



Journey to the Centre of the Earth

Recommended year group: Year 7

Subject focus: Drama, English, Science, Maths, Geography, History, RE

Driving Question

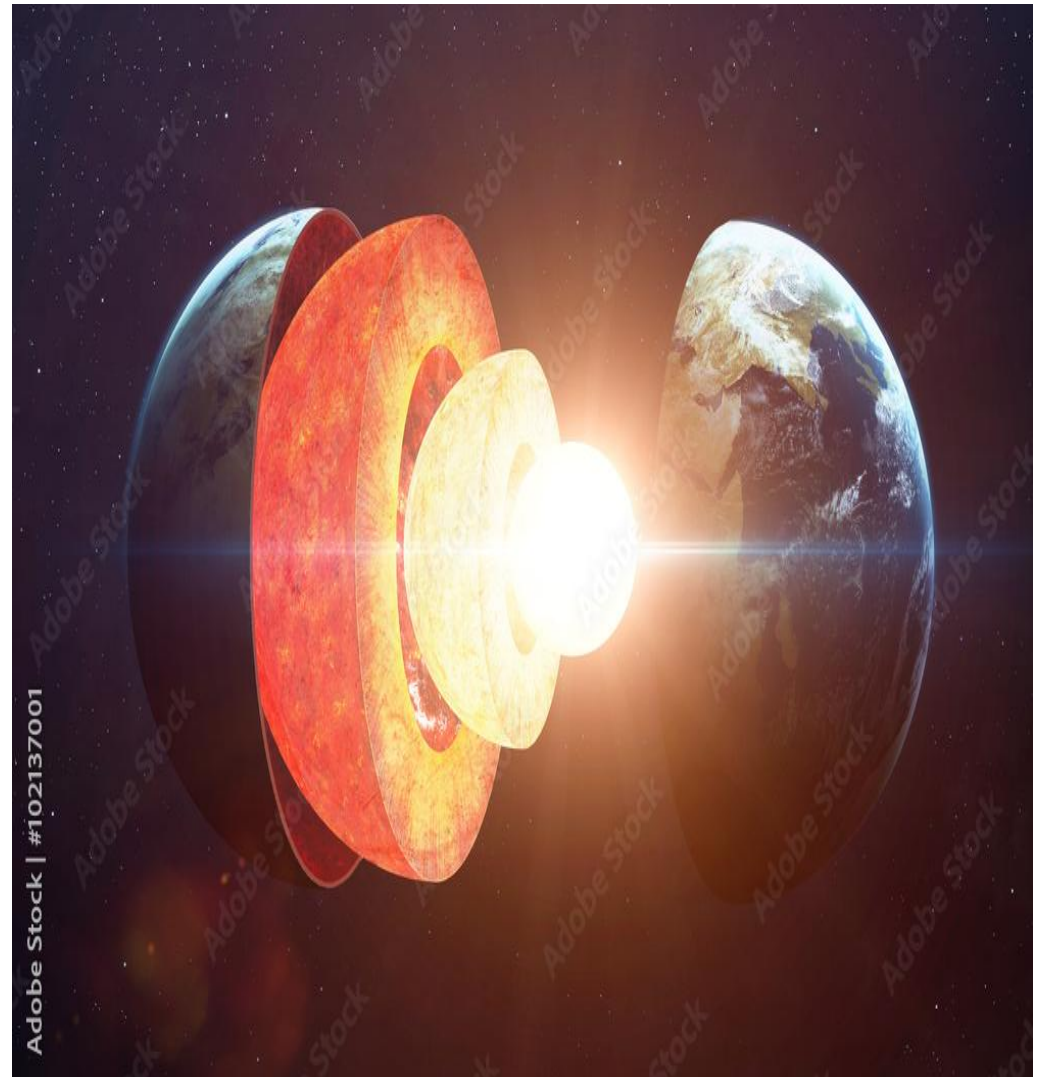
Is the Earth Alive?

Introduction

Journey to the Centre of the Earth is a cross-curricular theme that uses curiosity and imagination to explore what lies beneath our feet. Inspired by Jules Verne's classic novel, the theme blends science, religion, and literature to help students investigate how humans have tried to understand the Earth's structure and our place in the universe.

Through scientific discovery, students learn about the layers of the Earth and the forces that shape it. Through religious and philosophical ideas, they explore different beliefs about how the world began. Through literature, they develop inference skills and reflect on how stories help us make sense of the unknown.

This theme encourages students to think deeply about the Earth, its mysteries, and how human understanding has changed over time. It shows how science and storytelling can work together to spark wonder—and how our search for knowledge continues to shape the way we see the world.



Learning Checks

Lesson 7 – Big Read: Jules Verne

Lesson 9 – The Dynamic Earth – natural disasters

Lesson 11 – Big Write - Prepositions

Key vocabulary

Abrahamic, afterlife, amplitude, astronomy, astrophysicist, auditory canal, auditory nerve, axis, careers, cochlea, composed, Continental drift, convection, currents, creation, crust, death, Dharmic, discursive, eardrum, earth, earthquake, Equator, existence, galaxy, geoscientist, geotechnical, gravitational field strength, gravity, gravity/ gravitational force, heat, heaven, hell, hemispheres, hydrologist, igneous, imaginary, importance, inertia, inner core, light, mantle, mass, metamorphic, metaphor, meteorologist, moon, motion, orbit, outer core, outer ear, palaeontologist, person specification, personification, planet, plate boundaries, porous, prehistoric, preposition, pressure, qualifications, seasons, sedimentary, seismologist, sentence cohesion, shadow, skills, solar system, sun, synopsis, tectonic plates, telescope, tilted, tsunamis, volcano, weight

Linked Reading

Journey to the Centre of the Earth by Jules Verne - *Travel deep beneath the Earth and uncover incredible underground secrets.*

A Wrinkle in Time by Madeleine L'Engle - *Journey across space and time on a mission to save a missing scientist.*

The Last Wild by Piers Torday - *When animals begin to disappear, one boy must help save the natural world.*

Floodland by Marcus Sedgwick - *Survive in a future Britain where rising seas have changed everything.*

The Explorer by Katherine Rundell - *Four children stranded in the Amazon discover adventure, danger and mystery.*

The Wolves of Willoughby Chase by Joan Aiken - *Two friends face wild landscapes, fierce wolves and unexpected challenges.*

The Lost Whale by Hannah Gold - *An unforgettable journey of friendship, family and the wonders of the ocean.*

Cosmic by Frank Cottrell-Boyce - *Accidentally launched into space, Liam discovers what really matters.*

The Secret Island by Enid Blyton - *Four children build a new life on a hidden island and learn to survive.*

Northern Lights by Philip Pullman - *Follow Lyra's epic adventure through a world of mystery, science and discovery.*

Challenge Reads

The Hobbit by J.R.R. Tolkien - *Join Bilbo on a dangerous quest through mountains, caves and forests.*

The Martian: Classroom Edition by Andy Weir - *Can science and determination keep an astronaut alive on Mars?*

Phoenix by S.F. Said - *An exciting space adventure exploring courage, friendship and the universe.*

Read: *Earth Heroes* by Lily Dyu

Discover the inspiring stories of scientists, explorers and activists who have helped protect our planet. Learn how people can make a positive difference to the Earth.

Watch: *A Life On Our Planet* by David Attenborough

Find out how Earth has changed over time and explore the impact humans have had on the environment, climate and natural world.

Listen: *A Place in Space and Time* by Brian Cox

Explore humanity's place in the universe and discover how our understanding of space has changed throughout history.

Activities to try at home

Family Earth Scavenger Hunt

Work together to find evidence of how amazing our planet is!

Can you find:

- Something made from rock
- Something that comes from the Earth
- A living thing
- Something shaped by water or weather
- A picture of a volcano, earthquake or mountain
- Something that is older than you
- Something that reminds you of space

Build an Edible Earth

Create a model of the Earth's layers using food or craft materials.

Ideas: cake, jelly, fruit, biscuits, sweets or playdough.

Can you:

- Label the crust, mantle, outer core and inner core?
- Explain what each layer does to a family member?
- Compare the Earth to your model and discuss which layer would be the hardest to visit and why?

Extended learning opportunities

Careers

Have you ever wondered who studies volcanoes, earthquakes, rocks and the planet beneath our feet?

Click on [this link](#) to explore a range of exciting careers, including: Geologist, Volcanologist, Seismologist, Environmental Scientist, Meteorologist

Find out what these jobs involve and the skills and qualifications needed to follow these career paths.

Places to Visit

Explore interactive exhibits at places such as the Thinktank Science Museum in Birmingham or the National Space Centre in Leicester. Discover more about Earth, space and scientific discoveries.

Take a [Virtual Tour Inside a Volcano](#) and discover what happens beneath the Earth's surface.

[The Giant's Causeway](#) - Visit this incredible natural wonder virtually and investigate how rocks can reveal the story of Earth's past.

[Virtual Tour of Mount Everest](#) - discover how tectonic plates created this spectacular landscape.

People, Place and Time

The 'People', 'Place' and 'Time' resources provide support to key knowledge throughout the theme. More specifically:

- **People:** fact files on key people who have had an influence in this theme. Students can use these to research information, or they can be used as WAGOLs for fact files.
- **Place:** provides a visual representation of the places where humans have explored the earth and space
- **Time:** highlights of the history of the creation of the earth that humans live on today

Lessons

Lesson title	Subject	Essential knowledge/concepts	Competencies	National curriculum coverage
Lesson 1: Our Place in the Universe.	Science	Describe what a light year is and identify key features of our solar system and galaxy. Use data to compare distances and temperatures in space and represent this information in a graph. Explain different theories about the origin of the universe and evaluate why the Big Bang theory is the most widely accepted today.	SC.CS.01 - Using Scientific Ideas	Science: Understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas, together with the importance of publishing results and peer review.
Lesson 2: Religious Creation Stories	Religious Studies	Discuss the creation of Planet Earth. Describe and explain Abrahamic religious creation stories. Compare Abrahamic religious creation stories.	SE.RE.01 - Make sense of religious beliefs	NATRE: Explain the religions and worldviews which they encounter clearly, reasonably and coherently; evaluate them, drawing on a range of introductory level approaches recognised in the study of religion or theology
Lesson 3: Death – Is it the end?	Religious Studies	Describe how the concept of the afterlife is believed by different religions. Compare and contrast theories of what happens once our ‘journey’ of life ends in the form of a discursive text	SE.RE.01 Make sense of religious beliefs	NATRE: Explain the religions and worldviews which they encounter clearly, reasonably and coherently; evaluate them, drawing on a range of introductory level approaches recognised in the study of religion or theology
Lesson 4: Gravity, Weight and Mass	Science and Maths	Calculate weight using mass and acceleration of gravity	SC.MS.01: Using Equations and Solving Problems	Science Physics ‘non-contact forces: gravity forces’ and ‘forces measured in newtons’ and ‘gravity force, weight = mass x gravitational field strength’

				Maths ‘use standard units of mass, length, time, money and other measures, including with decimal quantities ‘
Lesson 5: The Moving Earth	Science and Maths	Describe the theory of day and night. Explain what changes occur when the Earth spins once around its axis and orbits the Sun. Analyse a graph showing daylight hours.	SC:CS.01 Using Scientific Ideas SC.PE.02 Interpreting, Analysing and Evaluating Data	Science Physics: ‘the seasons and the Earth’s tilt, day length at different times of year, in different hemispheres’ and ‘interpreting observations and other data, including identifying patterns and trends, making inferences and drawing conclusions’ Maths: ‘plot and interpret graphs’
Lesson 6: How Ideas Have Changed	Science	Describe key events in Galileo's life. Explain how Galileo’s experiments led to changes in ideas over time.	SC.CS.02 Reviewing Theories	Science ‘understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas, together with the importance of publishing results and peer review’
Lesson 7: Big Read: Jules Verne	English	Identify language techniques in a given text. Explain the purpose behind these features. Analyse the purpose and overall effectiveness behind these features.	*RL.LD.05b: Identify and interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyse how they affect meaning or tone.	English: ‘knowing how language, including figurative language, vocabulary choice, grammar, text structure and organisational features, presents meaning’ and ‘making inferences and referring to evidence in the text’

Lesson 8: The Structure of the Earth	Science	Describe the structure of the Earth. Evaluate models that represent the structure of the Earth.	SC.CS.01: Using Scientific Ideas	Science Chemistry: ‘the structure of the Earth’ Pupils should be taught about: Earth and atmosphere the composition of the Earth the structure of the Earth
Lesson 9: The Dynamic Earth	Geography	Identify what continental drift is and describe the theory of plate tectonics. Describe plate boundaries. Assess the impacts of earthquakes and volcanoes.	SE.GE.03: Demonstrate understanding of physical geography concepts and their interrelationships with places, environments and processes	Geography: ‘physical geography relating to: geological timescales and plate tectonics’
Lesson 10: The Science of Sound	Science	Compare the speed of sound and light. Describe differences in sounds. Explain a sound using the appropriate terms. Apply understanding to how our ear works.	SC.CS.01: Using Scientific Ideas: Develop scientific knowledge and understanding through the specific areas of biology, chemistry and physics to understand the uses and implications of science, today and for the future.	Science: Sound waves • frequencies of sound waves, measured in hertz (Hz); echoes, reflection and absorption of sound • sound needs a medium to travel, the speed of sound in air, in water, in solids • sound produced by vibrations of objects, in loud speakers, detected by their effects on microphone diaphragm and the ear drum; sound waves are longitudinal • auditory range of humans and animals
Lesson 11: The Changing Earth	Science and Geography	Describe how sedimentary, metamorphic and igneous rocks are formed.	SE.GE.03: Demonstrate understanding of	Science - Chemistry: ‘the rock cycle and the formation of igneous, sedimentary and metamorphic rocks’

		Explain the properties of different types of rocks. Apply knowledge of the rock cycle to answer questions	physical geography concepts and their interrelationships with places, environments and processes	Geography: ‘physical geography relating to rocks and weathering’
Lesson 11: Big Write - Descriptive Writing	English	Develop an understanding of the use of prepositions to create description. Use given sentence stems to create descriptive writing.	CL.WP.01 Write imaginative, interesting and developed texts to convey complex ideas clearly and accurately (Ideas)	English Write accurately, fluently, effectively and at length for pleasure and information through: writing for a wide range of purposes and audiences, including essays. Draw on knowledge of literary and rhetorical devices from their reading and listening to enhance the impact of their writing.
Lesson 12: Careers	Careers	Identify different careers in the Earth/Space Sciences fields. Research the necessary qualification, skills, and experience to successfully pursue a career in these fields. Explain the importance of these careers.	PD.CA.02: Experiencing the world of work	Gatsby benchmark 4: Linking curriculum learning to careers. All teachers should link curriculum learning with careers. STEM subject teachers should highlight the relevance of STEM subjects for a wide range of future career paths. Science: ‘Establishing the basis for a wide range of careers’