

# How can we answer questions about creation and origins? Learning from religion and science: Christianity, Hinduism, Islam and Humanism – Year 9

## About the unit

This unit suggests activities that can be used in teaching and learning about creation and origins. It can be adapted to local circumstances and for different age groups. It illustrates the provision of the non-statutory national framework for religious education (RE) and can be used or adapted to deliver an agreed syllabus or other guidelines.

This unit focuses on creation and origins of the universe and human life and the relationship between religion and science. It aims to deepen pupils' awareness of ultimate questions through argument, discussion, debate and reflection and enable them to learn from a variety of ideas of religious traditions and other world views. It explores Christianity, Hinduism and Islam and also considers the perspective of those who do not believe there is a god (atheists). It considers beliefs and concepts related to authority, religion and science as well as expressions of spirituality. Pupils have opportunities to discuss, question and evaluate important issues in religion and science. They also have opportunities to reflect on and evaluate their own beliefs and values, and the beliefs and values of others, in relation to questions of truth and purpose.

This unit can be adapted for other religions – using responses from other religious traditions to the key questions, including accounts from scientists who are members of that religious tradition and sources of authority such as sacred texts – according to your agreed syllabus or other guidelines.

The unit should take six to seven hours.

## Prior learning

It is helpful if pupils have:

- been encouraged to think about religion and science and the relationship between them, for example as portrayed in the media.

## Future learning

Pupils could go on to:

- investigate and role-play particular disputes between religion and science, *eg Galileo, Darwin and Dawkins*, and particular meeting points between science and religion, *eg*

*Einstein, Teilhard de Chardin*

- explore and write about attitudes to science and religion in Islamic and other cultures
- study a GCSE unit on an aspect of religion and philosophy.

### **Where the unit fits in**

This unit links with the following key stage 3 guidelines in the non-statutory national framework for RE:

- Learning about religion: 1a, 1b, 1c, 1d, 1e, 1f, 1g
- Learning from religion: 2a, 2b, 2d, 2e
- Religions and beliefs: 3a, 3b, 3d
- Themes: 3e, 3f, 3g, 3h
- Experiences and opportunities: 3o, 3p, 3r.

This unit could build on what pupils might have already learnt about creation stories from sacred texts.

### **Attitudes in the unit**

This unit helps pupils develop the following four attitudes outlined in the non-statutory national framework for RE.

#### **Self-awareness**

- feeling confident about their own beliefs and identity and sharing them with others without fear of embarrassment or ridicule, *eg articulating and reflecting critically on their own religious, philosophical and moral beliefs about science and religion*

#### **Respect for all**

- being prepared to recognise and acknowledge their own bias, *eg when discussing religious and other views of the world*

#### **Open-mindedness**

- distinguishing between opinions, viewpoints and beliefs in connection with issues of conviction and faith, *eg in relation to questions about creation and origins*

#### **Appreciation and wonder**

- recognising that knowledge is bounded by mystery, *eg in relation to the origin of the universe and of human beings.*

### **Differentiated outcomes**

During this unit pupils have opportunities to show their knowledge, understanding and skills. When working at the differentiated levels, pupils could give the following evidence.

Pupils working at level 4 could:

- describe one view that might be held by a Christian, Hindu, Muslim or an atheist about the origins of the universe and human beings
- describe similarities and differences between the different views of creation and origins studied in this unit
- ask questions and suggest answers to questions about the nature of truth in relation to science and religion
- compare their own ideas about the origins of human life to different ideas they have studied in this unit, drawing out similarities and differences
- make links between religious sources and the answers given by the various traditions studied, to the fundamental questions about the beginnings of the universe and human existence.

Pupils working at level 5 could:

- explain different views that might be held by Christians, Hindus, Muslims and atheists about the origins of the universe and human beings
- suggest reasons for similarities and differences between the views of creation and origins studied in this unit
- express their own and others' views on questions about the nature of truth in relation to science and religion
- relate the idea of the universe as created by God, or not, to their own thoughts about life's meanings
- explain how religious sources are used to provide answers to fundamental questions about the beginnings of the universe and human existence by the adherents to the traditions studied in this unit.

Pupils working at level 6 could:

- explain the reasons for the diversity of views within and between religions about the origins of the universe and human beings
- give an informed account of how Christian, Hindu, Muslim or atheist scientists might comment on the idea that God created the universe and explain the reasons for diversity between such views
- use reasoning and examples to express insights into their own and others' views on questions of truth in relation to science and religion
- express their views about creationism, intelligent design and evolution by natural selection in the light of their learning about religious and non-religious world views, using arguments and examples
- interpret religious sources, explaining how different groups use information from them in different ways.

Pupils working at level 7 could:

- analyse issues raised by the diversity of views within and between religions about the origins of the *universe* and human beings.

- give a coherent account of how Christian, Hindu, Muslim or atheist scientists might comment on the idea that God created the universe and analyse the reasons for the diversity between them
- evaluate the significance of religious and other views for understanding questions of truth in relation to science and religion
- articulate personal and critical responses to their learning about religious and non-religious views about creationism, intelligent design and evolution by natural selection
- research a variety of philosophical sources and use them in their answers to questions about creation and origins.

Pupils working at level 8 could:

- present a reasoned analysis of range of views within and between religions about the origins of the *universe* and human beings and their implications for communities and society
- use historical, cultural, social and philosophical ideas to contextualise their accounts of how Christian, Hindu, Muslim or atheist scientists might comment on the idea that God created the universe
- synthesise a range of evidence that leads believers of some religious or philosophical traditions to deny that the beliefs of those of other traditions deserve to be treated as justified true beliefs, fully justifying their own views and ideas and providing a detailed evaluation of the perspectives of others
- coherently analyse a wide range of viewpoints including their own in response to their learning about religious and non-religious views about creationism, intelligent design and evolution by natural selection
- research a variety of philosophical sources, and analyse them in their answers to questions about creation and origins.

Pupils demonstrating exceptional performance could:

- provide a consistent and detailed analysis of a range of views within and between religions about the origins of the universe and human beings and their implications for diverse communities and pluralistic societies
- evaluate the use of historical, cultural, social and philosophical ideas in a contextualised accounts of how Christian, Hindu, Muslim or atheist scientists might comment on the idea that God created the universe
- give independent, well informed and highly reasoned insights into their own and others' perspectives on questions of truth in relation to science and religion
- analyse in depth a wide range of perspectives including their own in response to their learning about religious and non-religious views about creationism, intelligent design and evolution by natural selection
- evaluate the strengths and weakness of using philosophical methods to discuss questions about creation and origins.

## Vocabulary

In this unit pupils have an opportunity to use words and phrases related to:

- religion in general, *eg creation, God as creator of the universe, intelligent design, sacred story, purposeful design*
- specific to a religion, *eg Bible, Rig Veda, Qur'an*
- religious and human experience, *eg agnostic, atheist, Big Bang, cause, controversy, evidence, evolution, literal interpretation, meaning, myth, origins, partnership, probability, proof, purpose, revelation, truth.*

## Resources

*A devil's chaplain: Selected writings* – this resource is available from the *World of Richard Dawkins* website.

*A guide to science and belief* – by M Poole (1997) this publication addresses the view that science and belief are in conflict.

Australian Broadcasting Corporation – this broadcaster's website includes a 'Science' section, which contains the text of a conversation between the scientist Paul Davies and filmmaker Phillip Adams about creation and ultimate meanings.

*Bitesize revision* – supported by the BBC, this website includes a 'Religious education' section, which contains materials on religion, science and the environment.

British Humanism Association – this association's website offers materials for teaching and learning about Humanism.

*Counterbalance* – this website features an interactive library, presenting perspectives on complex issues and containing online video interviews with scientists on a range of topics.

*Developing secondary RE: science and religion* – by R Rivett, ed, this resource is one in a series and is designed to help primary and secondary teachers teach religious education and is available on the *RE Today* website.

*Evolution* – supported by the US Public Broadcasting Service, this website includes online courses, lessons and videos for teaching evolution.

*God talk, science talk: teacher's guide to science and belief* – by M Poole et al (1997), this pack includes ideas for teaching RE in secondary schools.

*HubbleSite* – this website includes images of space taken from the Hubble telescope.

*IslamiCity.com* – the ‘Science’ section of this website provides information and articles about the relationships between science and Islam.

‘Leading in learning’ – from the secondary strategy training material, includes information on thinking skills and information processing/relational diagrams.

*Origins* – the ‘Intelligent design’ pages of this website contain resources on intelligent design and philosophical theism.

‘Pedagogy and practice, unit 7: questioning’ – from the secondary strategy training material, this resource includes information to help promote higher-order questioning skills.

‘Pedagogy and practice, unit 13: developing reading’ – from the secondary strategy training material, this resource includes information on strategies to develop reading.

‘Picturing creation’ – this CD-ROM includes a slideshow of images by the artist Kate Neal, depicting each of the seven days of creation.

*Religion and science* – by B Russell, this publication offers a brief study of the debates between science and traditional religion during the last four centuries.

*RE today* – this website provides professional support and curriculum ideas for teaching RE.

*Science and religion in schools* – this web-based project offers guidance on teaching science and religions, including a guidebook, CD-ROM and other materials for download.

‘Testing God’ – created by *BecauseYouThink.tv*, this documentary features scientists talking about their belief in God and rationality.

*The Christian Bible: Genesis 1–3* – includes the text that Christians associate with the creation of the universe.

*The Qur’an: Surah 25:59, 7:54-56, 21:30-33* – some of the texts that Muslims associate with the creation of the universe.

University of Southern California – this university’s website offers a compendium of Muslim texts, including ‘Islam, knowledge and science and keyword search facility’ and a keyword search facility.

‘Why Atheism?’ – published by Team Video, this video pack includes six films and introduce pupils to humanism and atheism.

*World of Richard Dawkins* – this website includes a selection of quotations.

Complete website addresses are available from the RE pages on the QCA website ([www.qca.org.uk/re/](http://www.qca.org.uk/re/)). QCA monitors and updates these website addresses, but accepts no responsibility for their content.

Syllabus writers and teachers have responsibility for checking the relevance, accessibility and suitability of any web-based material that they or their pupils access.

## Teaching and learning activities

1. Can we 'know' the truth? If so, how?			
Learning objectives	Teaching and learning	Learning outcomes	Points to note
<p>Pupils should:</p> <ul style="list-style-type: none"> <li>know that people use the terms 'know' and 'true' in different ways</li> <li>understand that people have always had questions about the origins, meaning and purpose of the universe and human existence</li> <li>reflect on their own and others' questions about truth when viewing images of the universe.</li> </ul>	<ul style="list-style-type: none"> <li>Ask the pupils to write any sentence the phrase 'I know' in it, eg I know that England will win the World Cup. Then ask them to swap sentences with their neighbour and replace 'know' with another verb, eg I hope that England will win the World Cup.</li> <li>Together with the class, make a list of different meanings of 'know': knowledge as certainty, knowledge as hope, knowledge as belief, knowledge as personal encounter, etc. Through discussion, analyse how scientists and religious people use the expression 'I know', eg 'I know the universe started with a big bang', when often they mean 'I have a theory' or 'I believe'.</li> <li><i>What did people really mean when they said 'I know'?</i> Explain that, when scientists make a scientific assertion they usually mean, 'to the best of my understanding, with the present results and facts that I have, I believe "X" is true'. This is one reason why scientific theories change over time. Explain that, for religious people, there is often a source of truth that comes from revelation, or from the teachings of those who claim their insight comes from the attainment of higher states of consciousness, perhaps through a religious experience, prayer</li> </ul>	<p>Pupils:</p> <ul style="list-style-type: none"> <li>suggest how people use the terms 'know' and 'true'</li> <li>suggest comments and questions raised by the images for the content of a website exploring questions about meaning, purpose, origins and destiny</li> <li>reflect on their own understanding of 'truth'.</li> </ul>	<ul style="list-style-type: none"> <li>This unit suggests work on four perspectives – probably more than enough for most pupils – but you might consider introducing the viewpoint of agnosticism (a principled and argued 'don't know' stance), which could also be useful.</li> <li>Links to the science curriculum: Level 5 science: 'drawing conclusions consistent with evidence'. Consider teaching that is inter-departmental, enabling learners to benefit from interdisciplinary expertise.</li> <li>Opportunities for ICT: There are many web-based resources about the 'wonders of the universe' and firsthand accounts of different perspectives on religious and science questions. The pupils should have opportunities to use and develop their ICT skills, particularly in</li> </ul>



	<p>or meditation.</p> <ul style="list-style-type: none"> <li>• <i>How do we identify beliefs typical of different groups of people?</i> Organise the pupils into pairs. Give each pair a collection of statements that scientists, religious and non-religious people might hold. Ask the pupils to decide which groups of people made each statement and explain their choices to their partners. Ask the pupils whether there are any statements that fit in more than one category and what this tells them. Then, lead the pupils in a class discussion about which statements they believe to be true and why.</li> <li>• <i>Looking at the universe: What do we see?</i> Using a website containing images of space, and displaying the images on a whiteboard, ask the pupils to develop their own responses to some of the images. Encourage the pupils to describe what they see and how they feel about the images, including those who want to describe the universe as beautiful and those for whom it generates feeling of appreciation and wonder and even surprise. Ask the pupils to speculate about what Christians, Hindus, Muslims or atheists might say about these images.</li> <li>• Ask the pupils to compose a statement that what they 'know' is 'true' about the universe. Then ask them to swap statements and ask if they can 'know' that it is 'true'.</li> <li>• Ask the pupils to design a series of web pages for a website that aims to explore spiritual</li> </ul>		<p>interpreting information from the web. They should weigh the ways in which people's perspectives can impact on their interpretation and on their presentation. The pupils can exchange and share information in ways that are appropriate to the task, refining and presenting information, ideas and questions through well-chosen media.</p> <ul style="list-style-type: none"> <li>• There are various publications that can be used for this lesson (see 'Resources').</li> <li>• Links to key aims and values of the curriculum: this unit is about the pursuit of truth and mutual understanding.</li> <li>• The 'Leading in learning' (Secondary Strategy) training material contains guidance on the use of Information processing/relational diagrams and provides advice on the use of grids/frames/structures.</li> </ul>
--	---	--	---

	questions (about meaning and purpose, origins and destiny). They should choose two or more images and suggest comments and questions raised by each image, which would form part of the design.		
--	---	--	--

<b>2. Does a complexly functioning world imply a creator God?</b>			
<b>Learning objectives</b>	<b>Teaching and learning</b>	<b>Learning outcomes</b>	<b>Points to note</b>
<p>Pupils should:</p> <ul style="list-style-type: none"> <li>know that, for many people, contemplation of the universe raises important questions about its origin and purpose</li> <li>reflect on the extent to which the existence of the universe provokes the question of the existence of a creator God.</li> </ul>	<ul style="list-style-type: none"> <li><i>What questions does the existence of the universe and human beings raise for us?</i> Ask the pupils to work in groups, looking at some examples/images of the complexity in the universe, and of the humanity. Ask the pupils to record their group's questions about the origins and purposes of human existence raised by these examples. Then, lead a class discussion about the questions the pupils identify, or ask the pupils to give presentations about them. Display the pupils' questions as reference points through the rest of the lesson.</li> <li><i>To what extent does a world that functions in a very complex way imply a creator God?</i> Ask the pupils to work in pairs or small groups, making some initial responses to this key question. Responses should be imaginative and should begin to argue their case.</li> <li>Ask the pupils to share their initial thoughts, asking them to think carefully about the points they contribute. Introduce the pupils to the ways in which Christians, Hindus, Muslims and atheists might answer this question, if such views have not already been expressed by the pupils themselves.</li> <li>Ask the pupils to write a response to the following question. <i>The world is very complex. Does this mean that it must have been the work of a creator God?</i> The pupils should show that they have thought about more than just their own, initial response. You might wish to make use of a pre-prepared bank of statements or a</li> </ul>	<p>Pupils:</p> <ul style="list-style-type: none"> <li>investigate what ultimate questions are raised for people when looking at the universe</li> <li>suggest what meaning might be drawn from various responses to: <i>To what extent does a world that functions in a very complex way imply a creator God?</i></li> <li>reflect on the beliefs and feelings of others in their responses to: <i>Does the world imply God?</i></li> </ul>	<ul style="list-style-type: none"> <li>The groups' questions about the origins and purposes of human existence will need duplicating for the assessment task in lesson 6.</li> <li>Suggest to the pupils that their responses contain the phrase 'I believe this because...'</li> </ul>

	writing frame to help the pupils plan their responses.		
--	--	--	--

<b>3. How do people account for their views about the origins of the universe?</b>			
<b>Learning objectives</b>	<b>Teaching and learning</b>	<b>Learning outcomes</b>	<b>Points to note</b>
<p>Pupils should:</p> <ul style="list-style-type: none"> <li>know Christian and Islamic accounts of creation</li> <li>know the ways in which Hindus think about the origin of the world</li> <li>know the ways in which atheists think about the origin of the world</li> <li>understand the significance of accounts of creation for many believers</li> <li>reflect on the question: <i>Why are we here?</i>, from what they have learnt.</li> </ul>	<ul style="list-style-type: none"> <li><i>What accounts of origins are found in the sacred texts of Christians and Muslims? What do Hindu sacred texts say about the origins of the universe?</i> Ask the pupils to consult different creation stories and to complete a tick chart that helps them to note similarities and differences between the accounts of the origins of the universe found in the Christian Bible (Genesis: 1-3), Hindu scriptures (eg Rig Veda X 129) and the Qur'an (eg in Surah 25:59, 7:54-56, 21:30-33). Consider presenting versions of these stories in a variety of media, eg CD-ROMs, children's books, original texts or web-based versions. Ask the pupils to consider why the stories are so important to people in religious traditions and analyse what they understand to be the significance of these accounts to believers.</li> <li><i>What accounts of the origins of the universe do atheists hold?</i> Ask the pupils to create a mind-map of what they already know about evolution and big bang theory as individuals, in pairs or as a whole class. <i>Why is it that not all atheists believe in the 'big bang' and not all theists believe in the biblical or Qur'anic accounts of God's creation of the world?</i> After the pupils have shared their knowledge, give an overview of both the evolution and</li> </ul>	<p>Pupils:</p> <ul style="list-style-type: none"> <li>investigate different creation accounts</li> <li>interpret what these account mean for believers</li> <li>analyse how believers' understanding about the origins of the world might affect their other attitudes and beliefs</li> <li>evaluate answers to the questions: <i>Where do we come from? Why are we here?</i>, which are found within Christian, Hindu, Muslim and atheist thinking.</li> </ul>	<ul style="list-style-type: none"> <li>This lesson should take a minimum of two hours to complete.</li> <li>For the continuum discussion, organise the class so that they are seated in circles of six with empty floor space or two tables between them. Give each group a set of cards containing statements about the origins and possible purposes of life. In the middle of the floor place two cards some distance apart, with one reading 'I totally agree with this statement' and the other 'I totally disagree with this statement'. Explain to the pupils that these cards represent a continuum that ranges from totally agree to totally disagree. The pupils should take it in turns to read out the statement on their card, say how they feel about that statement and then place the card somewhere in the continuum where they feel it belongs. When everyone has placed the card somewhere in the continuum, discussion is</li> </ul>

	<p>big bang theories through a PowerPoint presentation.</p> <ul style="list-style-type: none"> <li>• <i>What do people say about questions of origins?</i> Organise a ‘continuum discussion’ (see ‘Points to note’), in which they evaluate some arguments for and against propositions such as: The universe began with an accident, and doesn’t have a purpose; humans are more like apes than angels; God is the creator of the world; love is the meaning of creation; if you don’t know where you came from, it is hard to know who you are; the meanings of human life can be found through thinking about sacred texts in scriptures; God is the power at work in the design of evolution; disagreement about the origins and purposes of life on earth are common.</li> </ul>		<p>opened up for others to express their opinions on the placements of various cards. After listening to the views and opinions of the other pupils, explain that they each now have the opportunity to move the card from where they placed it to another place in the continuum, if they so wish.</p> <ul style="list-style-type: none"> <li>• Links to literacy strategy – the pupils should explain texts imaginatively and thoughtfully and develop their understanding of the contested status of texts in science and religion. Developing the key skills involved in understanding the function of religious texts within religious traditions are important learning outcomes for RE teaching.</li> <li>• Links to reading strategies – Pedagogy and Practice unit 13: developing reading’ (Secondary Strategy training material), contains guidance on strategies for developing reading, which may be useful in this unit.’</li> <li>• Be aware that Christians approach view the creation accounts in various ways, all of which see the world as a gift of God’s creativity.</li> </ul>
--	---	--	--

			<ul style="list-style-type: none"><li>• Be aware that Islamic teaching about God sees him as a creator without partners.</li><li>• Be aware that Hindus interpret their creation accounts in various ways.</li><li>• Be aware that atheists do not believe in a transcendent meaning or purpose to life and respond to accounts of origins in various ways.</li></ul>
--	--	--	---

4. What do people believe about the origins of the universe and human existence?			
Learning objectives	Teaching and learning	Learning outcomes	Points to note
<p>Pupils should:</p> <ul style="list-style-type: none"> <li>know how people express a range of beliefs about whether the universe shows signs of having been designed</li> <li>understand a range of responses to questions of origin and purpose</li> <li>reflect on the strengths and weaknesses of a range of contrasting viewpoints.</li> </ul>	<ul style="list-style-type: none"> <li><i>Is the universe designed? Who could have designed it?</i> Give the pupils opportunities to explore, through a website, DVD or written text (see ‘Resources’), a range of different answers to these questions, including answers given by members of different faiths. These answers should include the views of creationists, evolutionists, advocates of intelligent design and philosophers of religion, such as Anselm, Thomas Aquinas, Blaise Pascal and Francis Bacon.</li> <li>Ask the pupils to analyse these views, considering the question of truth, the strengths and weaknesses of the arguments including the evidence that supports them. Give the pupils time to develop and discuss their own ideas in relation to those they have discovered in the lesson.</li> <li><i>What is a human being: result of natural selection, child of God or mystery?</i> Ask the pupils to complete a table of responses to: <i>What is a human being?</i> Ask the pupils to work in pairs to discuss their thoughts on the three alternatives presented above, and then work in larger groups, or as a class, to share their thoughts and reflections, taking note of good points made by other pupils that could enhance their own thinking.</li> </ul>	<p>Pupils:</p> <ul style="list-style-type: none"> <li>explain the concepts of creation, intelligent design and evolution, showing the ability to identify key elements of religious and secular thinking</li> <li>compare and contrast different answers to questions about the origin of the universe and the purpose of human existence</li> <li>evaluate the strengths and weaknesses of a range of contrasting viewpoints.</li> </ul>	<ul style="list-style-type: none"> <li>The pupils should understand the terms used in discussions of the origin and purpose of the universe and human existence. High-achieving pupils can research debates around creationism and intelligent design themselves. They should make use of published materials that seek to offer support in the teaching of science and religion at key stages 3 and 4, especially those that set out many of these views for classroom use.</li> <li>When evaluating contrasting viewpoints, encourage the pupils to recognise that positions held as a matter of faith, or as trust in the veracity of revealed scripture, should not be dismissed simply because they appear not to meet the criteria of rationality.</li> <li>Be aware that Francis Bacon said ‘a little philosophy inclineth man’s mind to atheism, but depth in philosophy bringeth men’s minds about to religion’.</li> </ul>



	<ul style="list-style-type: none"> <li>• A table of responses might include columns titled:  Arguments and evidence for this view  Arguments and evidence against this view  My view of the strength and weaknesses of these arguments   Rows titled:  Result of natural selection?  Child of god?  Mystery?</li> <li>• For homework, the pupils should use their table of notes to create an argument from the three points of view – chance event, child of God and mystery – between different viewpoints, including their own, under the title ‘Human being: result of natural selection, child of God or mystery?’ In their answer they should remember to show an understanding of the question ‘What does it mean to be human?’; show they understand three different views of human origins and explain why each of the views is attractive to some people and express their own reflections and views. Ask the pupils to refer to ‘sources of authority’ from Christians, Hindus, Muslims and/or atheists.</li> </ul>		
--	--	--	--

<b>5. What is the relationship between religion and science for believers?</b>			
<b>Learning objectives</b>	<b>Teaching and learning</b>	<b>Learning outcomes</b>	<b>Points to note</b>
<p>Pupils should:</p> <ul style="list-style-type: none"> <li>know that there is a variety of perspectives on the relationship between religion and science within each of the religious and philosophical traditions they have considered</li> <li>understand how their own world view can affect their understanding of information</li> <li>reflect on one issue that religion and science tend to approach in different ways.</li> </ul>	<ul style="list-style-type: none"> <li><i>What do scientists say about religion?</i> Watch a DVD or video extract (see ‘Resources’) that allows the pupils to encounter the views of scientists from various fields who are Christian, Hindu, Muslim or atheist. While watching the DVD or video pupils should note the diverse views expressed about questions of origins of the universe and of human existence held within the scientific community.</li> <li><i>Is it surprising to find people who have a religious belief who are scientists?</i> Lead the pupils in a class discussion, asking the pupils to reflect on what their responses tell others about their own ‘world views’. Raise issues of truth and knowledge for the pupils to think through again. Ask them to consider how they view the relationship between religion and science, and why they think that way.</li> <li><i>What do Christians, Hindus, Muslims and atheists say about topical issues in science?</i> Using a recent newspaper, examine a news article concerning a scientific topic. Display a copy of the news article on an interactive whiteboard and ask the pupils to identify, by highlighting on the board, any religious</li> </ul>	<p>Pupils:</p> <ul style="list-style-type: none"> <li>analyse accounts from scientists who are Christians, Hindus, Muslims or atheists about the importance of religious belief</li> <li>identify how their own world views and assumptions can affect their understanding of religion and questions about origins of the universe and human existence</li> <li>express insights into their own and other’s views on the interaction between scientific and religious ideas in discussions about one topical issue.</li> </ul>	<ul style="list-style-type: none"> <li>Note that this activity builds on the work in the first part of this unit, in which the pupils discuss the question of truth and how to identify it.</li> </ul>

	<p>and/or moral questions or problems raised by the article.</p> <ul style="list-style-type: none"><li>• Ask the pupils to match ideas from religious sources, such as extracts from sacred texts including creation accounts studied in lesson 1, to the scientific, religious and moral questions or problems raised by the article. Ask them to annotate their own copy of the text to identify the matched ideas and to consider the different ways in which science and religion might interact or come into conflict. News articles might be about pictures from space, discoveries about genetics and the relationship between humans and the great apes.</li><li>• Encourage the pupils to see that, for many religious people, core beliefs and values about the universe and human existence are derived from their understanding of creation stories.</li></ul>		
--	--	--	--

## Assessment activity

<b>6. Will humans ever really know for sure how the universe came about?</b>			
There are opportunities for assessment for learning throughout this unit. However, in this activity, there are particular opportunities to collect evidence of what children know, understand and can do, using the learning objectives and outcomes and relating them to the level descriptions as appropriate.			
<b>Learning objectives</b>	<b>Teaching and learning</b>	<b>Learning outcomes</b>	<b>Points to note</b>
<p>Pupils should:</p> <ul style="list-style-type: none"> <li>know a range of responses to the question <i>How can we answer questions about origins?</i></li> <li>understand some of the reasons for similarities and differences between the views of creation and origins considered in this unit</li> <li>reflect on the boundaries to human knowledge and on how religion and science might contribute to our awareness of these boundaries.</li> </ul>	<ul style="list-style-type: none"> <li>Design a PowerPoint presentation with the title <i>Will humans ever really know for sure how the universe came about?</i></li> </ul>	<p>Pupils:</p> <ul style="list-style-type: none"> <li>explain a range of responses to the question <i>How can we answer questions about origins?</i></li> <li>suggest possible reasons for similarities and differences between the views of creation and origins considered in this unit</li> <li>express their own views on the boundaries to human knowledge and how religion and science might contribute to our awareness of these boundaries.</li> </ul>	<ul style="list-style-type: none"> <li>Consider organising this task so that the pupils complete their presentations either individually, in pairs or in small groups. In each case, the pupils will need to undertake peer assessment and make clear who is credited with each aspect of the work.</li> </ul>

### **Differentiated outcomes**

Note that the following level descriptions relate to this assessment activity only. For level descriptions relating to the unit as a whole, see 'Differentiated outcomes'.

Pupils working at level 4 can:

- explain one view that might be held by a Christian, Hindu, Muslim or an atheist about the origins of the universe and human beings
- describe similarities and differences between the different views of creation and origins studied in this unit
- compare their own ideas about the origins of human life to different ideas they have studied in this unit, drawing out similarities and differences
- make links between religious sources and the answers given by the various traditions studied, to the fundamental questions about the beginnings of the universe and human existence.

Pupils working at level 5 can:

- explain different views that might be held by Christians, Hindus, Muslims and atheists about the origins of the universe and human beings
- suggest reasons for similarities and differences between the views of creation and origins studied in this unit
- relate the idea of God as creator and/or the idea of the universe as an accident, to their own thoughts about life's meanings
- explain how religious sources are used to provide answers to fundamental questions about the beginnings of the universe and human existence by the adherents to the traditions studied in this unit.

Pupils working at level 6 can:

- explain the reasons for the diversity of views within and between religions and beliefs about the origins of the universe and human beings
- give an informed account of how Christian, Hindu, Muslim or atheist scientists might comment on the idea that God created the universe and explain the reasons for diversity between such views
- express their views about creationism, intelligent design and evolution 'without God' in the light of their learning about religious and non-religious

world views, using arguments and examples

- interpret religious sources, explaining how different groups use information from them in different ways.

Pupils working at level 7 can:

- analyse issues raised by the diversity of views within and between religions and beliefs about the origins of the universe and human beings
- give a coherent account of how Christian, Hindu, Muslim or atheist scientists might comment on the idea that God created the universe and analyse the reasons for the diversity between them
- articulate personal and critical responses to their learning about religious and non-religious views about creationism, intelligent design and evolution 'without God'
- research a variety of philosophical sources and use them in their answers to questions about creation and origins.

Pupils working at level 8 can:

- present a reasoned analysis of range of views within and between religions and beliefs about the origins of the universe and human beings and their implications for communities and society
- use historical, cultural, social and philosophical ideas to contextualise their accounts of how Christian, Hindu, Muslim or atheist scientists might comment on the idea that God created the universe
- coherently analyse a wide range of viewpoints including their own in response to their learning about religious and non-religious views about creationism, intelligent design and evolution 'without God'
- research a variety of philosophical sources, and analyse them in their answers to questions about creation and origins.

Pupils demonstrating exceptional performance can:

- provide a consistent and detailed analysis of a range of views within and between religions and beliefs about the origins of the universe and human beings and their implications for diverse communities and pluralistic societies
- evaluate the use of historical, cultural, social and philosophical ideas in a contextualised accounts of how Christian, Hindu, Muslim or atheist

scientists might comment on the idea that God created the universe

- analyse in depth a wide range of perspectives including their own in response to their learning about religious and non-religious views about creationism, intelligent design and evolution ‘without God’
- evaluate the strengths and weakness of using philosophical methods to discuss questions about creation and origins.