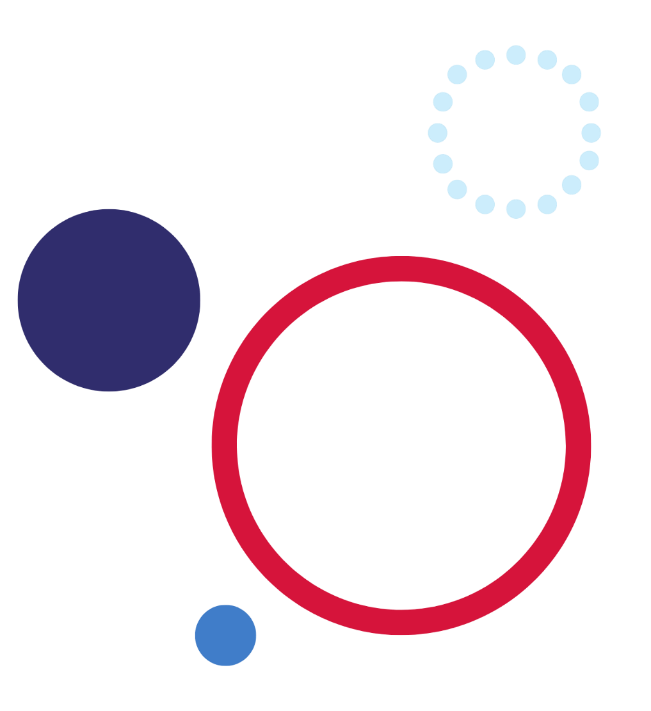
# Big History – Core 1: What is Big History?



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## Focus

This unit will explore Big History as a modern, scientific origin story and starts with the long line of origin stories that humans have passed down for thousands of years. Big History explores the history of the universe and the Earth from a human perspective, and all the vast cosmos in a single, unbroken continuum from the Big Bang until now. This is a story about all time, all existence, and a very personal story about who we are and where we came from.

### Outcomes

A student:

* **BH5-1** identifies and describes terms and concepts in appropriate contexts
* **BH5-3** identifies types of evidence and discipline-based claims of knowledge of the universe used in addressing essential questions
* **BH5-5** identifies and describes appropriate concepts to address relevant questions, cases, problems and claims of knowledge
* **BH5-6** analyses differing perspectives and claims of knowledge through the use of sources and evidence
* **BH5-8** evaluates the usefulness of sources and evidence across a range of disciplines to respond to essential questions and assess claims of knowledge
* **BH5-9** assesses claims of knowledge across a range of disciplines.

Outcomes referred to in this document are from the [Big History Course Document](https://education.nsw.gov.au/teaching-and-learning/curriculum/department-approved-courses/big-history#/asset2) © NSW Department of Education for and on behalf of the crown in the State of New South Wales (2021).

### Rationale

This course is designed for students curious about seeking answers to big questions regarding the history and development of our universe, including the origin of our species. It promotes reasoned predictions of future events. Collaboration amongst students, teachers, scholars and scientists is the foundation of Big History. It places human history in the broader context of the universe’s history.

Throughout history, humans have collaborated in creative endeavours leading to a dynamic body of knowledge which is continually refined and contested as evidence evolves. This knowledge provides explanations for various phenomena and enables sense to be made of the development of human society.

In Big History, students will develop deep knowledge, understanding and skills that will allow them to create new ideas and translate their ideas into practical applications. Through engaging with varying sources and perspectives, students will develop problem-solving, research and critical thinking skills, and demonstrate respect for differing viewpoints. Through the integrated study of the cosmos, life and humanity, students will use empirical evidence to develop a deeper appreciation of the evolution of knowledge systems and the complex relationship between evidence and ideas.

Big History addresses the need for students to use interdisciplinary understanding to solve problems and develop critical thinking skills to assess the validity of claims of knowledge. The course will build upon the learning across the curriculum content, including the general capabilities priorities from the NSW syllabus documents, that encompass the knowledge, skills, attitudes and behaviours to assist students to live and work successfully in the 21st century.

### Aim

This course aims to develop students’ understanding of the history of the universe from the ‘Big Bang’ to the modern day and beyond, through an exploration of the themes and patterns that can help us better understand the world we live in. Big History will develop students’ ability to synthesise complex information, hypothesise and develop arguments, develop key critical thinking skills and enhance their reading, writing, and research skills in a multidisciplinary way.

### Purpose and audience

This teaching resource is for teachers delivering or planning to deliver the course. The learning sequence demonstrates how a combination of outcomes can be used to develop teaching and learning activities. It also suggests a range of resources to support teachers when planning and/or teaching the course.

### When and how to use this document

Use this resource when designing learning activities that align with the course outcomes and content. The activities and resources can be used directly or may be adapted based on teacher judgment and knowledge of their students. Core modules must precede options in the delivery of the course. Consult the course document for further details on timing of core and options.

### Teacher note

This resource provides some suggested teaching strategies that could be used in your classroom.

The course supports the opportunity to explore a range of areas within the scope of Big History. It is recommended that teachers should refer to the [Controversial Issues in Schools](https://education.nsw.gov.au/policy-library/policies/pd-2002-0045) policy.

**Note:** The following learning sequences are designed to supplement the materials and activities available through the [Big History School](https://bighistoryschool.mq.edu.au/core-200/) and [OER Project](https://www.oerproject.com/Big-History) websites. There is no requirement to use all (or any) of the following activities, as they are suggestions only. These sequences are not intended to be used as a complete teaching and learning program.

It is strongly recommended that science trained teachers support the delivery of this unit.

## Learning sequence 1: Introduction to Big History

Students describe Big History and its key skills and concepts, for example:

* claims testing
* scale
* interdisciplinary approach.

### Claims testing

Big History uses specific vocabulary, with some words and phrases being used differently to how they are used in everyday speech or in other subjects. As you work through each unit, complete a vocabulary tracker with the keywords and phrases you encounter. An example has been filled in for you.

Table – Vocabulary tracker

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Word or phrase | Definition | Synonyms | Antonyms | Use in a sentence |
| Adapt | Make something suitable for a new use or purpose, modify | Modify, alter, change, adjust, convert, transform | Conform, misapply, misadjust, stay | Any life form must adapt to and interact with its physical environment. |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Use [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645) to discuss the meaning of knowledge, opinion, and fact, then complete Table 2.

Table – Knowledge, opinion, fact

|  |  |  |  |
| --- | --- | --- | --- |
| Word | Definition 1 | Definition 2 | How do we acquire it? |
| Knowledge |  |  |  |
| Opinion |  |  |  |
| Fact |  |  |  |

Read [No, you’re not entitled to your opinion](https://theconversation.com/no-youre-not-entitled-to-your-opinion-9978) from *The Conversation*. As a class, discuss the differences between opinion and fact, and how we discern between them. Edit your definitions in the table as required.

Add knowledge, opinion, and fact to the vocabulary tracker for this unit.

**Note:** Display the following claims on the board: ‘It is possible to run on water’ and ‘You can’t ride a motorcycle on the ocean.’

As a class, discuss whether the statements are true and how we could test the claims.

In small groups, answer the following questions:

* What are some of the challenges we face when searching for knowledge?
* What is human bias and how can it affect the way we understand the universe?
* Why is it important to decide if we trust information as knowledge? How can we determine information is trustworthy?

Create a procedure for testing new information and determining if it is a fact. This could be a paragraph of text, a series of dot points, or a flowchart.

Watch the videos [Walk on water (Liquid Mountaineering) (3:13)](https://www.youtube.com/watch?v=Oe3St1GgoHQ) and [Robbie Maddison’s “Pipe Dream” (3:59)](https://www.youtube.com/watch?v=lDi9uFcD7XI).

Revisit student responses to the questions on the board after watching the videos. Make any necessary adjustments to your responses and share reflections with the class.

### Scale

**Note:** Give students cards with key moments from [History of Earth in 24-hour clock](https://ultimate-facts.com/654/earths-history/) for the second activity. The cards are in the [Appendix](#_Appendix_–_Key) of this document. Do not allow students to see the clock at this stage.

Watch [Viral TikTok Uses Rice to Show How Rich Jeff Bezos Is (3:04)](https://www.youtube.com/watch?v=qSOVBiEotaw) and conduct a class discussion around the following questions:

* What surprised you about the video?
* What does this video tell us about our ability to comprehend large numbers?
* How might this be relevant when studying the history of the universe?
* How could we describe the chronological scale of the universe in a way that makes it meaningful to us? Write a paragraph response.

Your teacher will provide you with a card showing details of a key event in the Earth’s history. Work as a class to arrange yourselves in order from the oldest event to the most recent. Then predict the gaps between each event, creating an approximate chronological scale. Record your prediction of the order of events and size of the gaps between them – taking a photo of the class would be a good way to do this.

Watch [The history of our world in 18 minutes (17:24)](https://www.ted.com/talks/david_christian_the_history_of_our_world_in_18_minutes/transcript?language=en), then revisit the [History of Earth in 24-hour clock](https://ultimate-facts.com/654/earths-history/) and identify the correct chronological scale. Discuss as a class what differences there were from the class prediction of the chronological scale of events.

Interdisciplinary approach

**Note:** Give each student one of the following categories: principal, teacher, Year 7 student, Year 12 student, parent, canteen worker, cleaner. In Step 2, put students into groups of the same category, so that all the ‘cleaners’ are in the one group, all the ‘principals’ in another, and so on. Then, in Step 3, put the students in mixed groups where there is only one student from each category.

* **Step 1**: Using the perspective of the role that your teacher has provided, identify the following:
* the 3 best things about your school, for example, great sporting facilities
* 3 things that would improve your school, for example, having recycling bins in the playground.
* **Step 2**: In your assigned group, discuss and rank the improvements in order of priority – from most urgent or important to least urgent or important.
* **Step 3**: In your new group, discuss the different improvements raised by each person. As a group, create a priority list of the 5 things that would improve the school.
* **Step 4**: A focus of Big History is that different disciplines of knowledge bring different perspectives to an issue. As a class, discuss the benefits and limitations of working in a group with people who have different perspectives.

## Learning sequence 2: Predicting the future

Students make predictions for the near and distant futures, considering:

* education
* technology
* living conditions
* social and political issues.

### Predicting the future

Complete the following table, identifying changes in your lifetime in education, technology, living conditions, social, and political issues. Talk to people from earlier generations, such as your parents or carers, and grandparents, and record the results in Table 3, below.

Table – Predicting the future

|  |  |  |  |
| --- | --- | --- | --- |
| Category | Changes in my lifetime | Changes in parents’ lifetime | Changes in grandparents’ lifetime |
| Education |  |  |  |
| Technology |  |  |  |
| Living conditions |  |  |  |
| Social issues |  |  |  |
| Political issues |  |  |  |

Use [Will We Have Microchips for Brains in 20 Years? Futurists Weigh in on… the Future](https://www.thrillist.com/tech/nation/what-does-a-futurist-actually-do) and [Five principles for Thinking Like a Futurist](https://er.educause.edu/articles/2019/3/five-principles-for-thinking-like-a-futurist) to complete a one-paragraph response to the following question: ‘How does looking at the past help to make predictions about what the future may be like?’

Use [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645) to predict what one of the following will be like in 20 years:

* education
* technology
* living conditions
* social and political issues.

## Learning sequence 3: Origin stories

Students:

* explore the nature and significance of origin stories, including
* the role of origin stories
* Big History as a modern, scientific, origin story.
* identify the key features of Big History as a modern, scientific origin story
* identify the key features of at least three of the following origin civilisations
* Ancient Chinese
* Judaeo-Christian
* Iroquois
* Ancient Greek
* Tat Roog
* Hindu
* Ancient Egyptian
* an Aboriginal Australian nation.

### Origin stories

Write 2 paragraphs outlining why humans create origin stories.

Create a [Venn diagram](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/599) that shows areas of overlap between the origin stories you have studied.

## Learning sequence 4: Scale

Students:

* explain the importance of scale in Big History, for example
* the concept of powers of 10 and its usefulness
* the impact of scale when viewing events.
* analyse patterns and trends in the 13.8 billion-year timeline of Big History
* identify key events in Big History and create timelines.

### Scale

**Note:** Point out that the traditional focus of history is centred on humans, Big History is different.

Provide students with printouts of the following suggested images: [synapse](https://d2cbg94ubxgsnp.cloudfront.net/Pictures/2000x1125/4/4/0/137440_Synapse_illustration-SPL_Hero2.jpg), [blood cell](https://www.openaccessgovernment.org/wp-content/uploads/2018/01/dreamstime_xxl_80935812-696x464.jpg), [grains of sand](https://3.bp.blogspot.com/-aJmF_sCZ9l4/WlORKb23rHI/AAAAAAAAOfQ/damNfBzHmRgglV2UhZ7GQhT2ezWaOgemgCLcBGAs/s640/sand-grains-under-microscope-gary-greenberg-4%2B%25281%2529__1515426009_161.202.39.248.jpg), [toy marble](https://cdn.shopify.com/s/files/1/0016/6959/5189/files/chesapeake-marbles_grande.jpg?v=1548802269), [leaf](https://andyloweorg.files.wordpress.com/2017/09/dda095cd93294af204cd853d63ae1e84-elephant-ear-plant-elephant-ears.jpg), [elephant skin](https://commons.wikimedia.org/wiki/File:African_Elephant_Rough_Skin_(2743229739).jpg), [whale](https://a-z-animals.com/media/2021/04/Blue-Whale-in-ocean-1024x535.jpg), [Apollo lunar module](https://commons.wikimedia.org/wiki/File:Apollo_CSM_lunar_orbit.jpg), [Berlin at night from space](https://i.guim.co.uk/img/static/sys-images/Guardian/About/General/2013/4/19/1366394664437/Colonel-Chris-Hadfields-p-011.jpg?width=620&quality=85&auto=format&fit=max&s=0a8c23a41eaff4f2452c14552416f81c), [Hawaii from space](https://visibleearth.nasa.gov/images/63863/hawaii), [spacewalk](https://techcrunch.com/wp-content/uploads/2016/01/nasa-spacewalk.jpg?w=990&crop=1), [Earth from space](https://www.nasa.gov/sites/default/files/styles/full_width_feature/public/thumbnails/image/solar_eclipse_may10_2021.png), [solar system](https://cdn.mos.cms.futurecdn.net/VL7nBnqLZMhQt5VkPzzJVF-970-80.jpg.webp), [Magellanic Cloud](https://www.nasa.gov/sites/default/files/thumbnails/image/pia16884_-_taken_under_the_wing_of_the_small_magellanic_cloud.jpg).

Use the images that your teacher has provided and arrange them in order from largest to smallest.

Use [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645) to discuss how useful these sources are for our understanding of the way that scale affects our perception of things.

As a class, discuss the order and refine the sequence as needed.

Watch [Cosmic Eye — Universe Size Comparison (2:59)](https://www.youtube.com/watch?v=8Are9dDbW24) and use it to answer the following questions:

* How does the video alter your perception of the importance of humans?
* What questions does the video raise in terms of scale?
* Parts of this video have been created using computer-generated imagery (CGI). How does this impact its reliability?

Research the average length of a lifetime for a:

* human
* fruit fly
* Great Basin bristlecone pine tree
* star.

Read [Halley’s Comet: Facts about history's most famous comet](https://www.space.com/19878-halleys-comet.html) to provide background information. As a class, discuss how significant an event it would be to ‘see’ Halley’s Comet in your lifetime for each of the following:

* human
* fruit fly
* Great Bain bristlecone pine tree
* star.

## Learning sequence 5: Claims testing

Students:

* explain how claims of knowledge are tested, including the role of
* intuition
* authority
* logic
* evidence.
* apply understanding of the claims testing process used in Big History.

### Testing claims of knowledge

Add intuition, authority, logic, and evidence to the vocabulary tracker.

Watch [Making of Hi-Tec Liquid Mountaineering (3:06)](https://www.youtube.com/watch?v=7bjT0ypsNIo) and excerpts from [DC Shoes – Robbie Maddison’s Behind the Dream Part 2: The making of 'Pipe Dream' (17:51)](https://www.youtube.com/watch?v=cw_cybkPy00). Revisit the discussion from the first learning sequence around whether it is possible to run on water and ride a motorcycle on the ocean. Write answers to the following:

* How do these 2 videos relate to claims of knowledge?
* What similarities and differences are there in the purpose of the 2 videos?
* How did the 2 video makers differ in their use of science and engineering to achieve their goals?

Watch [Fake Obama created using AI video tool – BBC News (1:26)](https://www.youtube.com/watch?v=AmUC4m6w1wo) and answer the following questions:

* What are some of the advantages and disadvantages of using the internet to check claims?
* Why does technology make claims testing more important, and more difficult, than ever?

Work in pairs or small groups to record a podcast discussing how technology can be used both to apply claims testing and to intentionally mislead from the truth. Provide tips on how to use technology to verify claims of knowledge.

## Appendix: Key moments in the history of the Earth

Images representing the key moments from [History of Earth in 24-hour clock](https://ultimate-facts.com/654/earths-history/). Print each image and description on a single card for students.

Table – History of the Earth in 24 hours

|  |  |
| --- | --- |
| Image | Description |
| Image 1  Earth as seen from Apollo 17 in space  "[The Blue Marble](https://commons.wikimedia.org/wiki/File:The_Earth_seen_from_Apollo_17.jpg)" by [Apollo 17](https://commons.wikimedia.org/wiki/Apollo_17) is in the [Public Domain, CC0](https://creativecommons.org/publicdomain/zero/1.0/). | Formation of the Earth |
| Image 2  Meteor shower  "[Perseids Meteor Shower](https://www.flickr.com/photos/eag/9512431565)" by [Eric Gorski](https://www.flickr.com/photos/eag/) is licensed under [CC BY-NC-SA 2.0](https://creativecommons.org/licenses/by-nc-sa/2.0/). | Meteorite bombardment |
| Image 3  DNA ribbon  "[Deoxyribonucleic acid (DNA)](https://commons.wikimedia.org/wiki/File:%C3%81cido_desoxirribonucleico_(DNA).png)" by [Kadumago](https://kadumagohistoriaearqueologia.blogspot.com/) is licensed under [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/deed.en). | Origin of life on Earth |
| Image 4  Shrimpfish fossil in rock  "[Shrimpfish (Centriscidae) fossil](https://commons.wikimedia.org/wiki/File:Centriscidae_Fossil.png)" by [Ne-ro82](https://de.wikipedia.org/wiki/Benutzer:Ne-ro82) is licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/). | Oldest fossils |
| Image 5  Banded iron formations on rock wall  "[Dales Gorge | Banded Iron Formation at the Fortescue Falls](https://commons.wikimedia.org/wiki/File:Banded_iron_formation_Dales_Gorge.jpg)" by [Graeme Churchard](https://www.flickr.com/people/30659367@N00) is licensed under [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/). | Banded iron formations in earth’s crust due to photosynthesis by bacteria |
| Image 6  Single cell algae under a microscope  "[Euglena Gracilis](https://www.flickr.com/photos/46769179@N08/4297301229)" by [naturalismus](https://www.flickr.com/photos/naturalismus/) is licensed under [CC BY-SA 2.0](https://creativecommons.org/licenses/by-sa/2.0/). | Single-celled algae forms |
| Image 7  Diagram of sexual reproduction cycle showing meiosis (haploid) to fertilisation (diploid) and back to meiosis.  "[Meiosis fertilization haploid diploid](https://commons.wikimedia.org/wiki/File:Sexual_cycle_haploid_diploid.png)" by [Seb951](https://en.wikipedia.org/wiki/User:Seb951) is licensed under [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/deed.en). | First example of sexual reproduction |
| Image 8  Seaweed on gravel beach  "[Seaweed](https://commons.wikimedia.org/wiki/File:Seaweed_-_geograph.org.uk_-_2549914.jpg)" by [Mick Garratt](https://www.geograph.org.uk/profile/343) is licensed under [CC BY-SA 2.0](https://creativecommons.org/licenses/by-sa/2.0/). | Seaweed |
| Image 9  Moon jellyfish  "[Moon jellyfish in Åbyfjorden at Rågårdsdal](https://commons.wikimedia.org/wiki/File:Moon_jellyfish_in_R%C3%A5g%C3%A5rdsdal_4.jpg)" by [W.carter](https://commons.wikimedia.org/wiki/User:W.carter) is licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/). | Jellyfish |
| Image 10  Trilobite fossil  "[Acadoparadoxides briareus, Middle Cambrian](https://commons.wikimedia.org/wiki/File:Acadoparadoxides_briareus,_Middle_Cambrian,_Jbel_Wawrmast_Formation,_Sidi_Abdallah_ben_al_Hadj,_Morocco_-_Houston_Museum_of_Natural_Science_-_DSC01409.JPG)" by [Daderot](https://commons.wikimedia.org/wiki/User:Daderot) is in the [Public Domain, CC0 1.0](https://creativecommons.org/publicdomain/zero/1.0/deed.en). | Trilobites |
| Image 11  Prehistoric-looking forest  "[Prehistoric looking rainforest](https://commons.wikimedia.org/wiki/File:Prehistoric_looking_rainforest.jpg)" by Samuel Martin is licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/). | Plants on land |
| Image 12Coal swamp  "[Swamp with dead trees near Poratz](https://commons.wikimedia.org/wiki/File:Swamp_Poratz.jpg)" by [Ina Hensel](https://commons.wikimedia.org/wiki/User:Ina_Hensel) is licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/). | Coal swamps |
| Image 13  Life-sized models of dinosaurs in a dinosaur park  "[Xixia Dinosaur Park](https://commons.wikimedia.org/wiki/File:Xixia_Dinosaur_Park_20.jpg)" by [Gary Todd](https://www.flickr.com/photos/101561334@N08/) is in the [Public Domain, CC0 1.0](https://creativecommons.org/publicdomain/zero/1.0/deed.en). | Dinosaurs |
| Image 14  Woolly mammoth  "[Wooly mammoth model](https://commons.wikimedia.org/wiki/File:Wooly_mammoth_model.jpg)" by [IJ Reid](https://commons.wikimedia.org/wiki/User:IJReid) is licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/deed.en). | Mammals |
| Image 15  Homo sapiens skull  "[Skull of the Théviec burial](https://commons.wikimedia.org/wiki/File:T%C3%A9viec_Crane_Profil_Droit_II.jpg)" by [Didier Descouens](https://commons.wikimedia.org/wiki/User:Archaeodontosaurus) is licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/deed.en). | Humans |

## Additional information

**Resource evaluation and support**: Please complete the following [feedback form](https://forms.office.com/Pages/ResponsePage.aspx?id=muagBYpBwUecJZOHJhv5kbKo2q_ZUXlHndJMnh2Wd8NUOUk0VTIzUDVVSlVFQVM5MkdOMkJGTjVKNCQlQCN0PWcu) to help us improve our resources and support.

The information below can be used to support teachers when using this teaching resource for Big History.

### Assessment for learning

Possible formative assessment strategies that could be included:

* Learning intentions and success criteria assist educators to articulate the purpose of a learning task to make judgements about the quality of student learning. These help students focus on the task or activity taking place and what they are learning and provide a framework for reflection and feedback. [Online tools](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/622) can assist implementation of this formative assessment strategy.
* Eliciting evidence strategies allow teachers to determine the next steps in learning and assist teachers in evaluating the impact of teaching and learning activities. Strategies that may be added to a learning sequence to elicit evidence include all student response systems, [exit tickets](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/543), mini whiteboards (actual or [digital](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/575)), [hinge questions](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/557), [Kahoot](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/621), [Socrative](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/587), or quick quizzes to ensure that individual student progress can be monitored and the lesson sequence adjusted based on formative data collected.
* Feedback is designed to close the gap between current and desired performance by informing teacher and student behaviour (AITSL 2017). AITSL provides a [factsheet to support evidence-based feedback](https://www.aitsl.edu.au/teach/improve-practice/feedback#:~:text=FEEDBACK-,Factsheet,-A%20quick%20guide).
* [Peer feedback](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/549) is a structured process where students evaluate the work of their peers by providing valuable feedback in relation to learning intentions and success criteria. It can be supported by [online tools](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=1d29b).
* Self-regulated learning opportunities assist students in taking ownership of their own learning. A variety of strategies can be employed and some examples include reflection tasks, [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645), [KWLH charts](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/562), [learning portfolios](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/583) and [learning logs](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/564).

The primary role of assessment is to establish where individuals are in their learning so that teaching can be differentiated and further learning progress can be monitored over time.

Feedback that focuses on improving tasks, processes and student self-regulation is the most effective. Students engaging with feedback can take many forms including formal, informal, formative, summative, interactive, demonstrable, visual, written, verbal and non-verbal.

[What works best update 2020](https://education.nsw.gov.au/about-us/educational-data/cese/publications/research-reports/what-works-best-2020-update) (CESE 2020a)

### Differentiation

Differentiated learning can be enabled by differentiating the teaching approach to content, process, product and the learning environment. For more information on differentiation go to [Differentiating learning](https://education.nsw.gov.au/teaching-and-learning/professional-learning/teacher-quality-and-accreditation/strong-start-great-teachers/refining-practice/differentiating-learning) and [Differentiation](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/primary-school/teaching-strategies/differentiation).

When using these resources in the classroom, it is important for teachers to consider the needs of all students in their class, including:

* **Aboriginal and Torres Strait Islander students**. Targeted [strategies](https://education.nsw.gov.au/teaching-and-learning/aec/aboriginal-education-in-nsw-public-schools) can be used to achieve outcomes for Aboriginal students in K-12 and increase knowledge and understanding of Aboriginal histories and cultures. Teachers should utilise students’ Personalised Learning Pathways to support individual student needs and goals.
* **EAL/D learners**. EAL/D learners will require explicit English language support and scaffolding, informed by the [EAL/D enhanced teaching and learning cycle](https://education.nsw.gov.au/teaching-and-learning/curriculum/literacy-and-numeracy/resources-for-schools/eald/enhanced-teaching-and-learning-cycle) and the student’s phase on the [EAL/D Learning Progression](https://education.nsw.gov.au/teaching-and-learning/curriculum/multicultural-education/english-as-an-additional-language-or-dialect/planning-eald-support/english-language-proficiency). In addition, teachers can access information about [supporting EAL/D learners](https://education.nsw.gov.au/teaching-and-learning/curriculum/multicultural-education/english-as-an-additional-language-or-dialect/planning-eald-support/english-language-proficiency) and [literacy and numeracy support specific to EAL/D learners](https://education.nsw.gov.au/teaching-and-learning/curriculum/literacy-and-numeracy/resources-for-schools/eald).
* **Students with additional learning needs**. Learning adjustments enable students with disability and additional learning and support needs to access syllabus outcomes and content on the same basis as their peers. Teachers can use a range of [adjustments](https://education.nsw.gov.au/teaching-and-learning/disability-learning-and-support/personalised-support-for-learning/adjustments-to-teaching-and-learning) to ensure a personalised approach to student learning. In addition, the [Universal Design for Learning planning tool](https://education.nsw.gov.au/teaching-and-learning/learning-from-home/teaching-at-home/teaching-and-learning-resources/universal-design-for-learning) can be used to support the diverse learning needs of students using inclusive teaching and learning strategies. Subject specific curriculum considerations can be found on the [Inclusive Practice hub](https://education.nsw.gov.au/campaigns/inclusive-practice-hub/primary-school/teaching-strategies/differentiation).
* **High potential and gifted learners**. [Assessing and identifying high potential and gifted learners](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/assess-and-identify#Assessment1) will help teachers decide which students may benefit from extension and additional challenge. [Effective strategies and contributors to achievement](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/evaluate) for high potential and gifted learners help teachers to identify and target areas for growth and improvement. In addition, the [Differentiation Adjustment Tool](https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/supporting-educators/implement/differentiation-adjustment-strategies) can be used to support the specific learning needs of high potential and gifted students. The [High Potential and Gifted Education Professional Learning and Resource Hub](https://schoolsnsw.sharepoint.com/sites/HPGEHub/SitePages/Home.aspx) supports school leaders and teachers to effectively implement the High Potential and Gifted Education Policy in their unique contexts.

All students need to be challenged and engaged to develop their potential fully. A culture of high expectations needs to be supported by strategies that both challenge and support student learning needs, such as through appropriate curriculum differentiation. (CESE 2020a:6).

### About this resource

All curriculum resources are prepared through a rigorous process. Resources are periodically reviewed as part of our ongoing evaluation plan to ensure currency, relevance and effectiveness. For additional support or advice contact the Teaching and Learning Curriculum team by emailing [secondaryteachingandlearning@det.nsw.edu.au](mailto:secondaryteachingandlearning@det.nsw.edu.au).

**Alignment to system priorities and/or needs**:

This resource aligns to the School Excellence Framework elements of curriculum (curriculum provision) and effective classroom practice (lesson planning, explicit teaching).

This resource supports teachers to address [Australian Professional Teaching Standards](https://educationstandards.nsw.edu.au/wps/portal/nesa/teacher-accreditation/meeting-requirements/the-standards/proficient-teacher) 2.1.2, 2.3.2, 3.2.2, 7.2.2

This resource has been designed to support schools with successful implementation of new curriculum, specifically the NSW Department of Education approved elective course, Big History © 2021 NSW Department of Education for and on behalf of the Crown in right of the State of New South Wales.

The resource is produced to assist schools with promoting and implementing the course for the first time. As the course may be taught by teachers from a range of key learning areas, the resource is designed to support teachers from a variety of KLA expertise.

**Department approved elective course**: Big History

**Course outcomes**: BH5-1, BH5-3, BH5-6, BH5-8, BH5-9

**Author**: Curriculum Secondary Learners

**Publisher**: State of NSW, Department of Education

**Resource**: Teaching resource

**Related resources**: Further resources to support Big History can be found on the Department approved elective courses webpage including course document, sample scope and sequences, assessment materials and other learning sequences.

**Professional Learning**: Join the [Teaching and Learning 7-12 statewide staffroom](https://education.nsw.gov.au/teaching-and-learning/curriculum/statewide-staffrooms) for information regarding professional learning opportunities.

**Universal Design for Learning Tool**: [Universal Design for Learning planning tool](https://education.nsw.gov.au/teaching-and-learning/learning-from-home/teaching-at-home/teaching-and-learning-resources/universal-design-for-learning). Support the diverse learning needs of students using inclusive teaching and learning strategies.

**Consulted with**: Aboriginal Outcomes and Partnerships, Inclusion and Wellbeing, EAL/D, and Macquarie University.

**Reviewed by**: This resource was reviewed by Curriculum Secondary Learners and by subject matter experts in schools to ensure accuracy of content.

**Creation date**: 1st November 2022

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**Evidence Base**:

‘The long-term vision is for a curriculum that supports teachers to nurture wonder, ignite passion and provide every young person with knowledge, skills and attributes that will help prepare them for a lifetime of learning, meaningful adult employment and effective future citizenship’ (NESA 2020:xi).

The development of the course and the course document as part of department approved electives aims to respond to the goals articulated in NESA’s curriculum review. Consistent messages from the review include:

* ‘flexibility’ was the word most used by teachers to describe the systemic change they want
* teachers need more time to teach important knowledge and skills
* students want authentic learning with real-world application.

This teaching resource provides teachers with some examples of explicit and authentic learning experiences. The option to adjust these learning sequences leads to ‘increased local decision making in relation to the curriculum’ as this ‘is associated with higher levels of student performance’ (NESA 2020:52).

The suggested strategies for teaching and learning align with the principles of explicit teaching. ‘The evidence shows that students who experience explicit teaching practices perform better than students who do not. Explicit teaching reduces the cognitive burden of learning new and complex concepts and skills, and helps students develop deep understanding’ (CESE 2020a:11).

## References

**Links to third-party material and websites**

Please note that the provided (reading/viewing material/list/links/texts) are a suggestion only and implies no endorsement, by the New South Wales Department of Education, of any author, publisher, or book title. School principals and teachers are best placed to assess the suitability of resources that would complement the curriculum and reflect the needs and interests of their students.

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