



Year 6

Animals including Humans



Animals



The Human Body

Living Things and Habitats



Animals

Evolution and Inheritance



Animals



Earth and Space



Plants

Light



Energy and Forces



Materials and Matter

Electricity



Energy and Forces



Materials and Matter



Year 6 Unit Overview – Animals Including Humans (Animals and The Human Body Strands)

National Curriculum:

Pupils should be taught to:

- **Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood**
- **Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function**
- **Describe the ways in which nutrients and water are transported within animals, including humans**

Outcomes:

Core Knowledge

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

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

- Describe the functions of the heart, blood vessels and blood
- Explain how nutrients and water are transported in the human body
- Describe the role of the circulatory system
- Explain the impact of diet, exercise, drugs and lifestyle on the body
- Use models to represent how the circulatory system works

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

Use models to explain ideas

Interpret data and observations

Use evidence to support conclusions

TAPS Enquiries: Heart Rate (Research and modelling)

Other Enquiry Opportunities:

Ask questions (e.g. “How does the circulatory system work?”)

Use models to represent blood flow

Interpret data (e.g. heart rate)

Use evidence to explain lifestyle impacts

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 6 Unit Overview – Living Things and Their Habitats (Animals Strand)

National Curriculum:

Pupils should be taught 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**
- **Give reasons for classifying plants and animals based on specific characteristics.**

Outcomes:

Core Knowledge

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

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

- Describe how living things are classified into broad groups
- Classify living things based on observable characteristics
- Explain similarities and differences between organisms
- Use classification systems to group living things
- Identify micro-organisms and other groups

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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)

Use classification systems

Gather, record and present data

Use evidence to support conclusions

TAPS Enquiries: Invertebrate Research

Other Enquiry Opportunities:

Ask questions (e.g. “How can we group living things?”)

Use classification keys

Compare organisms

Record findings using tables/diagrams

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 6 Unit Overview – Evolution and Inheritance (Animals, Earth and Space and Plants Strands)

National Curriculum:

Pupils should be taught to:

- **Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents**
- **Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution**
- **Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago**

Outcomes:

Core Knowledge

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

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

- Describe how living things have changed over time
- Explain how fossils provide evidence of past life
- Identify how animals and plants are adapted to their environment
- Explain how variation occurs within a species
- Describe how adaptation can lead to evolution over time

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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)

Use evidence to support explanations

Interpret data and observations

Identify patterns

Draw conclusions

TAPS Enquiries: Evolution: fossil habitats, Evolution: egg strength

Other Enquiry Opportunities:

Ask questions (e.g. “How have living things changed over time?”)

Compare fossils and living organisms

Identify adaptations

Use evidence to explain evolutionary ideas

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 6 Unit Overview – Light (Energy and Forces, Materials and Matter Strands)

National Curriculum:

Pupils should be taught to:

- **Recognise that light appears to travel in straight lines**
- **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**
- **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**
- **Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.**

Outcomes:

Core Knowledge

Core knowledge, vocabulary and progression are outlined in the Science Knowledge Progression document (Energy and Forces 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 Energy and Forces and Materials and Matter strands.

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

Explain that light travels in straight lines

Explain how we see objects (light entering the eye)

Describe how light is reflected from surfaces

Explain how shadows are formed and why they have the same shape as objects

Use ideas about light to explain observations

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)

Use evidence to explain observations

Interpret results

Draw conclusions

TAPS Enquiries: Investigating Shadows

Other Enquiry Opportunities:

Ask questions (e.g. “How does light travel?”)

Investigate how shadows change

Use diagrams to explain light paths

Use observations to explain phenomena

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 6 Unit Overview – Electricity (Energy and Forces, Materials and Matter Strands)

National Curriculum:

Pupils should be taught to:

- **Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit**
- **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**
- **Use recognised symbols when representing a simple circuit in a diagram.**

Outcomes:

Core Knowledge

Core knowledge, vocabulary and progression are outlined in the Science Knowledge Progression document (Energy and Forces 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 Energy and Forces and Materials and Matter strands.

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

- Construct and interpret simple electrical circuits
- Explain how the brightness of bulbs is affected by components
- Explain how voltage affects circuits
- Compare how components function in different circuits
- Use recognised symbols to represent circuits

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)

Plan and carry out fair tests

Record and present results accurately

Use evidence to explain findings

Evaluate investigations

TAPS Enquiries: Bulb Brightness

Other Enquiry Opportunities:

Ask questions (e.g. “What affects brightness in a circuit?”)

Investigate circuit changes

Record results using diagrams

Evaluate outcomes

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