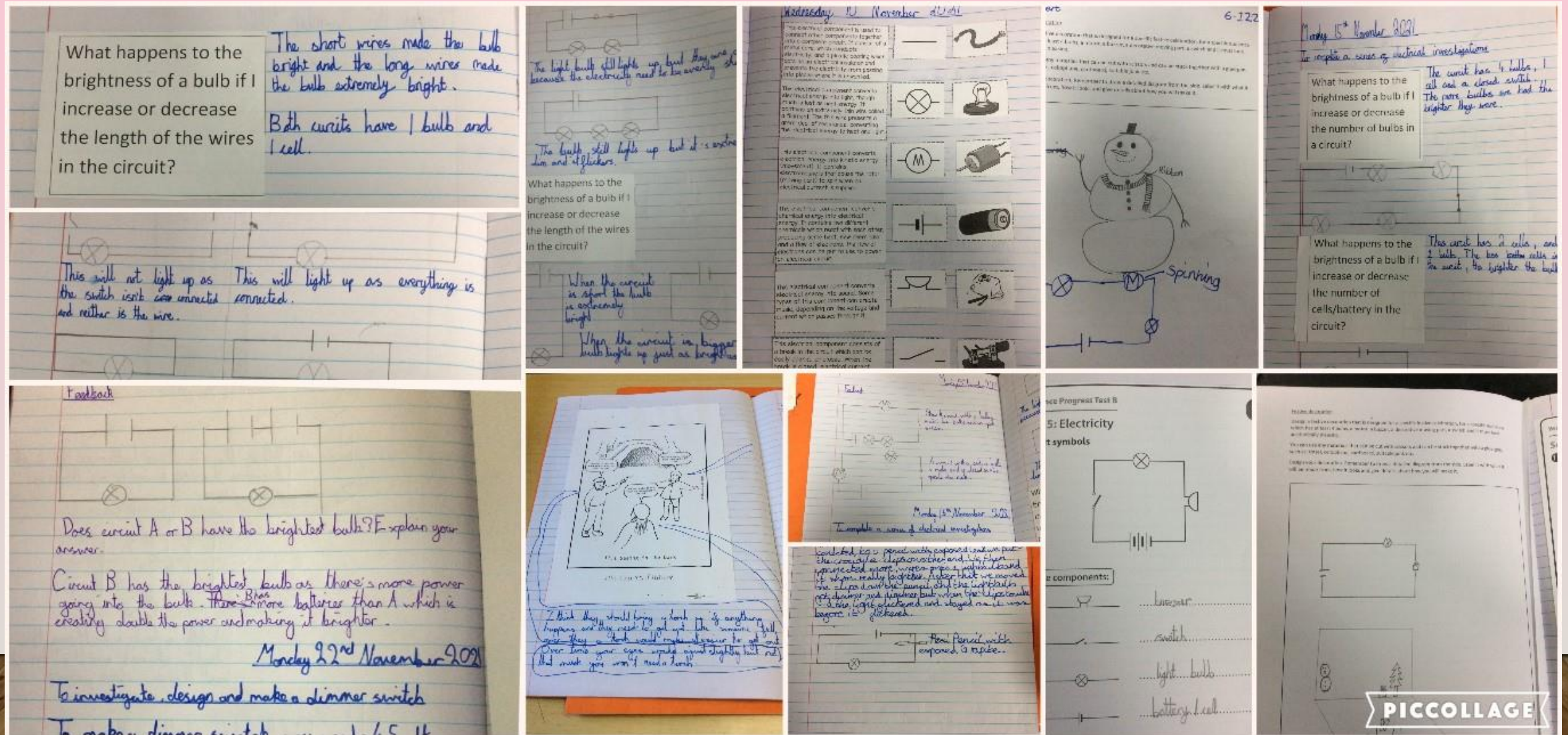
PICCOLLAGE

Year Six Yarmouth: Electricity

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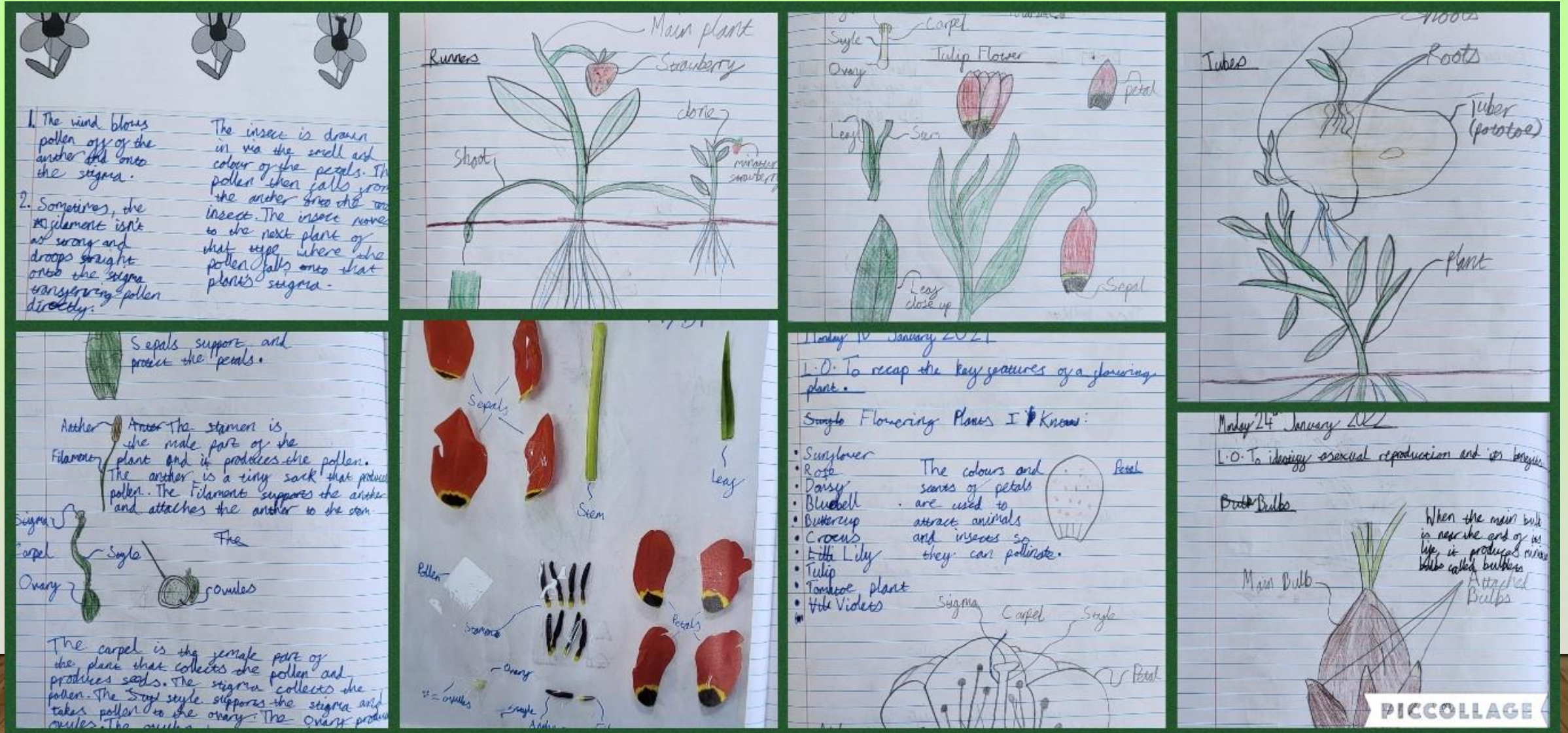
FEDERATION COVERAGE – AUTUMN 2 TERM

Year Six Shalfleet: Electricity



FEDERATION COVERAGE – SPRING TERM

Year Six Yarmouth: Plants



FEDERATION COVERAGE – SPRING TERM

Year Six Yarmouth:

Frog

Duck

egg

newly hatched larva

egg

chick

flourishing larva

fledgling

froglet

adult

adult

I think the frog hasn't gone through metamorphosis because metamorphosis is permanent and irreversible, but the frog can change back and forth between forms.

Monday 7th February 2022

1.0 To understand the lifecycles of mammals

Ways to know whether a mammal is a mammal:

- Warm blood.
- Has a backbone/spine.
- Gives birth to live young.
- Has fur/hair.
- Mammals have brains.

Put an arrow to show which statement applies to which (either insect or animal)

Types of Amphibians

These are amphibians that have a body divided into three main parts: head, thorax and abdomen.

- They are cold-blooded.
- They can undergo metamorphosis (change form as they become adults) during their life.
- They can move and breathe both on land and under water.
- They have an exoskeleton.
- They have 6 legs, 2 antennae and 2 pairs of wings.
- They are smooth-skinned vertebrates during part or all of their lives.

Life cycle of a ladybird

• Starts as an egg
• Grows through stages
• Emerges as a pupa
• Pupa grows into an adult
• Adult lays more eggs

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ASexual REPRODUCTION IN FRUIT AND VEGETABLES

What fruits and vegetables do you think these are?

Picture	What we think	What it is
	Banana fruit	Banana
	Corn	Sweetcorn
	Berries	Tomatoes
	Cauliflower	Cucumber
	Wood wood	Lemon

People cut one of the roots and plant it. This process repeats.

Although it means the new trees will gradually replace the old ones, it is a good thing.

Life cycle of a frog

• Starts as an egg
• Grows through stages
• Emerges as a pupa
• Pupa grows into an adult
• Adult lays more eggs

Life cycle of a frog

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• Grows through stages
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Life cycle of a frog

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FEDERATION COVERAGE – SPRING TERM 2

Year Six Yarmouth:

Gentoo Penguin Challenge

For our nest we first gathered large chunk of bark and layered it around the edges. Then we put sand and tree paper at the bottom with leaves on top and around the outside. We then put soil on the leaves and bark and finished off by layering rocks, stones, twigs and pinecones in the middle.

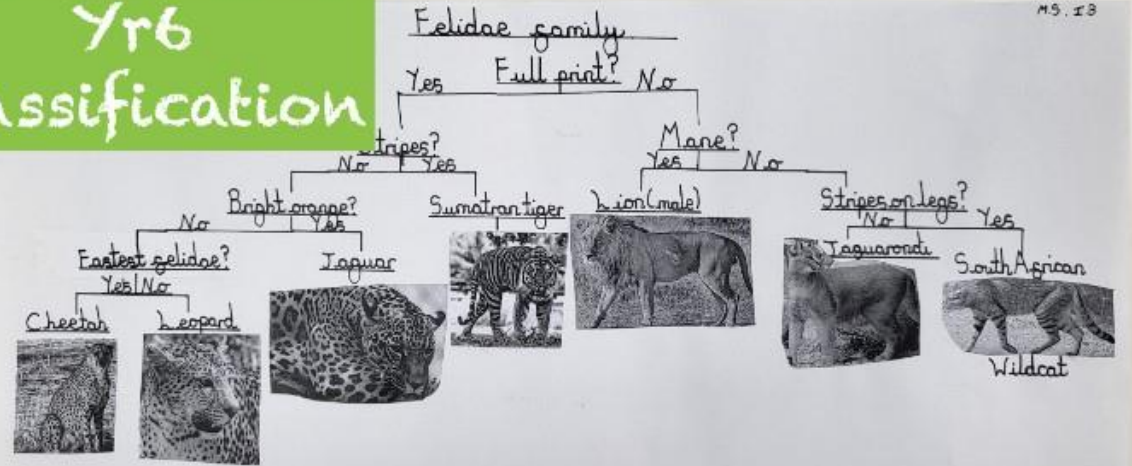
Group	Original slime size	Max stretched size	Percentage increase
G	16cm	1,150cm	7,100%
MR	13cm	550cm	4,200%
TR	17cm	550cm	3,200%
WN	15cm	2,800cm	18,600%
B	23cm	1,200cm	5,200%
D	24cm	2,300cm	9,500%
H	17cm	1,000cm	5,800%
MLM	14cm	2,050cm	14,600%
Class	48cm	7,000cm	14,500%

Friday 25th March 2022

L.O. To be able to create a classification key.



Yr6 Classification



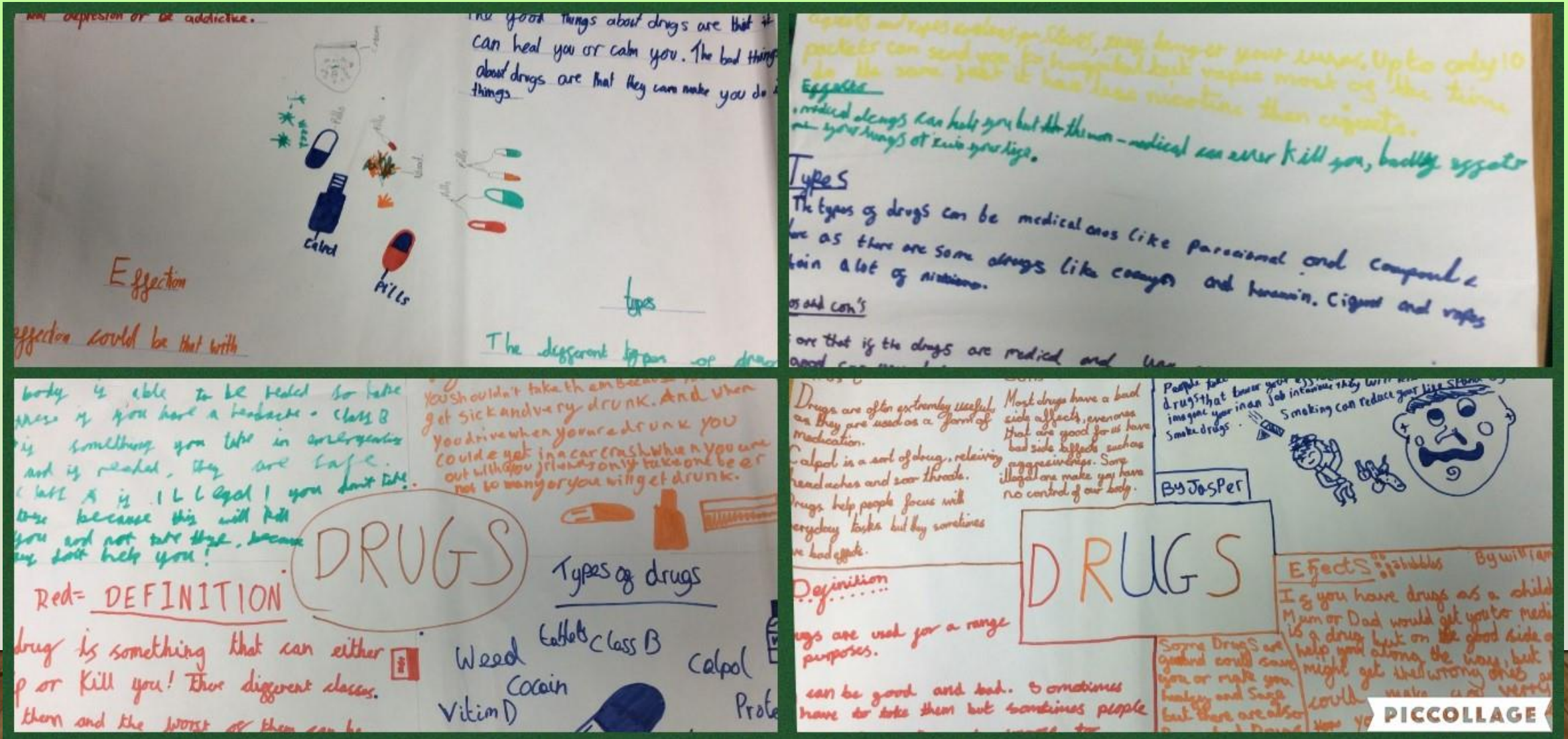
Friday 11th March 2022

L.O. To understand how classification works.



FEDERATION COVERAGE – SPRING TERM

Year Six Shalfleet:



Year Six Shalfleet: Characteristics of Inheritance

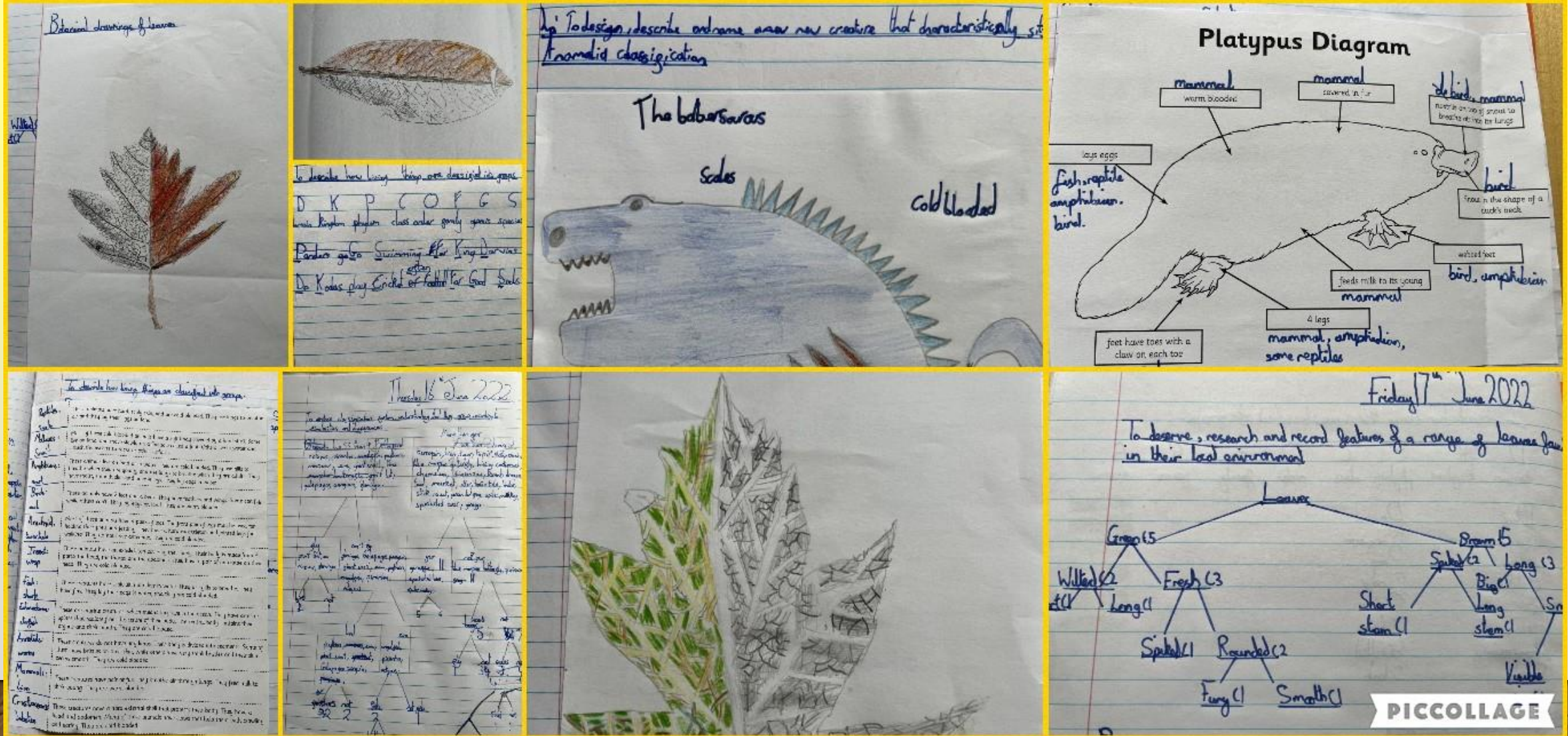
PICCOLLAGE

Year Six Shalfleet: Evolution



FEDERATION COVERAGE – SUMMER TERM




Year Six



MONITORING THE SUBJECT:



PUPIL VOICE QUESTIONNAIRE

Class / Year group:	 Agree	 Neutral	 Disagree
I enjoy science lessons.			
My teacher enjoys science lessons.			
Science is difficult.			
I do lots of thinking and talking in science.			
I do lots of writing in science.			
I use lots of equipment in science.			
I work in small groups in science.			
I would like to do more science lessons.			
I can use some scientific words.			
You must be clever to be good at science.			

Extra questions:

How often do you have a science lesson?

What is science?


What do you like about science?

Is there anything that you do not like about science?

What has been your favourite science lesson?

How could your science lessons be better?

NEXT STEPS IN THE SUBJECT:

**Brighstone C.E. Aided
Primary School**

Science Deep Dive

Meeting with Ofsted Inspector

- ▶ Looked at a variety of books from specified year groups and wanted to see our long term curriculum plan.
- ▶ Wanted to see how the working scientifically skills were mapped within year groups, so that there was a clear progression.
- ▶ Asked what our curriculum intent was and what exactly we wanted learners to be fluent in by the time they left us.
- ▶ Asked about Science in EYFS and how I know what it looks like.
- ▶ Unfortunately, was not interested in the work that we have been doing to develop subject specific vocabulary in Science (which was deemed to be an area for development at our previous visit).
- ▶ Was not interested in our CPD log; wider opportunities in Science; or the development of any Science capital in school, such as STEM speakers.

Pupil conferencing

- ▶ Spoke to three children of her selection from specified year groups, to ask them what they had been learning about.

Lesson observation in Y2

- ▶ Observed a Y2 lesson with me and as we entered the room asked which were the children in receipt of Pupil Premium in the classroom. We then discussed what we'd seen and she agreed that it was an excellent lesson.

Even better if...

- ▶ Felt that the planning across all year groups was not consistent, and that in some year groups, the work in books did not show a cohesive learning journey (albeit that these books were from ECT teachers, whom I acknowledged were in the process of receiving more support for their curriculum delivery).

Our steps taken since the visit

- ▶ We have implemented using a subject learning journey title page that has a consistent format across the school, which includes the learning outcomes and key vocabulary for the learning journey.
- ▶ On the advice of Broadlea, we now begin every lesson with a 'Flashback 3' to revise knowledge from last week/half term/year.

Action Plan points:

Subject Learning Journeys consistent and containing vocabulary and the unit's outcomes linked to LTP/MTP

Flashback 3 – Revise knowledge from: Last Week/Last Half Term/Last Year

Planning consistent across the schools...