

Animals including Humans



Animals



The Human Body

Plants



Plants

Light



Energy and Forces

Forces and Magnets



Energy and Forces

Rocks



Materials and Matter



Earth and Space



Year 3 Unit Overview – Animals Including Humans (Animals and The Human Body Strands)

National Curriculum:

Pupils should be taught 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
- Identify that humans and some other animals have skeletons and muscles for support, protection and movement

Outcomes:

Core Knowledge

Core knowledge, vocabulary and progression are outlined in the Science Knowledge Progression document (Animals + Human Body strands) and should be explicitly taught and revisited. This knowledge builds on prior learning and prepares pupils for future learning within the Animals + Human Body strands.

By the end of this unit all pupils should have had the opportunity to:

Identify that animals (including humans) need nutrition to survive

Identify that animals cannot make their own food

Describe the main nutrients needed for a healthy diet (e.g. Use food labels to explore the nutritional content of a range of food items)

Identify that humans and some animals have skeletons for support, protection and movement

Describe how muscles work with the skeleton to enable movement

Classify food in a range of ways.

Teacher Support

Teachers are supported through high-quality, nationally recognised resources such as Oak National Academy, Explorify, TAPS Resources, ASE (Association for Science Education) and STEM Learning, ensuring consistency while maintaining professional autonomy

Working Scientifically

By the end of this unit pupils should have developed the following working scientifically skills:

Working Scientifically (TAPS framework)

Ask relevant questions

Gather and record data in different ways

Use results to draw simple conclusions

TAPS Enquiries: Investigating skeletons (Ask relevant questions))

Other Enquiry Opportunities:

Ask questions (e.g. “Why do we need different nutrients?”)

Compare diets of different animals

Observe how movement changes with different activities

Look for patterns in how bodies work

Use secondary sources to research the parts and functions of the skeleton

Investigate pattern seeking questions such as

Can people with longer legs run faster?

Can people with bigger hands catch a ball better?

Compare, contrast and classify skeletons of different animals

Use food labels to answer enquiry questions e.g. How much fat do different types of pizza contain? How much sugar is in soft drinks?

Possible Evidence and Assessment Opportunities:

Assessment is based on retrieval of sticky knowledge and application through discussion and practical work.

Retrieval of sticky knowledge (quizzes)

Observation of practical work

Use of scientific vocabulary in discussion

TAPS enquiry assessments

Retrieval Opportunities

Review prior knowledge at the start of lessons

Use low-stakes quizzes to secure sticky knowledge throughout the unit



Year 3 Unit Overview – Plants (Plants Strand)

National Curriculum:

Pupils should be taught to:

- Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- 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
- Investigate the way in which water is transported within plants
- Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal

Outcomes:

Core Knowledge

Core knowledge, vocabulary and progression are outlined in the Science Knowledge Progression document (Plants strand) and should be explicitly taught and revisited. This knowledge builds on prior learning and prepares pupils for future learning within the Plants strand.

By the end of this unit all pupils should have had the opportunity to:

Identify and describe the functions of different parts of flowering plants (roots, stem, leaves, flowers)

Explore how water is transported within plants

Explain how plants use light to make food (photosynthesis – basic concept)

Investigate the role of flowers in the life cycle of plants (pollination, seed formation, dispersal)

Compare how plants grow in different conditions

Teacher Support

Teachers are supported through high-quality, nationally recognised resources such as Oak National Academy, Explorify, TAPS Resources, ASE (Association for Science Education) and STEM Learning, ensuring consistency while maintaining professional autonomy

Working Scientifically

By the end of this unit pupils should have developed the following working scientifically skills:

Working Scientifically (TAPS framework)

Perform comparative tests

Observe and record results

Use results to draw simple conclusions

Observing over time (plant growth)

Comparative testing (conditions for growth)

TAPS Enquiries: Measuring Plants and Function of a Stem

Other Enquiry Opportunities:

Observe flowers carefully to identify the pollen

Observe flowers being visited by pollinators e.g. bees and butterflies in the summer

Observe seeds being blown from the trees e.g. sycamore seeds

Research different types of seed dispersal

Classify seeds in a range of ways including by how they are dispersed

Possible Evidence and Assessment Opportunities:

Assessment is based on retrieval of sticky knowledge and application through discussion and practical work.

Retrieval of sticky knowledge (quizzes)

Observation of practical work

Use of scientific vocabulary in discussion

TAPS enquiry assessments

Retrieval Opportunities

Review prior knowledge at the start of lessons

Use low-stakes quizzes to secure sticky knowledge throughout the unit



Year 3 Unit Overview – Light (Energy and Forces Strand)

National Curriculum:

Pupils should be taught to:

- Recognise that they need light in order to see things and that dark is the absence of light
- Notice that light is reflected from surfaces
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- Recognise that shadows are formed when the light from a light source is blocked by an opaque object
- Find patterns in the way that the size of shadows change

Outcomes:

Core Knowledge

Core knowledge, vocabulary and progression are outlined in the Science Knowledge Progression document (Energy and Forces strand) and should be explicitly taught and revisited. This knowledge builds on prior learning and prepares pupils for future learning within the Energy and Forces strand.

By the end of this unit all pupils should have had the opportunity to:

Recognise that light is needed to see and that darkness is the absence of light

Identify different sources of light

Explain that light is reflected from surfaces

Describe how shadows are formed

Observe how shadows change size

Teacher Support

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Working Scientifically

By the end of this unit pupils should have developed the following working scientifically skills:

Working Scientifically (TAPS framework)

Observe closely

Perform simple tests

Use observations to answer questions

TAPS Enquiries: Making Shadows

Other Enquiry Opportunities:

Ask questions (e.g. "How are shadows formed?")

Investigate how shadows change

Explore reflective surfaces

Observe light sources

Possible Evidence and Assessment Opportunities:

Assessment is based on retrieval of sticky knowledge and application through discussion and practical work.

Retrieval of sticky knowledge (quizzes)

Observation of practical work

Use of scientific vocabulary in discussion

TAPS enquiry assessments

Retrieval Opportunities

Review prior knowledge at the start of lessons

Use low-stakes quizzes to secure sticky knowledge throughout the unit



Year 3 Unit Overview – Forces and Magnets (Energy and Forces Strand)

National Curriculum:

Pupils should be taught to:

- Compare how things move on different surfaces
- Notice that some forces need contact between two objects, but magnetic forces can act at a distance
- Observe how magnets attract or repel each other and attract some materials and not others
- 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
- Describe magnets as having two poles
- Predict whether two magnets will attract or repel each other, depending on which poles are facing

Outcomes:

Core Knowledge

Core knowledge, vocabulary and progression are outlined in the Science Knowledge Progression document (Energy and Forces strand) and should be explicitly taught and revisited. This knowledge builds on prior learning and prepares pupils for future learning within the Energy and Forces strand.

By the end of this unit all pupils should have had the opportunity to:

Compare how things move on different surfaces

Identify that forces can be pushes or pulls

Explore how magnets attract and repel

Identify magnetic materials

Describe how magnets have poles

Teacher Support

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Working Scientifically

By the end of this unit pupils should have developed the following working scientifically skills:

Working Scientifically (TAPS framework)

Perform comparative tests

Observe and record results

Use results to draw simple conclusions

TAPS Enquiries: Shoe Grip, Strongest Magnet, Ballon Rocket

Other Enquiry Opportunities:

Ask questions (e.g. “Which surface creates more friction?”)

Test movement on different surfaces

Explore magnetic and non-magnetic materials

Investigate how magnets behave

Possible Evidence and Assessment Opportunities:

Assessment is based on retrieval of sticky knowledge and application through discussion and practical work.

Retrieval of sticky knowledge (quizzes)

Observation of practical work

Use of scientific vocabulary in discussion

TAPS enquiry assessments

Retrieval Opportunities

Review prior knowledge at the start of lessons

Use low-stakes quizzes to secure sticky knowledge throughout the unit



Year 3 Unit Overview – Rocks (Materials and Matter, Earth and Space Strands)

National Curriculum:

Pupils should be taught to:

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- Describe in simple terms how fossils are formed when things that have lived are trapped within rock
- Recognise that soils are made from rocks and organic matter

Outcomes:

Core Knowledge

Core knowledge, vocabulary and progression are outlined in the Science Knowledge Progression document (Earth and Space and Materials and Matter strands) and should be explicitly taught and revisited. This knowledge builds on prior learning and prepares pupils for future learning within the Earth and Space and Materials and Matter strands.

By the end of this unit all pupils should have had the opportunity to:

Compare and group different types of rocks based on their appearance and properties

Describe how fossils are formed

Identify that soils are made from rocks and organic matter

Compare the properties of different soils

Explain how rock type affects its uses

Teacher Support

Teachers are supported through high-quality, nationally recognised resources such as Oak National Academy, Explorify, TAPS Resources, ASE (Association for Science Education) and STEM Learning, ensuring consistency while maintaining professional autonomy

Working Scientifically

By the end of this unit pupils should have developed the following working scientifically skills:

Working Scientifically (TAPS framework)

Perform comparative tests

Observe and record results

Use results to draw simple conclusions

TAPS Enquiries:

Rock Reports (Identifying and classifying / comparative testing)

Other Enquiry Opportunities:

Ask questions (e.g. “Which rock is the hardest?” “Which rock is most absorbent?”)

Compare and group rocks based on their appearance and properties

Test rocks for properties such as hardness, permeability and durability

Observe and describe how fossils are formed

Explore how soils differ and what they are made from

Use observations to explain how rock type affects its uses

Possible Evidence and Assessment Opportunities:

Assessment is based on retrieval of sticky knowledge and application through discussion and practical work.

Retrieval of sticky knowledge (quizzes)

Observation of practical work

Use of scientific vocabulary in discussion

TAPS enquiry assessments

Retrieval Opportunities

Review prior knowledge at the start of lessons

Use low-stakes quizzes to secure sticky knowledge throughout the unit