



ST AIDAN'S CE PRIMARY SCHOOL, BILLINGE

"Let your light shine" - Matthew 5:16

SPIRITUALITY ACROSS THE SCIENCE CURRICULUM

A curriculum map of authentic opportunities from St Aidan's Science knowledge organisers



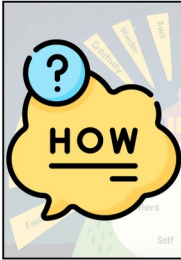
Scope. This document maps the 36 Science knowledge organisers supplied for Years 1-6. Every unit is represented in the overview; detailed lesson mapping identifies only those lessons where a meaningful spiritual opportunity grows naturally from the scientific content.

Hope • Love • Friendship • Forgiveness • Truth • Perseverance

OUR SPIRITUALITY LANGUAGE

Six shared lenses used across the Beacon Curriculum

A common language. The lenses help staff and pupils notice and articulate genuine spiritual opportunities. They are not a checklist and they are not an assessment of a child's spirituality.

 Find hope and wonder in the joys of life. Seek moments to delight in light filled times.	 Appreciate times of stillness and reflection. Be absorbed in the present moment.	 Ponder ultimate questions that help to explore the bright and dark times of life.
 Develop a resilient spirituality when faced with life's OWs. Seek to empathise with those experiencing dark times.	 Be the light for others through powerful actions that make a difference in their lives.	 Commit to being a person that brings light to others.

SPIRITUALITY WITHIN SCIENCE

Wonder, careful attention, questioning, evidence, responsibility and action

Intent. At St Aidan's, spirituality is woven naturally through Science. Pupils encounter WOW, NOW, HOW, OW, POW and VOW moments through the living world, materials, physical processes, Earth and space, and through scientific enquiry itself. Curiosity begins with noticing and wondering; scientific enquiry then asks pupils to question, observe, test, record, interpret evidence and be prepared to refine what they think.

How spirituality connects to scientific learning

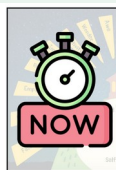
Across the uploaded organisers, pupils study animals and humans, plants, habitats, materials, light, sound, forces, electricity, rocks, states of matter, Earth and space, evolution and the environment. Scientific enquiry includes questioning and prediction, comparative and fair testing, recording and presenting results, observation over time, pattern seeking, identifying and classifying, research and problem-solving. These disciplinary habits are especially rich in curiosity, attentiveness, humility and truth-seeking.



WOW

Wonder: Find hope and wonder in the joys of life. Seek moments to delight in light-filled times.

Science connection: Patterns, diversity, life cycles, body systems, unseen forces, light, sound, Earth and space, and surprising experimental outcomes.



NOW

Reflection: Appreciate times of stillness and reflection. Be absorbed in the present moment.

Science connection: Close observation, listening, fieldwork, watching change over time, measuring carefully and attending to evidence before responding.



HOW

Big questions: Ponder ultimate questions that help us explore the bright and dark times of life.

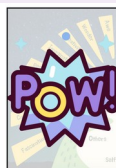
Science connection: Questions about life, change, scale, time, cause, evidence, models and how science explains things we cannot directly see.



OW

Challenge & empathy: Develop a resilient spirituality when faced with life's OWs. Seek to empathise with those experiencing dark times.

Science connection: Ageing, vulnerability, harmful substances, habitat loss, pollution, extinction risk, climate change and the consequences of human actions.



POW

Making a difference: Be the light for others through powerful actions that make a difference in their lives.

Science connection: Applying science through engineering, health, conservation, safer design, environmental action and solutions that serve people or the natural world.



VOW

Values & commitment: Commit to being a person that brings light to others.

Science connection: Safe and healthy choices, care for the environment, stewardship, responsible use of resources, fair testing, accurate recording and commitment to Truth.

HOW THE SCIENCE MAP WORKS

Keeping spiritual development authentic and Science distinctly scientific

Golden rule. The scientific learning comes first. A spirituality link is mapped only where the knowledge, enquiry or application naturally creates space to wonder, attend, question, encounter challenge, act for others or consider a personal commitment.

Four principles for staff

- Science explanations remain scientific. A reflective question sits alongside the science; it never replaces evidence, explanation or subject vocabulary.
- Not every lesson needs a spirituality label. Unmapped lessons are a sign of curriculum integrity, not a gap.
- Questions are invitational. Pupils of all faiths and worldviews can wonder, reflect, question, empathise and respond without being required to adopt a belief.
- Evidence can be light-touch: pupil voice, a question, an observation note, a short reflection, a design decision or an authentic action already arising from the lesson.

A particularly strong Science thread: Truth

Truth in enquiry. Scientific enquiry repeatedly asks pupils to be accurate, fair and honest with evidence. Predictions may be wrong; results may surprise us; explanations may need to change. That makes Science a natural place to live out the school value of Truth - not by always being right, but by being willing to follow the evidence.

CURRICULUM COVERAGE

All 36 uploaded Science knowledge organisers are represented

Coverage note. The detailed mapping that follows is selective at lesson level, but the unit overview below confirms the complete Years 1-6 scope supplied for this project. No EYFS Science organiser was included in this upload.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Animals, including humans - All about animals	Animals, including humans - Growth	Animals, including humans	Animals, including humans	Animals, including humans	Animals, including humans
Animals, including humans - All about me	Animals, including humans - Life cycles	Forces and Magnets	Electricity	Changes of Materials	Electricity
Exploring Everyday Materials 1	Living things and their habitats - Around the world	Light	Living things and their habitats - Conservation	Earth and Space	Evolution and Inheritance
Exploring Everyday Materials 2	Living things and their habitats	Plants	Living things and their habitats	Forces	Light
Plants	Plants	Rocks	Sound	Living things and their habitats	Living things and their habitats
Seasonal Changes	Uses of everyday materials	Scientific Enquiry	States of Matter	Properties of Materials	Looking after the environment

SCIENCE SPIRITUALITY MAP - YEAR 1 & YEAR 2

Every Science unit shown; lenses identify the strongest authentic opportunities

Year	Unit	Strongest lenses	Why this unit is spiritually rich
Y1	Animals, including humans - All about animals	WOW • HOW • VOW	Diversity, animal families and feeding patterns create wonder; distinctions between wild animals and pets can prompt responsible care.
Y1	Animals, including humans - All about me	WOW • NOW	The human body and the five senses invite wonder and close attention to how we experience the world.
Y1	Exploring Everyday Materials 1	WOW • HOW	Natural and man-made materials, floating and sinking, and material properties can prompt curiosity about how the physical world behaves.
Y1	Exploring Everyday Materials 2	WOW • POW	Designing strong or waterproof structures highlights human ingenuity and how scientific thinking can solve practical problems.
Y1	Plants	WOW • NOW • HOW	Growth from seed, plant structure and observation over time invite wonder, attentiveness and questions about living things.
Y1	Seasonal Changes	WOW • NOW	Repeated observation of seasons, weather and rainfall helps pupils notice rhythms, change and patterns in the natural world.

Y2	Animals, including humans - Growth	HOW • OW • VOW	Survival needs and healthy choices create opportunities to reflect on dependence, wellbeing and personal responsibility.
Y2	Animals, including humans - Life cycles	WOW • HOW • OW	Human and animal life cycles invite wonder about growth and change, alongside sensitive reflection on ageing.
Y2	Living things and their habitats - Around the world	WOW • OW • POW • VOW	Changing environments, rainforest problems and polar habitats connect wonder with vulnerability and responsibility.
Y2	Living things and their habitats	WOW • NOW • HOW • POW	Living/dead/non-living distinctions, microhabitats and food chains prompt big questions, close observation and care for habitats.
Y2	Plants	WOW • NOW • HOW	Plant needs, life cycles, adaptation and observation over time create sustained opportunities for wonder and reflection.
Y2	Uses of everyday materials	WOW • POW	Bridge building and the work of inventors show how material knowledge can be applied creatively to meet human needs.

SCIENCE SPIRITUALITY MAP - YEAR 3 & YEAR 4

Every Science unit shown; lenses identify the strongest authentic opportunities

Year	Unit	Strongest lenses	Why this unit is spiritually rich
Y3	Animals, including humans	WOW • VOW	Skeletons, muscles and nutrition reveal the complexity of bodies and can support responsible choices about health.
Y3	Forces and Magnets	WOW • HOW • POW	Invisible and non-contact forces provoke curiosity, while everyday applications show science being used purposefully.
Y3	Light	WOW • NOW • HOW • VOW	Light, reflection and changing shadows invite wonder and observation; Sun safety connects knowledge to responsible action.
Y3	Plants	WOW • NOW • HOW	Photosynthesis, water transport, pollination and seed dispersal reveal complex processes within familiar living things.
Y3	Rocks	WOW • NOW • HOW	Rock formation, weathering, fossils and soil open reflection on deep time, change and the history held within the Earth.
Y3	Scientific Enquiry	HOW • NOW • VOW	Questioning, prediction, fair testing and accurate recording strengthen curiosity, attentiveness and commitment to truth through evidence.

Y4	Animals, including humans	WOW • HOW • VOW	Digestion, teeth and food webs reveal connected systems; dental care links knowledge with personal responsibility.
Y4	Electricity	WOW • HOW • VOW	Circuits and current make unseen processes investigable; electrical safety connects understanding with responsible choices.
Y4	Living things and their habitats - Conservation	WOW • OW • POW • VOW	Environmental change, pollution and conservation place wonder alongside human impact, compassion and purposeful action.
Y4	Living things and their habitats	WOW • NOW • HOW	Habitats, adaptation and classification encourage attentive observation and questions about diversity and pattern.
Y4	Sound	WOW • NOW • HOW	Vibration, pitch and sound travelling through media make the unseen perceptible and reward careful listening.
Y4	States of Matter	WOW • NOW • HOW	Particles, changes of state and the water cycle offer rich opportunities to wonder about processes we cannot directly see.

SCIENCE SPIRITUALITY MAP - YEAR 5 & YEAR 6

Every Science unit shown; lenses identify the strongest authentic opportunities

Year	Unit	Strongest lenses	Why this unit is spiritually rich
Y5	Animals, including humans	WOW • HOW • OW	Gestation, development, puberty and ageing invite wonder about human life and sensitive reflection on change across a lifetime.
Y5	Changes of Materials	WOW • HOW	Reversible and irreversible changes encourage careful observation and questions about transformation and permanence.
Y5	Earth and Space	WOW • HOW • NOW • VOW	Scale, movement and changing scientific models create powerful wonder, big questions and humility before evidence.
Y5	Forces	WOW • HOW • POW	Gravity, resistance and mechanisms show hidden forces at work and how scientific ideas can be harnessed to solve problems.
Y5	Living things and their habitats	WOW • HOW • POW • VOW	Life cycles and the work of Jane Goodall and David Attenborough connect scientific understanding with influence and care for living things.
Y5	Properties of Materials	WOW • HOW • POW	Conductivity, insulation, solubility and separation show how properties can be understood and applied to real needs.

Y6	Animals, including humans	WOW • NOW • OW • VOW	The circulatory system and heart rate invite wonder and self-awareness; health choices and harmful substances prompt responsibility.
Y6	Electricity	WOW • HOW • POW • VOW	Voltage, circuits and troubleshooting combine curiosity with engineering problem-solving and safe application.
Y6	Evolution and Inheritance	WOW • HOW	Variation, adaptation, fossils, natural selection and human evolution open sustained questions about life, change and evidence over time.
Y6	Light	WOW • NOW • HOW	Reflection, refraction, shadows and colour provide striking phenomena for close observation and explanation.
Y6	Living things and their habitats	WOW • HOW • NOW • OW	Kingdoms, microorganisms and classification reveal both the diversity of life and the hidden organisms that help or harm.
Y6	Looking after the environment	OW • HOW • POW • VOW	Climate change, energy, waste, COP26 and data invite evidence-informed concern, agency and commitment to environmental responsibility.

DETAILED SCIENCE MAPPING - YEAR 1

Only lessons with a genuine spiritual opportunity are included

Using this page. A lesson may carry more than one lens where the connection is natural. Teacher prompts are optional invitations to reflection and should be used briefly so the scientific learning remains central.

Unit	Lesson / curriculum focus	Lens	Why this creates a spiritual opportunity	Possible prompt	Natural evidence
All about animals	1. Discover animal families	WOW	The variety of animal groups can create delight and fascination with living diversity.	What makes the animal world so wonderfully varied?	Pupil wonder / discussion
All about animals	4. Discover the type of food living things eat	WOW • HOW	Different feeding patterns prompt curiosity about how living things survive and depend on particular foods.	Why do different animals need different foods?	Questions / scientific talk
All about animals	5. Explore the difference between wild animals and pets	VOW	The distinction can support reflection on human responsibility when animals depend on us for care.	What responsibilities do people have when an animal becomes a pet?	Pupil voice / class reflection
All about me	1. Discover the basic parts of the human body	WOW	Naming body parts can become a starting point for wonder at the complexity of our own bodies.	What amazes you about what your body can do?	Talk / drawing annotation
All about me	2-6. Explore sight, hearing, taste, touch and smell	NOW • WOW	The senses encourage pupils to attend carefully to the present moment and notice details they may usually overlook.	What do you notice when you give one sense your full attention?	Observation / oral reflection

Exploring Everyday Materials 1	4. Identify objects that are natural and those that are man-made	HOW	Comparing natural and made materials opens questions about what people change, shape and create from the world around them.	What comes from nature, and what have people changed or made?	Sorting + reflective question
Exploring Everyday Materials 1	5. Predict and identify if an object will float or sink	WOW	Unexpected outcomes can create genuine surprise and curiosity.	What surprised you - and what do you now want to find out?	Prediction / response
Exploring Everyday Materials 2	1. Build a structure strong enough to withstand wind	POW	Using material knowledge to solve a practical problem shows how scientific thinking can help protect and support people.	How can what we know help us build something safer or stronger?	Design explanation
Exploring Everyday Materials 2	2. Build a waterproof structure	POW	Applying properties to keep a structure dry connects enquiry with purposeful problem-solving.	How can science help us meet a real need?	Design / evaluation
Plants	1. Understand that seeds grow into plants	WOW	A small seed becoming a larger living plant is a natural opportunity for wonder.	How can something so small become something so different?	Wonder question / drawing
Plants	3. Understand that different plants can grow in the same environment	WOW • HOW	Diversity within one environment encourages noticing similarities, differences and shared needs.	How can one place support so many different plants?	Pupil talk

Plants	6. Record the growth of a plant	NOW	Repeated observation invites patience, attentiveness and noticing small changes over time.	What has changed since the last time we looked carefully?	Observation record
Seasonal Changes	1. Understand there are four seasons	WOW • NOW	The yearly pattern of seasons supports noticing rhythm and change in the natural world.	What changes do you notice as the year moves on?	Seasonal reflection
Seasonal Changes	2-5. Observe changes in autumn, winter, spring and summer	NOW • WOW	Attending to visible changes helps pupils become more observant of their immediate environment.	What is different now that was not here before?	Pupil voice / nature notes
Seasonal Changes	6. Investigate how you can measure rainfall	NOW	Measuring weather turns everyday experience into careful attention and evidence.	What can careful measuring help us notice about our world?	Science journal

DETAILED SCIENCE MAPPING - YEAR 2*Only lessons with a genuine spiritual opportunity are included*

Using this page. A lesson may carry more than one lens where the connection is natural. Teacher prompts are optional invitations to reflection and should be used briefly so the scientific learning remains central.

Unit	Lesson / curriculum focus	Lens	Why this creates a spiritual opportunity	Possible prompt	Natural evidence
Growth	1. Describe the needs of animals for survival	HOW • OW	Learning that living things depend on food, water, air and shelter can prompt reflection on vulnerability and dependence.	What do all living things need in order to flourish?	Discussion
Growth	2. Describe the needs of humans for survival	HOW	Human survival needs create space to consider what is essential and what helps people flourish.	What do we need to live, and what helps us live well?	Pupil talk
Growth	3-5. Food, balanced diet and exercise	VOW	Scientific knowledge about health can lead naturally to age-appropriate reflection on personal choices.	What healthy choice could I make because of what I have learned?	Personal reflection
Growth	6. Investigate hygiene	VOW	Understanding hygiene links science with responsibility for self and others.	How can looking after ourselves also help other people?	Class response
Life cycles	1. Order the stages of the human life cycle	WOW • HOW	Human growth and change can prompt wonder about identity across a lifetime.	How can one person change so much and still be the same person?	Pupil question / talk

Life cycles	2. Describe the stages of life from adulthood to old age	OW • HOW	Ageing can be approached sensitively as part of life, inviting empathy and thoughtful questions about change.	What changes as people grow older, and how can we show care?	Discussion
Life cycles	4-6. Chicken, butterfly and frog life cycles	WOW	Hatching and metamorphosis provide striking examples of transformation in living things.	Which change in these life cycles fills you with the most wonder?	Wonder response
Habitats - around the world	2. Appreciate that environments are constantly changing	HOW • OW	Environmental change raises questions about how living things cope when the places they depend on alter.	What happens when a home changes faster than a living thing can adapt?	Discussion
Habitats - around the world	3. Explore the rainforest and its problems	OW • POW	Threats to rainforests can deepen empathy for affected living things and open consideration of human action.	What can people do when our choices damage a habitat?	Ideas for action
Habitats - around the world	4-5. Ocean, Arctic and Antarctic habitats	WOW • OW	Extreme habitats create wonder while also highlighting the vulnerability of life in demanding environments.	What helps life survive in a place that seems so difficult to live?	Pupil talk
Living things and habitats	1. Compare living, dead and never alive	HOW	The distinction creates an authentic early big question: what makes something living?	What does it really mean to be alive?	Question wall

Living things and habitats	2. Identify plants and animals in a microhabitat	NOW • WOW	Close observation of small spaces reveals life that is often overlooked.	What did we only notice because we slowed down and looked closely?	Field notes / pupil voice
Living things and habitats	3. Design a suitable microhabitat	POW	Applying understanding to create conditions in which living things could survive gives science a caring purpose.	How can our knowledge help living things thrive?	Design justification
Living things and habitats	5. Understand food chains	WOW • HOW	Food chains reveal interdependence between living things.	What might happen if one part of this chain disappeared?	Discussion / explanation
Plants	2-3. Investigate and describe what plants need to grow	HOW • WOW	Enquiry into plant needs shows both dependence and the conditions required for growth.	What does a living thing need from its environment in order to flourish?	Prediction / reflection
Plants	4. Describe the life cycle of a plant	WOW	The repeating cycle of seed, growth, flowers and new seeds creates a clear moment of wonder.	What do you find remarkable about the way the cycle begins again?	Science journal
Plants	5. Observe and record growth over time	NOW	Longer-term observation develops patience and attention to gradual change.	What small change might we miss if we do not look carefully?	Observation notes
Plants	6. Understand that plants adapt to suit their environment	WOW • HOW	Adaptation prompts curiosity about how living things are fitted to different conditions.	How can a plant be suited to the place where it lives?	Pupil explanation

Uses of everyday materials	2. Select the right materials to build a bridge	POW	Choosing materials for a bridge shows scientific knowledge serving a practical human purpose.	How can scientific choices make something safer and more useful?	Design evaluation
Uses of everyday materials	5-6. Charles Macintosh and John McAdam	WOW • POW	Inventive use of materials shows how scientific ideas and persistence can improve everyday life.	How did understanding materials allow these people to make a difference?	Pupil response

DETAILED SCIENCE MAPPING - YEAR 3

Only lessons with a genuine spiritual opportunity are included

Using this page. A lesson may carry more than one lens where the connection is natural. Teacher prompts are optional invitations to reflection and should be used briefly so the scientific learning remains central.

Unit	Lesson / curriculum focus	Lens	Why this creates a spiritual opportunity	Possible prompt	Natural evidence
Animals, including humans	1-2. Food groups and nutrition	VOW	Knowledge about nutrition can inform responsible choices about caring for the body.	How might this knowledge change one choice we make about food?	Reflection
Animals, including humans	3-6. Skeletons and muscles	WOW	The structure and movement of human and animal bodies reveal complexity beneath the surface.	What is happening inside your body when you move?	Wonder / annotated diagram
Forces and Magnets	1. Explore contact and non-contact forces	WOW • HOW	Forces that cannot always be seen directly invite curiosity about invisible causes.	How can we know a force is acting when we cannot see it?	Questioning / explanation
Forces and Magnets	5. Understand magnetic forces can act at a distance	WOW • HOW	Action at a distance often produces genuine surprise and invites deeper questioning.	What feels surprising about a force acting without touching?	Pupil talk
Forces and Magnets	6. Explore everyday uses of magnets	POW	Applications of magnetism show how understanding a phenomenon can be used to solve problems.	Where does scientific understanding become useful to people?	Examples / explanation

Light	1. Identify light sources and non-light sources	HOW	Deciding what counts as a light source develops careful thinking about evidence and explanation.	How do we know whether something is really producing light?	Scientific reasoning
Light	2. Explore sunlight and how to stay safe	VOW	Understanding risk from the Sun leads naturally to responsible choices.	How should what we know change what we do?	Safety commitment
Light	4-6. Shadows and how they change	NOW • WOW	Observing shadows across time rewards careful attention to a familiar but changing phenomenon.	What can a shadow tell us if we stop and watch it carefully?	Observation record
Plants	2. Plant parts and photosynthesis	WOW • HOW	Photosynthesis reveals an unseen process on which plant life depends.	What amazes you about what a leaf is doing even when it looks still?	Pupil wonder
Plants	3. Investigate water transport	WOW	Movement of water through a plant makes an unseen life process visible through enquiry.	How is water travelling through the plant when we cannot see it move?	Explanation
Plants	4-5. Flowers, pollination and seed dispersal	WOW	Reproduction and dispersal show intricate ways plants continue their life cycle.	Which part of this process makes you wonder most?	Reflection
Plants	1 & 6. Compare factors affecting plant growth	NOW	Careful comparison and repeated observation develop attentiveness to evidence.	What changes can we only see because we measured and compared carefully?	Science journal

Rocks	1-2. Formation of igneous, sedimentary and metamorphic rocks	WOW • HOW	Rock formation introduces processes operating over vast times and under extreme conditions.	What does a rock make us think about the age and changing story of Earth?	Wonder question
Rocks	4. Water and weathering	NOW • WOW	Slow weathering shows how small repeated processes can create significant change.	What can happen when a tiny change is repeated for a very long time?	Discussion
Rocks	5. Understand how fossils are formed	WOW • HOW	Fossils connect present evidence with living things from the distant past.	How can something in a rock tell us about life long ago?	Pupil explanation
Rocks	6. Explore different types of soil	WOW	Discovering that soil contains air, water, minerals and organic matter reveals complexity in something ordinary.	What is hidden inside something as ordinary as soil?	Observation / talk
Scientific Enquiry	1. Pose questions and write predictions	HOW	Scientific enquiry begins with curiosity: asking answerable questions and imagining what evidence might show.	What makes a question worth investigating?	Question generation
Scientific Enquiry	2. Record and present results	VOW	Accurate recording links directly to the value of Truth: evidence should be represented honestly, even when it surprises us.	What should we do when our results are not what we expected?	Pupil reflection

Scientific Enquiry	5. Fair testing, controls and variables	VOW	Fair testing requires discipline, honesty and care so that conclusions are trustworthy.	Why does fairness matter when we are trying to find out what is true?	Method evaluation
Scientific Enquiry	6. Scientific enquiry	HOW • NOW	Drawing enquiry strands together develops curiosity, attentiveness and willingness to revise explanations in the light of evidence.	How has the evidence changed what you think?	Conclusion / reflection

DETAILED SCIENCE MAPPING - YEAR 4*Only lessons with a genuine spiritual opportunity are included*

Using this page. A lesson may carry more than one lens where the connection is natural. Teacher prompts are optional invitations to reflection and should be used briefly so the scientific learning remains central.

Unit	Lesson / curriculum focus	Lens	Why this creates a spiritual opportunity	Possible prompt	Natural evidence
Animals, including humans	1-2. Digestive system	WOW	The coordinated journey of food through the body reveals a complex system working largely beyond conscious control.	What surprises you about what your body does without you thinking about it?	Pupil wonder
Animals, including humans	4. Understand how to care for your teeth	VOW	Dental science translates directly into responsible choices for long-term health.	What will you do differently because you understand how teeth can be damaged?	Personal response
Animals, including humans	5-6. Food chains and food webs	WOW • HOW	Food webs reveal networks of dependence rather than isolated organisms.	What happens when one living thing in a food web changes?	Discussion / diagram
Electricity	1. Electrical appliances and safety	VOW	Knowledge of electricity carries clear responsibilities for safe behaviour.	How should scientific knowledge change the way we act around electricity?	Safety reflection
Electricity	2-3. Series circuits and investigating circuits	WOW • HOW	A complete circuit makes an unseen electrical process observable through its effects.	How can we tell electricity is flowing when we cannot see the current?	Explanation

Electricity	4-6. Conductors, switches and changing components	HOW • WOW	Testing materials and altering components reveals patterns and causal relationships in a system.	What does changing one part teach us about the whole circuit?	Investigation conclusion
Conservation	1. Ecosystems and seasonal change	WOW • NOW	Seasonal effects on ecosystems invite careful noticing of connected changes in living communities.	What changes together when a season changes?	Observation / talk
Conservation	2. Human impact through deforestation	OW	Deforestation brings pupils into contact with habitat loss and the consequences of human choices.	Who or what is affected when a forest is removed?	Empathy / discussion
Conservation	3-4. Air and water pollution	OW	Pollution shows how actions in one place can harm living things elsewhere.	How can something we cannot always see still cause harm?	Discussion
Conservation	5. Methods to conserve water	POW • VOW	Scientific understanding supports practical action to protect a shared resource.	Which water-saving action could we commit to, and why?	Class action / pledge
Conservation	6. Humans can have a positive impact on nature	POW • VOW	The organiser explicitly presents conservation, recycling and nature reserves as positive human actions.	How can people use knowledge to repair or protect what has been damaged?	Action ideas
Living things and habitats	1-2. Explore and research habitats	WOW • NOW	Habitat study develops attention to the detail and diversity of living places.	What becomes visible when we look at a habitat like a scientist?	Field notes

Living things and habitats	3-5. Classification, keys and adaptation	WOW • HOW	Patterns of similarity and difference invite wonder while classification shows how humans organise knowledge.	Why do scientists group living things, and what can those groups help us notice?	Pupil explanation
Living things and habitats	6. Explore and classify pond plants	NOW	Close observation of pond plants creates a natural moment of stillness and focused attention.	What did you notice only because you looked closely?	Observation
Sound	1-2. How sound is made and travels	WOW • HOW	Invisible vibrations travelling through a medium become understandable through effects we can hear and investigate.	How can something invisible travel to us and become sound?	Wonder / explanation
Sound	4-5. Volume and pitch	NOW • WOW	Careful listening and comparison encourage pupils to attend closely to qualities of sound.	What changes can your ears notice when you listen with full attention?	Listening notes
States of Matter	1-2. Three states and particle behaviour	WOW • HOW	Particle models explain familiar materials through structures too small to see directly.	How can a model help us think about something we cannot see?	Model explanation
States of Matter	3-5. Melting, boiling, freezing, evaporation and condensation	WOW • NOW	Changes of state make transformation observable and reward careful noticing of conditions and change.	What changes, and what stays the same, when a substance changes state?	Investigation reflection

States of Matter	6. Understand the water cycle	WOW • HOW	The water cycle connects evaporation and condensation into a repeating planetary process.	Where might the water in today's rain have been before?	Wonder / discussion
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DETAILED SCIENCE MAPPING - YEAR 5

Only lessons with a genuine spiritual opportunity are included

Using this page. A lesson may carry more than one lens where the connection is natural. Teacher prompts are optional invitations to reflection and should be used briefly so the scientific learning remains central.

Unit	Lesson / curriculum focus	Lens	Why this creates a spiritual opportunity	Possible prompt	Natural evidence
Animals, including humans	1. Identify key stages of a mammal life cycle	WOW • HOW	A whole life cycle invites reflection on continuity, growth and change.	What is constant and what changes across a lifetime?	Discussion
Animals, including humans	2. Explore gestation periods of mammals	WOW	Variation in gestation across mammals can create fascination with the diversity of life.	What surprises you about how differently mammals develop before birth?	Pupil wonder
Animals, including humans	3. Learn about foetal development	WOW • HOW	Development before birth reveals gradual change from very small beginnings.	What questions does development before birth make you want to ask?	Questioning
Animals, including humans	5. Learn about changes experienced in puberty	NOW • HOW	Puberty learning can support thoughtful attention to change, individuality and the fact that development is not identical for everyone.	Why is it important to remember that people develop at different rates?	Sensitive reflection
Animals, including humans	6. Changes during old age	OW • HOW	Ageing creates an opportunity for empathy and reflection on human vulnerability and care across generations.	How might understanding ageing help us treat older people with care and respect?	Discussion

Changes of Materials	2. Recognise and describe reversible changes	HOW • WOW	Reversible change raises questions about what has genuinely changed and what can return to an earlier state.	How do we know whether a change can be undone?	Scientific reasoning
Changes of Materials	3. Observe chemical reactions and new materials	WOW • HOW	The formation of a new material can produce genuine surprise and invite explanation from evidence.	What evidence tells us something new has been made?	Observation / conclusion
Changes of Materials	4-6. Rusting, burning and acid/bicarbonate reactions	WOW • HOW	Visible reaction signs encourage careful attention to transformation and causal explanation.	Which observation is strongest evidence that a chemical change has happened?	Evidence discussion
Earth and Space	1. Explore the solar system and its planets	WOW • HOW	The scale, diversity and arrangement of the solar system provide one of the curriculum's strongest opportunities for awe and big questions.	What makes you feel small, curious or amazed when you think about the solar system?	Wonder reflection
Earth and Space	2. Understand the heliocentric model	HOW • VOW	Changing models show that explanations can be revised when better evidence becomes available, supporting humility and commitment to truth.	What should we do when evidence challenges an idea we have believed?	Pupil reflection

Earth and Space	3-5. Earth, day/night and Moon movement	WOW • NOW	Regular movements create patterns that pupils experience every day but can now observe with deeper understanding.	How does knowing the science change the way you notice the sky?	Observation / reflection
Earth and Space	6. Design a planet using knowledge gained	WOW	Imaginative application of scientific knowledge can deepen fascination with the conditions that shape worlds.	Which features of a planet would make it most interesting to explore?	Design explanation
Forces	1. Gravity and the work of Isaac Newton	WOW • HOW	Gravity is constant yet invisible, and its explanation shows the power of asking questions about ordinary experiences.	What familiar event can become extraordinary when we ask why it happens?	Pupil question
Forces	2-4. Air resistance, water resistance and friction	HOW	Comparing resisting forces develops causal thinking about why objects move differently.	How can something we cannot see change the way an object moves?	Investigation conclusion
Forces	5-6. Levers, pulleys and gears	POW • WOW	Mechanisms show how scientific understanding can reduce effort and extend what people are able to do.	How can a simple mechanism increase what a person can achieve?	Application / design
Living things and habitats	1-4. Plant and animal life cycles	WOW • HOW	Comparing life cycles highlights both shared patterns and striking differences across living things.	What patterns connect very different kinds of life?	Comparison reflection

Living things and habitats	5. Jane Goodall and David Attenborough	POW • VOW	Their work demonstrates how studying and communicating about living things can influence how people understand and value the natural world.	How can scientific knowledge become powerful when it is shared with others?	Pupil response
Living things and habitats	6. Research and present a creature life cycle	NOW • WOW	Focused research and presentation encourage attentive study of one living thing in depth.	What did you notice because you stayed with one creature's story for longer?	Research reflection
Properties of Materials	1-3. Properties, conductors/insulators and hardness	HOW • POW	Understanding why materials behave differently shows how scientific properties guide safe and useful choices.	How does knowing a material's properties help us choose wisely?	Explanation
Properties of Materials	4-6. Solubility and separating mixtures	WOW • HOW	Dissolving and separation reveal materials changing appearance while their substances can sometimes be recovered.	What can be present even when we can no longer see it?	Wonder / scientific reasoning

DETAILED SCIENCE MAPPING - YEAR 6

Only lessons with a genuine spiritual opportunity are included

Using this page. A lesson may carry more than one lens where the connection is natural. Teacher prompts are optional invitations to reflection and should be used briefly so the scientific learning remains central.

Unit	Lesson / curriculum focus	Lens	Why this creates a spiritual opportunity	Possible prompt	Natural evidence
Animals, including humans	1. Understand the function of the heart and its role in the circulatory system	WOW	The heart's continuous work sustaining the body offers a powerful opportunity for wonder.	What is your heart doing for you every moment without you asking it to?	Wonder reflection
Animals, including humans	2. Identify and compare blood vessels	WOW • HOW	Different vessel structures reveal how form is related to function within a connected system.	How does each vessel seem designed for the job it performs?	Explanation
Animals, including humans	3. Explore blood	WOW	Blood components carrying oxygen, fighting infection and clotting reveal hidden complexity in something familiar.	What is happening in a single drop of blood that we cannot see with our eyes?	Pupil wonder
Animals, including humans	4. Learn how the body transports water and nutrients	NOW • WOW	Tracing transport through the body can deepen awareness of ongoing processes that sustain life.	What is happening inside your body after you drink water?	Reflection / diagram
Animals, including humans	5. Investigate what affects heart rate	NOW • VOW	Measuring heart rate links careful self-observation with informed choices about health.	What does your body tell you when your heart rate changes?	Data + reflection

Animals, including humans	6. Learn about the impact of drugs and alcohol on the body	OW • VOW	The harmful effects described in the organiser create a clear opportunity to connect scientific knowledge with responsible choices.	How should knowledge about harm influence the choices people make?	Pupil reflection
Electricity	3. Identify and correct problems in a circuit	POW • HOW	Troubleshooting applies understanding purposefully and develops perseverance in solving a system problem.	How does careful reasoning help us turn failure into a solution?	Problem-solving notes
Electricity	5. Build a set of traffic lights	POW	Applying circuit knowledge to a familiar safety system shows science and engineering serving a community need.	How can electrical knowledge help keep people safe?	Design / explanation
Electricity	6. Apply knowledge of conductors and insulators	VOW • POW	Choosing conductors and insulators appropriately combines application with responsibility for safe design.	What responsibilities come with knowing how electricity behaves?	Safety / design reflection
Evolution and Inheritance	1. Offspring vary and are not identical to parents	WOW • HOW	Variation highlights both connection and uniqueness within living things.	How can offspring be like their parents and still be unique?	Discussion
Evolution and Inheritance	2-3. Animal and plant adaptations	WOW • HOW	Adaptations show diverse ways living things survive in particular environments.	What does an adaptation tell us about the challenges of a habitat?	Pupil explanation

Evolution and Inheritance	4. Explore what we can learn from fossils	HOW • WOW	Fossils are evidence from the past, linking scientific inference with deep time.	How can evidence in rock help us reconstruct a world no one alive has seen?	Evidence reflection
Evolution and Inheritance	5. Evolution by natural selection	HOW	Natural selection gives pupils a scientific explanation for change in populations over generations and invites careful thinking about evidence and timescale.	What evidence would scientists need when explaining change over very long periods?	Scientific discussion
Evolution and Inheritance	6. Explore human evolution	HOW • WOW	Human evolution extends questions of change and evidence to our own species.	How does scientific evidence help us think about the long story of human life?	Pupil reflection
Light	1. Explore how light travels	HOW • WOW	A simple rule - light travelling in straight lines - explains many familiar visual experiences.	How can one idea explain so many things we see?	Explanation / wonder
Light	2-3. Reflection and its uses	WOW • POW	Reflection can be both visually striking and practically useful for helping people see.	How can a property of light be used to solve a real problem?	Application response
Light	4-5. Investigate changing shadows and shadow shape	NOW • WOW	Precise observation of shadow size and shape turns an everyday phenomenon into a source of careful wonder.	What pattern only becomes clear when we measure or observe carefully?	Investigation notes

Light	6. Explore light phenomena	WOW • HOW	Colour and other light phenomena create strong opportunities for fascination followed by scientific explanation.	Which light phenomenon makes you want to ask the biggest question?	Wonder question
Living things and habitats	1-3. Classification, kingdoms and the Linnaean system	WOW • HOW	The enormous diversity of life can be organised into patterns; classification shows how scientific systems help humans make sense of complexity.	How does classification help us see both difference and connection?	Pupil explanation
Living things and habitats	4. Characteristics of microorganisms	WOW • OW	Microscopic organisms reveal an unseen world that includes both helpful and harmful forms.	How can something too small to see have such a large effect on our lives?	Discussion
Living things and habitats	5. Asexual reproduction through spore dispersal	WOW	Spore dispersal reveals another striking way life reproduces and continues.	What is surprising about a living thing reproducing without seeds or a mate?	Wonder response
Living things and habitats	6. Classify and describe a living organism	NOW • HOW	Close observation and classification require disciplined attention to evidence.	Which small detail changed how you classified the organism?	Observation / reasoning

Looking after the environment	1 & 6. Learn about climate change; compare data associated with the weather	OW • HOW • VOW	Climate change links scientific evidence and weather-data trends with impacts on habitats, ice, sea level and living things, reinforcing evidence-based judgement.	What does the evidence tell us is changing, who or what is affected, and why does good data matter?	Data interpretation / reflection
Looking after the environment	2-3. Reduce landfill waste and energy consumption	POW • VOW	Waste and energy reduction translate scientific understanding into practical action and personal responsibility.	Which realistic change could reduce our waste or energy use most?	Class action / commitment
Looking after the environment	4. Explore what happens when fuels are burnt	OW • HOW	Combustion links everyday energy use with greenhouse gas production and wider consequences.	How can an action in one place contribute to change across the planet?	Cause-and-effect reflection
Looking after the environment	5. Explore the outcomes of COP26	POW • VOW	International responses show collective agency and invite reflection on shared responsibility.	Why might environmental problems need people and countries to act together?	Pupil voice

PROGRESSION IN SPIRITUALITY THROUGH SCIENCE

Increasing depth of noticing, questioning, evidence, reflection and responsibility

A key principle. Progression does not mean pupils become "more spiritual" as they get older. It describes increasing depth in how they observe, question, connect evidence, consider consequences and respond responsibly.

KEY STAGE 1

Pupils notice, name, sort and compare the world around them. They experience wonder through animals, plants, materials, seasons, senses and life cycles. They begin to ask what makes something living, notice change over time and connect simple scientific knowledge with care for themselves and living things.

WOW and NOW are especially prominent, with early HOW, VOW and POW opportunities.

LOWER KEY STAGE 2

Pupils move beyond noticing towards explaining systems and unseen processes: digestion, skeletons, forces, magnetism, light, sound, particles, plant processes, rock formation and electricity. Enquiry becomes more deliberate through fair testing, variables and evidence. Environmental harm and conservation deepen OW, POW and VOW.

HOW deepens through explanation; NOW develops through enquiry; VOW links strongly to Truth and responsibility.

UPPER KEY STAGE 2

Pupils grapple with larger scales, longer times and more complex systems: Earth and space, human development, circulation, evolution, classification, chemical change and climate. They encounter changing scientific models, infer from evidence and consider how science is applied to health, engineering and environmental decisions.

Spirituality becomes increasingly connected to humility, evidence, agency, responsibility and the consequences of choices.

SCIENCE, SPIRITUALITY AND OUR CHRISTIAN VISION

Wondering at the world, seeking truth and using knowledge responsibly



Through Science, pupils encounter a world of extraordinary diversity, pattern and change - from the smallest seed and microscopic organism to the circulatory system, the history of life and the scale of the solar system. Scientific enquiry teaches pupils to look closely, ask questions, test ideas and attend honestly to evidence.

Within St Aidan's Christian vision, these experiences can create space for wonder, humility, hope and responsibility. "Let your light shine" is expressed not by replacing scientific explanation with belief, but by encouraging pupils to use knowledge well: to care for themselves, value living things, seek truth, protect the environment and apply understanding in ways that can benefit others.

Let your light shine. Science gives pupils knowledge and methods for understanding the world. Spiritual development asks what they notice, what they wonder, how they respond to challenge, what responsibilities knowledge brings, and how that knowledge might help them bring light to others.

Inclusive and academically rigorous

- Pupils are free to respond from their own faith or worldview; the school does not present scientific findings as proof of a religious claim.
- Where Science raises big questions, teachers can acknowledge that people may interpret meaning differently while keeping the scientific explanation accurate and explicit.
- The strongest spiritual moments often arise from the subject itself: wonder at evidence, humility when ideas change, empathy when science reveals harm, and agency when knowledge enables action.

USING AND MONITORING THE MAP

For teachers, subject leaders, governors and SIAMS evidence

What should be visible in practice?

Curriculum first Staff can identify the scientific knowledge or enquiry that creates the opportunity before naming a spirituality lens.	Pupil language Pupils increasingly recognise WOW, NOW, HOW, OW, POW and VOW moments and can explain why a particular experience made them wonder, reflect or want to act.
No tokenism Some lessons have no mapped spirituality opportunity and continue as high-quality Science without an added reflective task.	Truth in enquiry Pupils understand that fair testing, accurate results and changing an explanation in response to evidence are positive scientific habits.
Action with purpose POW and VOW are strongest where knowledge genuinely informs health, safety, conservation, engineering or environmental responsibility.	Light-touch evidence Pupil voice, science books, observation records, questions, design decisions and real actions provide evidence without creating a separate spirituality workbook.

Suggested subject-leader questions

- Can pupils give an example of a Science lesson that made them say WOW, ask HOW or stop and notice NOW?
- Can pupils explain how evidence sometimes changes what scientists think?
- Where has Science helped pupils consider responsibility for health, living things or the environment?
- Do staff feel confident leaving a lesson unmapped when the spirituality link would be artificial?
- Can leaders trace the mapped opportunities directly back to the taught Science curriculum?

Important. This map identifies opportunities for spiritual development; it does not assess or grade pupils' spirituality.



SPIRITUALITY ACROSS THE SCIENCE CURRICULUM

Let your light shine - Matthew 5:16