



The Wolds and Vale Federation



Progression of Scientific Language and Vocabulary

Working Scientifically

<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
question answer observe equipment sort group talk about/describe compare record	question answer observe observing equipment identify classify sort diagram chart map data compare contrast describe biology chemistry physics group record	question answer observe observing equipment identify classify sort diagram chart map data compare contrast describe biology chemistry physics group record	Research: relevant questions 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: conclusion predictions differences similarities changes evidence improve secondary sources guides keys construct interpret	Research: relevant questions 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: conclusion predictions differences similarities changes evidence improve secondary sources guides keys construct interpret	Plan, variables, measurements, accuracy, precision, repeat, readings Record Data: scientific diagrams, labels, classification keys, tables, scatter graphs, bar graph and line graphs predictions further comparative and fair test report and present conclusions, causal relationships, explanations, degree of trust, oral and written display and presentation Evidence: support, refute ideas or arguments identify, classify and describe patterns systematic quantitative measurements	Plan, variables, measurements, accuracy, precision, repeat, readings Record Data: scientific diagrams, labels, classification keys, tables, scatter graphs, bar graph and line graphs predictions further comparative and fair test report and present conclusions, causal relationships, explanations, degree of trust, oral and written display and presentation Evidence: support, refute ideas or arguments identify, classify and describe patterns systematic quantitative measurements

Astronomy and Light

<u>EYFS</u>	<u>Year 1</u> Seasonal Changes	<u>Year 2</u>	<u>Year 3</u> Light, reflection and shadows	<u>Year 4</u>	<u>Year 5</u> Earth and Space	<u>Year 6</u> How light travels
Season: summer winter autumn spring day night Weather: wind rain snow sun hot warm cold cool Months of the Year: January February March April May June July August September October November December	Season: summer winter autumn spring day daytime Weather: wind rain snow hail sleet fog sun hot warm cold		light see dark reflect surface natural star Sun Moon shadow blocked solid artificial torch candle lamp sunlight dangerous protect eyes		Earth Sun Moon moons planets stars solar system Mercury Venus Mars Jupiter Saturn Uranus Neptune Pluto rotate day night Aristotle Ptolemy Galileo Copernicus Brahe Alhazen orbit axis spherical heliocentric geocentric hemisphere season tilt	light travels straight reflect reflection light source object shadows mirrors periscope rainbow filters

Animals, including humans

<u>EYFS</u>	<u>Year 1</u> Other animals/ Humans	<u>Year 2</u> Animal survival and growth	<u>Year 3</u> Skeletons and movement	<u>Year 4</u> Teeth, eating and digestion	<u>Year 5</u> Human life cycles	<u>Year 6</u> Exercise, health and the circulatory system
<p>Common animals: fish amphibians reptiles birds mammals</p> <p>pets</p> <p>Senses: tongue - taste nose - smell eyes - vision skin - touch ears - hearing</p> <p>Body parts: head neck arms elbows legs knees face ears eyes hair mouth teeth</p> <p>Baby/adult Grow Changes Life cycle</p>	<p>Common animals: fish amphibians reptiles birds mammals</p> <p>pets</p> <p>Senses: tongue - taste nose - smell eyes - vision skin - touch ears - hearing</p> <p>Body parts: head neck arms elbows legs knees face ears eyes hair mouth teeth</p> <p>Omnivores: meat and plants, badger, human, bear, chickens</p> <p>Carnivores: meat, cat, dog, lion, tiger, fox, shark, killer whale, eagle, hawk, snake, tyrannosaurus rex</p>	<p>offspring grow adults</p> <p>egg, caterpillar, pupa, butterfly</p> <p>frogspawn, tadpole, frog</p> <p>egg, chick, chicken</p> <p>lamb, sheep</p> <p>baby, toddler, child, teenager, adult</p> <p>survival: water, food, air</p> <p>exercise hygiene nutrition reproduce</p>	<p>nutrition nutrients carbohydrates protein fats fibre water vitamins minerals skeleton bones joints endoskeleton exoskeleton hydrostatic skeleton vertebrate invertebrate contract relax muscles ball joint socket joint hinge joint gliding joint</p>	<p>nutrition vitamins minerals fat protein carbohydrates fibre water skeletons support protection skull brain ribs heart lungs movement joint muscles pull contract relax diet</p>	<p>puberty life cycle gestation growth reproduce foetus baby fertilisation toddler child teenager adult old age life expectancy adolescence adulthood early adulthood middle adulthood late adulthood childhood</p>	<p>internal organs heart lungs liver kidney brain skeletal skeleton muscle muscular digest digestion digestive circulatory system heart blood vessels blood impact diet exercise drugs lifestyle nutrients water damage drugs alcohol substances</p>

Plants

<u>EYFS</u>	<u>Year 1</u> Common names and basic structure	<u>Year 2</u> Plant growth	<u>Year 3</u> Functions of parts of plants	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
plant: leaf root leaves flowers stem tree: trunk branches leaf root fruit vegetables seed lifecycle grow change	common wild plants garden plants deciduous evergreen plant: leaf root leaves bud flowers blossom petals root stem tree: deciduous evergreen trunk branches leaf root fruit vegetables bulb seed	common wild plants garden plants deciduous evergreen plant: leaf root leaves bud flowers blossom petals root stem grow healthy tree: deciduous evergreen trunk branches leaf root fruit vegetables bulb seed water light suitable temperature germination reproduction	common wild plants garden plants deciduous evergreen tree deciduous evergreen trunk branches leaf root plant leaf root leaves bud flowers blossom petals root stem fruit vegetables bulb seed			

Material Properties and Changes

<u>EYFS</u>	<u>Year 1</u> Everyday Materials	<u>Year 2</u> Uses of everyday materials	<u>Year 3</u> Rocks	<u>Year 4</u> States of matter	<u>Year 5</u> Testing material properties/ Reversible and irreversible changes	<u>Year 6</u>
material object change heat cool melt freeze solid liquid	Material: wood plastic metal glass paper water rock brick fabric elastic foil object Properties: hard/soft shiny/dull stretchy/stiff rough/smooth bendy/not bendy waterproof/not waterproof absorbent/not absorbent transparent opaque	Material: Wood Metal Glass Plastic Cardboard Paper Brick Rock Suitability Properties Waterproof Absorbent Hard Stiff Strong Opaque Rough Smooth Flexible Lightweight Stretchy squashing bending twisting stretching	appearance physical properties hard/soft shiny/dull rough/smooth absorbent/not absorbent fossils sedimentary rock soils organic matter grains crystals	Solid Solidify Iron Ice Melt Freeze Liquid Evaporate Condense Gas Container Changing state Heated Heat Cooled Cool Degrees Celsius °C Thermometer Water cycle Evaporation Condensation Temperature Melting Warm/cool Water Water vapour	properties hardness solubility transparency electrical conductor thermal conductor response to magnets dissolve solution separate separating solids liquids gases evaporating reversible changes dissolving mixing evaporation filtering sieving melting irreversible new material burning rusting magnetism electricity chemists quantitative measurements conductivity insulation chemical	

Environment

<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u> Living things and their habitats	<u>Year 3</u>	<u>Year 4</u> Living things and their habitats	<u>Year 5</u> Observing life cycles	<u>Year 6</u> Classification/ Evolution and inheritance
care nature environment plants animals		living dead never alive habitats micro-habitats food food chain alive healthy shelter seashore woodland ocean rainforest conditions hot/warm/cold dry/damp/wet bright/shade/dark		environment flowering non-flowering plants animals vertebrate environment dangers! vertebrate fish amphibians reptiles birds mammals invertebrate snails slugs worms spiders insects plants flowering plants (including grasses) non-flowering (including mosses and ferns) human impact positive - nature reserves, ecologically planned parks, garden ponds negative - population, development, litter, deforestation	life cycles mammal amphibian insect bird life process of reproduction plants animals vegetable garden flower boarder reproduction plants: sexual, asexual animals: sexual lifecycles rainforest oceans desert prehistoric similarities differences	classify compare Linnaean Carl Linnaeus classification domain kingdom phylum class order family genus species characteristics vertebrates invertebrates microorganisms organism flowering non-flowering evolution adaption inherited traits adaptive traits natural selection inheritance DNA genes variation parent offspring fossil environment habitat fossilisation plants/animals/living things

Forces						
<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u> Non-contact forces	<u>Year 4</u>	<u>Year 5</u> Effects of movement	<u>Year 6</u>
force push pull wind water magnetic change			force push pull open surface magnet magnetic attract repel magnetic poles North South		gravity air resistance water resistance friction surface force effect move accelerate decelerate stop change direction brake mechanism pulley gear spring theory of gravitation Galileo Galilei Isaac Newton	

Electricity

<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u> Electricity	<u>Year 5</u>	<u>Year 6</u> Electricity
				appliances electricity electrical circuit cell wire bulb buzzer danger electrical safety sign insulators: wood rubber plastic glass conductors: metal water switch open closed		voltage brightness volume switches danger series circuit working safely with electricity electrical safety sign circuit diagram switch bulb buzzer motor recognised symbols

Sound

<u>EYFS</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u> Sound	<u>Year 5</u>	<u>Year 6</u>
				vibrate vibration vibrating air medium ear hear sound volume pitch faint fainter loud louder string percussion woodwind brass insulate		