# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Managing Students’ Challenges Through Spiraling Activities and Deliberate Practice</td>
<td>4</td>
</tr>
<tr>
<td>Practice Progression Grid</td>
<td>6</td>
</tr>
<tr>
<td>Foundational BHP Practices</td>
<td>7</td>
</tr>
<tr>
<td>Reading</td>
<td>7</td>
</tr>
<tr>
<td>Writing</td>
<td>9</td>
</tr>
<tr>
<td>Claim Testing</td>
<td>12</td>
</tr>
<tr>
<td>Essential Thinking Practices</td>
<td>14</td>
</tr>
<tr>
<td>Causation</td>
<td>14</td>
</tr>
<tr>
<td>Scale</td>
<td>16</td>
</tr>
<tr>
<td>Integrating Multiple Disciplines</td>
<td>18</td>
</tr>
<tr>
<td>Repeated Activities</td>
<td>20</td>
</tr>
<tr>
<td>Narrative and Thresholds</td>
<td>21</td>
</tr>
<tr>
<td>Little Big History Project</td>
<td>23</td>
</tr>
<tr>
<td>This Threshold Today</td>
<td>24</td>
</tr>
<tr>
<td>Debates</td>
<td>26</td>
</tr>
<tr>
<td>DQ Notebook</td>
<td>27</td>
</tr>
<tr>
<td>Investigations</td>
<td>28</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>31</td>
</tr>
</tbody>
</table>
Introduction

BHP works with a wide range of students and recognizes the challenges learners face trying to understand historical content and to use sophisticated historical reasoning and literacy practices. Using a form of cognitive apprenticeship (Collins, et al., 1987) and research on domain-specific learning (Alexander, 1998), BHP has designed a series of activities intended to deepen students’ ability to engage independently in more sophisticated historical inquiry, analysis, and reasoning. These activities build upon each other over the course, and are intended to provide all students a sequence of activities to support their progress.¹ In addition, BHP has created a series of repeated activities that help reinforce these historical and literacy practices through deliberate practice.

¹ Note: Teachers should be cautious about skipping activities in a spiraling series as doing so might leave students with an incomplete set of skills or cause confusion, when students encounter less scaffolded activities. BHP advises teachers to complete each activity in the series with your students. Even if you don’t do them in the exact order suggested in the outline, ensure appropriate scaffolding is provided to support skill development.
Managing Students’ Challenges Through Spiraling Activities and Deliberate Practice

As they deepen their understanding of the historical content, BHP students are asked to engage in several historical inquiry and literacy practices. To become more proficient with these practices, BHP has created *practice progressions*, which intentionally spiral the complexity at which students encounter these inquiry and literacy practices. Seen independently, developing students’ capacity to use these reasoning and literacy practices provides a clearer pathway to more advanced work, such as in AP or IB courses, and post-secondary education. These practices also align well with career-readiness programs.

Conducting historical inquiry is BHP’s core and central practice, consisting of (1) constructing historical problems to investigate; (2) selecting and analyzing historical evidence; (3) employing historical, social scientific, and scientific concepts; and (4) reasoning toward and making public conclusions. In studying the past and conducting historical inquiry, BHP students also read and evaluate historical interpretations; engage in causal and consequential reasoning; examine history through multiple disciplines; test and make claims; and shift scales.

We have categorized the disciplinary thinking and literacy practices in BHP as either *foundational* or *essential*. Students will use many of these historical thinking and literacy practices regularly and consistently throughout the course. We refer to these as Foundational BHP Practices since they form the basis of students’ intellectual work. Students use other disciplinary practices less often, although these are essential to doing the work of history as well. We refer to these as Essential Thinking Practices. BHP has also developed a series of repeated activities that help reinforce the foundational and essential practices through deliberate practice. Although these repeated activities weren’t necessarily created with specific spirals and tools in mind, we do expect student thinking around these activities to grow more sophisticated over time.

To help students master the Foundational Practices and Essential Thinking Practices, we have theorized a sequence of activities, each with a “thinking tool” or scaffold for students to employ when learning a particular skill.

**Foundational BHP Practices**
- Conducting historical inquiry
- Reading
- Writing
- Claim testing

**Essential Thinking Practices**
- Determining causation
- Thinking across scales
- Integrating multiple disciplines

**Repeated Activities**
- Narrative and Thresholds
- This Threshold Today
- Debate
- DQ Notebook
- Vocabulary

---

2. We recognize that all the historical thinking practices are critical and interconnected. That is, in conducting inquiry, historians read texts or produce accounts to answer causation questions, or continuity and change questions, or to contextualize phenomena, processes, or events. However, we have created and used these categories to help structure learning progressions.

3. Reading does not have a sequence of activities, as it is a practice addressed almost daily in BHP. Teachers should have students rely less and less on the tool as they become more familiar with the process.
**Spiraling activities:** BHP has developed an instructional sequence requiring students to engage in complicated and sophisticated thinking with increasing independence and decreasing reliance on the teacher, tools, or scaffolds. The image below shows where each of these core practices are addressed in the course. Students address the Foundational Practices in every BHP unit, since engaging in historical inquiry, analyzing, and producing historical accounts are central to the work of any historian.

**Thinking tools:** Using available research on historical thinking, we have constructed some thinking tools to help students “do” the work of history. Thinking tools make visible complex disciplinary thinking for students to observe and use in order to engage in that complex thinking. These tools might involve specific routines, language, images, or symbols. Historical thinking tools assist students to conduct investigations, read texts, construct arguments, test claims, and determine causation, among other things. In many cases, students will outgrow the tool, showing evidence that they no longer need a formal routine or image or concept map to “do” the thinking practice, such as making a causal argument or testing the claim. However, some students will continue to find value in using the formal routine, image, or concept map since it continues to help them engage in complex thinking.

As teachers, you are the best arbiters of when and if students can do disciplinary thinking without explicitly using one of the thinking tools. That is, some students will successfully turn the steps from the tool into a routine, employ disciplinary language, or use a concept map without referencing the tool. Teachers might not require those students to use a tool. However, for other students, often in the same class, teachers will determine there is great value in encouraging or requiring students to use a tool in doing the work of historical thinking. BHP provides our best guesses about a typical learning progression, but affords teachers, who know their students best, the flexibility to modify and adjust our suggested sequence or tool use. For reading in particular, we leave it to you to decide when students need more or less support.

In the following pages, you will be introduced to each of the practice progressions as well as the repeated activities that support and deepen their understanding of each practice. Attention to these skills throughout the course should not only help your students in this course, but across the curriculum.
## Practice Progression Grid

<table>
<thead>
<tr>
<th>Unit 1</th>
<th>Unit 2</th>
<th>Unit 3</th>
<th>Unit 4</th>
<th>Unit 5</th>
<th>Unit 6</th>
<th>Unit 7</th>
<th>Unit 8</th>
<th>Unit 9</th>
<th>Unit 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reading</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Big History Overview&quot;</td>
<td>No specific activity sequence - release of scaffolding determined by teacher in relation to Three Close Reads.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Claim Testing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snap Judgment</td>
<td>Authority</td>
<td>Intuition</td>
<td>Evidence</td>
<td>Note: Logic is covered as part of the Analyzing Investigation Writing: Organization activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Causation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Disasters</td>
<td>Star Formation Parts 1 and 2</td>
<td>Categorizing Causes</td>
<td>Alphonse the Camel</td>
<td>The Modern Revolution</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Scale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of Me</td>
<td>Changing Views Timeline</td>
<td>Timelines and Periodization</td>
<td>Evolution and Life Timeline</td>
<td>Periodizing Big History</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big History on a Football Field</td>
<td>Human History on a String</td>
<td>Timelines</td>
<td>Periodizing Human History</td>
<td>Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Disciplines</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Foundational BHP Practices

Reading

BHP seeks to improve students’ ability to analyze, evaluate, and use a range of primary and secondary sources, including arguments about the past in a variety of formats or genres. For students to develop the skills related to reading comprehension, the course provides extensive supports related to what’s called the Three Close Reads process. Students are introduced to close reading strategies in the first unit of the course, and then continue to use the process throughout. While reading everything in the course three times might seem like overkill, it’s a very helpful tool for getting all the information from the material. Students will get faster and faster with each reading, and somewhere in the middle of the course they will notice that the three reads take the same amount of time that one used to take. Students will eventually internalize this process; however, they should continue to use the Three Close Reads Worksheet as a tool to help them with more complicated readings.

Keep an ear out for when your students start to grumble about the three reads. It might mean that they’re ready for a less scaffolded reading experience, so use your knowledge of your students and how their reading skills are developing to decide about when they need less guidance and structure. It’s unlikely this will happen in the first unit, or even the first five units, but eventually this process will become a habit. Until it does, it’s important to use the worksheet, and early in the course, we recommend modeling the Three Close Reads process with your students.

Typically, students should use the Three Close Reads Worksheet to help them analyze an article. In addition to the worksheet, you will always be given more specific questions (with sample answers that appear only in the teaching material), that can be used to orient your students to particular concepts for the second and third reads. The questions provided as part of the activity should be used for class discussions and for checking students’ understanding of the reading. They may also be used for the “question or idea to read against.” The content covered in the reading-specific questions is important for your students to learn, so make sure these questions, which are in addition to those on the Three Close Reads Worksheet, are addressed with your students in some way.

Reading Activity Progression

Students are introduced to the Three Close Reads process when reading “Big History Overview,” an overview article written for the course by John Green. The process is intensive at first, so we suggest you always address the first read, and earlier in the course give particular emphasis to the second read. Once students have become comfortable with the second read, readjust your focus to the third read.
**Reading Tool – Three Close Reads Worksheet**

**Reading 3: Thinking Conceptually**
The third reading is really about understanding how the article relates to the unit driving question or other questions and ideas from the course. Your teacher may give you some sentence starters to help you respond to these questions.

<table>
<thead>
<tr>
<th>Pay attention to...</th>
<th>Questions</th>
<th>Your answers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Support</strong></td>
<td>What does this text contribute to what you already know about the driving question or the question or idea you thought about so far?</td>
<td></td>
</tr>
<tr>
<td><strong>Context</strong></td>
<td>In what ways did the article deepen your thinking about the driving question or the question or idea you thought about so far?</td>
<td></td>
</tr>
<tr>
<td><strong>Challenge</strong></td>
<td>How did this article change your understanding of the driving question or the question or idea you thought about so far?</td>
<td></td>
</tr>
</tbody>
</table>

**Reading 2: Understanding Content**
In this read, you will pay attention to the informative that most helps you understand the article.

<table>
<thead>
<tr>
<th>Pay attention to...</th>
<th>Questions</th>
<th>Your answers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vocabulary</strong></td>
<td>Do these words make sense? How? What does the word contribute to your understanding of the article?</td>
<td></td>
</tr>
<tr>
<td><strong>Major Claims</strong></td>
<td>What is the main idea of this article? How is it supported or contradicted by evidence or examples?</td>
<td></td>
</tr>
<tr>
<td><strong>Analysis and Evidence</strong></td>
<td>Does the author use the evidence to support or contradict the main idea? Provide 3 examples.</td>
<td></td>
</tr>
<tr>
<td><strong>Claim Testers</strong></td>
<td>What new questions does the author raise when providing support or information that challenged the major claim? How do you think these questions should be answered?</td>
<td></td>
</tr>
</tbody>
</table>

**Reading 1: Skimming for Gist**
This reading is more of a skim—i.e., should help you get the general idea of the reading.

<table>
<thead>
<tr>
<th>Pay attention to...</th>
<th>Questions</th>
<th>Your answers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title and Headings</strong></td>
<td>What is this article about?</td>
<td></td>
</tr>
<tr>
<td><strong>Images, captions, graphs, tables</strong></td>
<td>How do these add to your idea of what the article is going to be about?</td>
<td></td>
</tr>
</tbody>
</table>
Writing

BHP is writing intensive. Students are asked to respond in writing to a variety of prompts throughout the course. At the end of each unit, we ask students to write something we call an Investigation essay. Like document-based questions (DBQs), these activities start with a driving question such as, “Why do we look at things far away and up close?” “What makes humans different from other species?” and “What’s the next threshold?” Each Investigation asks students to read a short collection of documents related to the driving question, and then write a multi-paragraph essay complete with thesis, intro and conclusion, and evidence from the documents they’ve read, backing up their claims.

Because history teachers are not necessarily trained as writing teachers, but must help students develop their writing skills, we have created a series of ten activities that focus specifically on developing these core writing skills, so that students are prepared to construct their own historical narratives in response to the investigation questions. Since these activities are part of a series, note that skipping one might cause students to have a gap in their knowledge, or could be confusing when progressing to the next. Also note that many of these activities rely on students completing writing assignments from earlier in the course, so it’s important to either make sure students engage with those activities, or that you come up with alternatives for them so students have material to analyze and edit as part of the activities.

As with reading, there is a specific activity in all but the final unit of the course that focuses on developing students’ writing skills. Although these are highly scaffolded initially, by the end of the course students should be able to evaluate and edit their own writing using the BHP Writing Rubric. Note these activities are the second to last or last activity in each unit, typically preceding each unit’s Investigation. Unit 4 is the exception, with two Investigation writing activities.

1. **Lesson 1.3: Analyzing Investigation Writing – Claim and Focus**
   In this activity, students will revisit the article, “Cosmology and Faith,” from Lesson 1.2, and use the Claim and Focus row in the BHP Writing Rubric to identify the claim and focus of the article. It’s important for students to see examples of these elements of writing so that they begin to understand what we mean by good historical writing.

2. **Lesson 2.2: Analyzing Investigation Writing – Use of Evidence**
   In this lesson, you will continue your quest to improve your students’ writing by getting down and dirty with the elements of Analysis and Evidence from the BHP Writing Rubric. As they did in the writing activity in Lesson 1.3, students will get more familiar with the criteria on the BHP Writing Rubric by analyzing a piece of writing in relation to the rubric. This activity should help them better understand how evidence should be used in their writing. And this time, they’ll analyze a piece of student writing.

3. **Lesson 3.2: Analyzing Investigation Writing – Applying BHP Concepts**
   In this third activity in the Investigation Writing series, students will tackle the fifth row of the BHP Writing Rubric, Applying BHP Concepts. This is yet another way for them to think about how the criteria presented in the rubric can be found in writing. Students will examine another writing sample, looking for the BHP concepts in the student essay. At the end of this activity, students will be able to identify the key elements that should be a part of any Investigation essay that they write. This is the first step in becoming more skilled BHP writers.
4. **Lesson 4.1: Analyzing Investigation Writing – Organization**
   In this activity, your students will focus on the Organization row of the BHP Writing Rubric so that they understand how the presentation and ordering of ideas in an essay can enhance the argument being made. In this activity, students will rearrange the paragraphs of a student essay so they can see how different arrangements impact the analysis, clarity, cohesion, and overall logic of an argument, which will help them understand that a well-executed argument is one that has a clear introduction, progresses logically, and concludes effectively. In this activity, students will also discuss the claim tester logic and how it relates to essay organization.

5. **Lesson 4.3: Revising Investigation Writing – Claim and Focus**
   In this Investigation writing activity, students circle back around to the first row of the BHP Writing Rubric, Claim and Focus, to move beyond simply identifying elements of a well-crafted argument, to analyzing and writing one. In this activity, each student will revise another student’s writing as a way to understand not just what a good claim is, but how to actually generate one. This gradual release of scaffolding and additional skill building will help students steadily improve their writing throughout the course.

6. **Lesson 5.3: Revising Investigation Writing – Use of Evidence**
   Much like they did for the last Investigation writing activity, students will review a student writing sample and analyze and then improve that sample. In this particular activity, students are focusing on the second row of the BHP Writing Rubric, Analysis and Evidence. This next step, in which students come to understand this vital ingredient of good historical writing, has them move beyond simply identifying where evidence is used in an essay, to actually revising the text to improve the use of that evidence.

7. **Lesson 6.3: Revising Investigation Writing – Applying BHP Concepts**
   By now, you and your students should be very familiar with these Investigation writing activities. The point of these continues to be to consistently and carefully work on particular elements of writing with your students so that they improve throughout the year. BHP research has shown that students dramatically improve their writing in the first half of the course, but then their progress tends to stagnate to some degree. These activities should help prevent any of your students from plateauing in their writing improvement.

8. **Lesson 7.2: Revising Investigation Writing – Sentence Starters Part 1**
   Now that students have had the opportunity to identify, analyze, and revise BHP student writing in relation to the Claim and Focus, Analysis and Evidence, and Applying BHP Concepts areas of the BHP Writing Rubric, they’ll put the pieces together and examine a piece of writing more holistically by attending to those three rows of the rubric together, as part of their revision. To help students manage this next level of complexity, we’ve provided sentence starters. Although the rows of the rubric mentioned, along with Organization, are a useful tool for breaking down elements of writing, eventually those elements need to be seen as a whole, since the areas of focus are interrelated. In the best historical writing, these connections are clear. This is the first activity of three that will help students put the pieces back together.

9. **Lesson 8.2: Revising Investigation Writing – Sentence Starters Part 2**
   This is another activity in which students will examine a piece of writing through the lens of the entire BHP Writing Rubric. While the categories in the rubric are a useful tool for initially understanding the different elements of writing, they need to be looked at as a whole since the
areas of focus are interrelated. In the interest of continued skill-building and independence in completing this type of work, students will conduct analysis and revision alone instead of in groups. Each student will be assigned to review and revise a peer essay for this activity.

10. Lesson 9.3: Revising Investigation Writing – Sentence Starters Part 3

Students have examined and revised Investigation writing samples based on Claim and Focus, Analysis and Evidence, and Applying BHP Concepts from the BHP Writing Rubric, and they’ve peer-reviewed an essay. Now, it’s time for the ultimate task—revising their own work based on the rubric and what they’ve learned. In this final activity in the Investigation writing series, your students will practice looking at their own work with a critical eye. This can be quite challenging, as it’s often hard to tease out your own errors in writing. However, learning to analyze your own writing will help students be better writers, not just in BHP, but in all their future writing endeavors.

Writing Tool – BHP Writing Rubric
Claim Testing

Claim testing is an important analytical process for assessing the quality and veracity of claims. It helps students “see” and evaluate people’s assertions, and gives shape to one of the most important and useful critical thinking practices of history. Since history is all about making assertions, it’s important that students learn the skill of testing claims early and use it frequently as part of evaluating historical accounts and making historical interpretations. Through use of this process, students will become familiar with the language of claim testing, which they should begin to use as part of accountable talk in the classroom.

BHP equips students with the language and practice needed to analyze claims made in many forms, including primary and secondary sources, data charts, videos, infographics, and even in-class discussions. It’s very important for students to see teachers modeling claim testing by making it a regular part of class work. Teachers might stop a video to ask about the support John Green offers for one his claims, might ask students to highlight an article’s major and minor claims, or use claim testers to shape a discussion of a current issue in the news or in school.

In class discussions, you might encourage students to respond to each other with questions such as:

- Do you think that’s a credible source? Why?
- What’s the evidence for that claim?
- Can you explain the logic for your statement?
- This makes logical [or intuitive] sense to me but I don’t have much evidence. Can someone suggest some evidence to support this?

Some teachers even create a poster of such phrases to scaffold the regular use of the claim testers in class. Of course, claim testing should also become evident in students’ writing as they use these same strategies to show how they arrived at or are supporting their conclusions.

1. **Lesson 1.3: Claim Testing – Snap Judgment**
   This activity, the first in the claim testing progression, is a quick introduction to how students assess claims that are made in their everyday lives. You’ll return to this activity later in the lesson so that once students are familiar with the four claim testers, they can categorize the “why” explanations they provided into the four Big History claim testers.

2. **Lesson 1.3: Claim Testing – What Are the Claim Testers?**
   Claim testing is one of the essential practices that students develop in BHP. Claim testing helps students decide what to believe, and it also helps them become more skillful in evaluating others’ claims. Learning this skill will enable students to support their own claims in both writing and speaking. In this activity, students will categorize supporting statements into the four claim tester types as a way to begin understanding the different ways in which claims can be supported.

3. **Lesson 2.1 – Claim Testing – Authority**
   Although authority is one of the claim testers that helps us decide what to believe, it can be puzzling when two authorities disagree. In this activity, students will dig into the concept of authority to gain a better understanding of what authority means, how it’s used, and how its meaning can change over time. They will also touch on how understanding authority can help us with sourcing.

4. **Lesson 3.2 – Claim Testing – Intuition**
   This quick activity digs into the intuition claim tester. Intuition is often a difficult claim tester.
for students to understand and use, because using this claim tester usually relies on the background knowledge of the person testing the claim. For a lot of what students encounter in history, they probably won’t have the requisite background knowledge, so relying on their intuition to make quick judgments about a claim becomes difficult. This activity should help students understand how and why intuition can be important, and what to do when they can’t rely on their intuition.

5. **Lesson 4.3: Claim Testing – Evidence**

In this final activity in the claim testing progression, students dig into evidence and how evidence impacts what people decide to believe. While evidence is often considered the “best” claim tester, it isn’t always effective in helping people decide what to believe. This will help students better understand how the situation and context in which claims are made and supported impact which claim tester or testers are used.

**Note:** Logic is addressed in Lesson 4.1’s Opening Activity: Analyzing Investigation Writing—Organization

**Claim Testing Tool**

View and download all the Claim Tester posters from the BHP Teacher Console.
Essential Thinking Practices

Causation

Causal reasoning can help students develop evidence-based explanations or arguments in response to a causal question that considers human actions, events, and larger structures or processes. Historical events rarely have a single, proximate cause – some happen immediately before an event, some long before an event, some play a central role, and some merely contribute. Some causes may be considered effects, and the significance of the event may change depending upon your framing of that event. Historians conduct causal analysis and make arguments as part of their everyday work. Students are introduced to causation in the course by thinking through the causes of a recent natural disaster. Reasoning about causation is core to the work of a historian and therefore this practice is introduced early and repeated often. As student’s progress in the course, they will use their causal reasoning skills in many of the activities they encounter. It should not take long until the steps they follow to analyze causation are implicit, and they may not need the support of the Causation Tool. However, when it comes to writing about causation, this may take more time, so make sure to provide the appropriate support to your students until they have mastered writing about causation.

1. Lesson 2.0: Causation – Natural Disasters
   Central to the work of a historian is determining cause and effect as related to historical events and processes. In this first activity in the causation progression, students engage in historical analysis by trying to identify the causes of a recent natural disaster. Making causal claims is major part of what we do in history, so students will work on determining causation throughout the course.

2. Lesson 3.0: Causation – Star Formation Part 1
   Causation is another way of examining historical events from different perspectives, but more important, it does something that perspective alone doesn’t do—it helps us establish connections between events over time, which gives us the opportunity to connect historical events to our own lives. In this activity on causation, we’ll ask students to identify the causes, effects, and triggering events for star formation. This will help clarify the process of star formation, but also establish a pattern of thinking that will be essential later on.

3. Lesson 3.1: Causation – Star Formation Part 2
   This activity revisits the causal map created in Part 1. This time, students will add details from Threshold 3 followed by Threshold 1, which will complicate their causal maps and deepen their understanding of how to use this analytical tool. Doing so should help students understand how new chemical elements are formed, and should also help them see how Thresholds 1, 2, and 3 are connected. This activity helps drive home how we use cause and effect as a tool for studying history. It also reinforces the idea that causes and effects are often two sides of the same coin; it’s the perspective you take that determines whether something is a cause or an effect.

4. Lesson 4.0: Causation – Categorizing Causes
   One of the most challenging tasks for historians (and scientists) is to make sense of events with multiple causes. In this activity, students are going to capture some causes that led to the development of the Earth’s atmosphere, and then categorize them in a couple of different ways. This will help students understand how to organize causes into different categories, and expand their strategies for using causation as an analytical tool when constructing historical narratives. This might seem like common sense, but critical thinking is key to thinking historically.
5. **Lesson 6.2: Causation – Alphonse the Camel**

One job of a historian is to make claims about why things happen. In other words, to determine what caused certain events to take place. This can be complicated because historical events rarely have a single, immediate cause. This activity challenges students to grapple with the idea of multiple causation, which complicates the relationship between causes, effects, and how they interact with one another. Examining the long-term and short-term causes of an event from different perspectives is used as an analytical tool for understanding effects. This activity takes a popular American expression and expands into the story of Alphonse the Camel, which it uses to explore the various reasons for the camel’s ultimate demise. In analyzing this story, students mirror a simple form of historical thinking, which we will expect from them in the future.

6. **Lesson 8.0: Causation – The Modern Revolution**

This activity takes a look at a complex historical event—the Industrial Revolution. This is the most complicated event that students will analyze as part of the series on causation, and will help solidify some of the practices they can use—such as connecting cause and effect—to understand how events over time are related. As part of this activity, students categorize and examine causes that have been put forth as essential to the event. They’ll then use this information to form an opinion of the analysis offered in the video, The Modern Revolution. This is the final activity in the series on causation, and by now your students should have a grasp of how to use cause and effect as analytical tools for understanding change over time and for creating historical narratives.

**Causation Tool**

![Causation Tool Diagram](image-url)
Scale

Big History encourages students to think across scales, from the massive expanse of the Universe to the smallest of atoms. Shifting scales is an essential task that historians rely upon in conducting historical analysis. This series of activities seeks to help students become familiar with the practice. They will compose their own timelines and look at how their perspective changes as they periodize historical events, process, and people in different ways, or as they zoom in and out of geographical areas of study.

1. **Lesson 1.1: Scale – History of Me**
   In this activity, students write a history of themselves, and then have the opportunity to reflect upon the scale at which they examined their own history. This helps students understand that their own personal narratives do have things in common with the much larger Big History narrative. It also introduces the concept of both temporal and spatial scale. This creates an opportunity to make it clear why historians will occasionally zoom out (in terms of both time and geography) to create a larger context for understanding a single history.

2. **Lesson 1.1: Scale - Big History on a Football Field**
   This activity invites students to place the Big History timeline on a football field. One of the most popular activities of the course, placing the thresholds of Big History at proportional locations on football field creates a concrete representation of the scale of the Universe.

3. **Lesson 1.1: Scale – Human History on a String**
   This activity is similar to the football field activity and is often used as an alternative when access to marked playing fields isn’t available. This activity invites students to create timelines using ribbon and string. While the previous activity looks at the history of the Universe, this activity looks specifically at human history. Alternates for this activity are easily generated looking at U.S., Australian or other national histories, state histories or community histories.

4. **Lesson 1.1: Scale – Timelines**
   Timelines can be used as analytical tools in history, and they will be used in this way throughout the course. However, before beginning the analysis process, students have to know how to read timelines. The Big History timeline is more detailed and complicated than the average timeline, and beginning to gain a better understanding of how it works and what it represents will provide your students with some of the knowledge they need to both analyze and construct timelines. In this activity, students review some of the key features of timelines and gain a deeper understanding of the importance of scale in timelines.

5. **Lesson 2.1: Scale – Changing Views Timeline**
   This activity asks students to read about different scientists’ views of the Universe, and then place those on a timeline to create a story arc that helps them better understand how thinking about the Universe has advanced over time. It will also deepen students’ understanding of how timelines can be used as analytical tools when studying history.

6. **Lesson 3.2: Scale – Timelines and Periodization**
   This activity will allow students to continue to explore timelines as analytical tools that help us understand the past. In particular, this activity aims to get students thinking about periodization and how that relates to scientific revolutions.

7. **Lesson 5.3: Scale – Evolution and Life Timeline**
   Students have been creating timelines regularly at this point in the course, and they should be getting the hang of them and the ways in which they can be useful. Creating timelines adds
another dimension to student understanding by providing yet another way to contextualize and understand content. This type of analysis is different from those used when reading, watching videos, or having class discussions.

8. **Lesson 9.0: Scale – Periodizing Big History**
   As part of the timeline activities that they completed in previous lessons, students learned about the idea of periodizing history. In this activity, they’ll think about how they would periodize the past and how periodizing something—in this case, the Big History timeline—reframes it. Looking at periodization from multiple angles helps students become more critical consumers of the historical accounts they encounter.

9. **Lesson 9.0: Scale – Periodizing Human History**
   In this activity, students will use a similar process to the one they used in the opening activity of this lesson, but this time they’ll try to periodize human history. Not only will this get them thinking about the richness of human history, but also the different ways in which they might tell stories about human history. This reinforces the idea that periodization is really an analytical tool in history, one that can help people understand and explain events of the past.

10. **Lesson 10.0: Scale - Review**
    This activity reinforces how important scale is to understanding the Big History story, and really all history stories. This is the final activity will students will deliberately consider scales of both place and time in relation to the big history narrative.

**Scale Tools**

---

### Scale Tools

- **PERSONAL**
- **LOCAL**
- **REGIONAL**
- **NATIONAL**
- **GLOBAL**
Integrating Multiple Disciplines

Big History encourages the use of interdisciplinary thinking and methodologies. Using the questions and practices from other disciplines is natural to the study of history, since history is made up of enduring questions, concepts, skills, and approaches from a variety of disciplines. The College, Career, and Civic Life (C3) Framework for Social Studies State Standards calls for having students focus on the disciplinary ideas and tools that can be used in their historical inquiries. In this way, BHP students use the questions of other disciplines to inform historical inquiry rather than studying those specific topics. Students should learn to integrate the insights of multiple disciplines when analyzing and drawing conclusions about historical information, including social, physical, and natural sciences. Students should become aware of a range of scholarly disciplines and understand the types of questions they ask, the types of conclusions that they draw, and the types of evidence they use to support their findings.

1. Lesson 2.2 – Disciplines – Who Knows What?
   In this activity, students will start to explore how examining the same event from different perspectives can result in varied conclusions surrounding that event. This will help them understand why Big History is interdisciplinary, and how they can work to use a variety of disciplines to help them understand the Big History story.

2. Lesson 2.2 – Disciplines – What Do You Know? What Do You Ask?
   This is a follow-up to the activity, Disciplines – Who Knows What?, in which students decided what different people would ask about a significant event. Now, instead of having different versions of themselves and representatives of other professions they’re familiar with, they’ll ask the questions from the viewpoint of the new disciplines that they’ve learned about earlier in this lesson. This will help them solidify their understanding of the different kinds of questions different disciplines ask, as well as help you understand whether or not your students are gaining an understanding of those disciplines. Most important, this activity is focused on helping students integrate interdisciplinary thinking.

3. Lesson 3.2 – Disciplines– What Do You Know? What Do You Ask?
   This activity asks students to decide what kinds of questions scholars from different disciplines might ask about an object or a significant event. The goal is to help students solidify their understanding of the different disciplines, but more important, to move your students toward thinking in an interdisciplinary fashion. Additionally, this pushes students to start thinking about how to construct researchable questions.

4. Lesson 4.3 Disciplines– What Do You Know? What Do You Ask?
   In most fields, individuals are asked to work in teams. From childhood we’re taught that “two heads are better than one.” We see this idea carried over into multiple disciplines, including history. This activity will help students continue to develop their interdisciplinary thinking and reasoning skills as they work to create questions about and investigate some of the greatest puzzles of the last 13.8 billion years.

5. Lesson 6.1 Disciplines– What Do You Know? What Do You Ask?
   This activity, like similar ones in earlier units, asks students to decide what kinds of questions scholars from different disciplines might ask about an object or a significant event. The goal is to help students solidify their understanding of the different disciplines, but more important, to move your students toward thinking in an interdisciplinary fashion.
6. **Lesson 7.2 Disciplines – What Do You Know? What Do You Ask?**

Historians study very different kinds of evidence from that studied by geologists or chemists, and their questions about evidence can be very different as well. Historical evidence poses some new but very interesting interdisciplinary challenges. In this activity, students will decide what kinds of questions scholars from different disciplines might ask about a piece of evidence that is clearly chosen from the discipline of history.

7. **Lesson 10.0.7 Disciplines – What Do You Know? What Do You Ask?**

This final activity in the progression should solidify students’ understanding of the different disciplines and reinforce the importance of thinking in an interdisciplinary fashion.

### Integrating Multiple Disciplines Tool – Disciplines Chart

<table>
<thead>
<tr>
<th>Discipline Name</th>
<th>A person who studies that discipline</th>
<th>If we ask why, what questions would we ask?</th>
<th>What evidence would we look for?</th>
<th>What evidence did we look for in that activity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>Anthropologist</td>
<td>What evidence would we look for?</td>
<td>What causes and consequences of disease?</td>
<td>DNA,</td>
</tr>
<tr>
<td>Archaeology</td>
<td>Archaeologist</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>Biology</td>
<td>Biologist</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chemist</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>Economics</td>
<td>Economist</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>Environmental Science</td>
<td></td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>Geology</td>
<td>Geologist</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>History</td>
<td>Historian</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>Physics</td>
<td>Physicist</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>Psychology</td>
<td>Psychologist</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
<tr>
<td>Sociology</td>
<td>Sociologist</td>
<td>Students can use evidence to learn about the past.</td>
<td>What can they tell us about the past?</td>
<td>Evidence,</td>
</tr>
</tbody>
</table>
Repeated Activities

BHP has also developed a series of repeated activities that help reinforce the foundational and essential practices through deliberate practice. While the repeated activities weren’t necessarily created with specific spirals and tools in mind, we do expect student thinking around these activities to grow more sophisticated over time. Consider how to provide additional scaffolds for your students for the early occurrences of these activities, and release that scaffolding as students become more familiar with each activity type.

<table>
<thead>
<tr>
<th>Unit 1</th>
<th>Unit 2</th>
<th>Unit 3</th>
<th>Unit 4</th>
<th>Unit 5</th>
<th>Unit 6</th>
<th>Unit 7</th>
<th>Unit 8</th>
<th>Unit 9</th>
<th>Unit 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative and Thresholds</td>
<td>Threshold Name Game</td>
<td>The Big Bang</td>
<td>Stars Light Up New Chemical Elements</td>
<td>Earth &amp; the Solar System</td>
<td>Life</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little Big History Project (LBH)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LBH Kick Off LBH Biography</td>
<td>LBH Choosing Your Focus LBH Research Questions</td>
<td>LBH Final Project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>This Threshold Today</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debates</td>
<td>Views of the Universe</td>
<td></td>
<td></td>
<td></td>
<td>Culture and Collective Learning</td>
<td></td>
<td>Has the Scientific Revolution Ended?</td>
<td></td>
<td>Is Change Accelerating?</td>
</tr>
<tr>
<td>DQ Notebook</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>This activity is repeated twice in every unit.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investigations</td>
<td>0 – How and why do individuals change their minds?** 1 – Why do we look at things from far away and close up.</td>
<td>2 – How and why do individuals change their minds? 3 – How can looking at the same information from different perspectives pave the way for progress? 4 – When and why do people accept a theory?</td>
<td>5 – How and why do theories evolve? 6 – How does language make humans different?** 7 – To what extent was farming an improvement over foraging? 8 – How and why have our reaction and responses to disease changed? 9 – To what extent has the Modern Revolution been a positive or negative force?**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Used for BHP research conducted by the University of Michigan to study student writing growth. Please submit these to BHP Score!
Narrative and Thresholds

From a cognitive standpoint, Big History supports students’ understanding of the larger narrative by highlighting the thresholds of increasing complexity. By noting the moments in history when a significant change occurred, one that forever altered the progress of the future, students are able to use the structure to organize individual events and facts. This understanding is built through learning the thresholds names and their sequence, but also by relating them to previous thresholds and what proceeds. The thresholds give context for the content that is taught during the Big History course. In the end, students should be able to take events and facts and situate them across multiple thresholds. This series of activities will help prepare students to start their Little Big History Projects in Unit 6.

1. Lesson 1.1 Narrative and Thresholds – Threshold Name Game
   The Big History narrative progresses through a series of eight thresholds of increasing complexity, starting with the Big Bang and ending with the Modern Revolution. Thresholds are guideposts along the way – major plot points in the Big History narrative. It turns out – and Big History Project research has shown this year after year – the better students grasp this narrative, the better they can connect with the course content in a way that encourages deep and lasting learning. It just takes some practice. This activity is all about learning the thresholds through a simple memory exercise.

2. Lesson 2.0 – Narrative and Thresholds – The Big Bang
   Big History Project research has shown that when teachers and students have a solid grasp on the driving course narrative (which includes BHP’s eight thresholds of increasing complexity), they are better able to connect with the course content in a cohesive way that encourages deep and lasting learning. One way to more easily remember the narrative is to revisit the thresholds throughout the course through a repeated activity. The thresholds function much like plot points, thereby punctuating and framing David Christian’s Big History story. This is the first quick activity in a series in which your students will review a graphical representation of each threshold, and after watching the corresponding video that introduces the threshold, determine (in their own words) what happened at that threshold of increasing complexity.

3. Lesson 3.0 Narrative and Thresholds – Stars Light Up
   The eight thresholds of increasing complexity are fundamental to teaching Big History Project, and they help us remember the modern, scientific origin story that is Big History. By continuing to revisit the thresholds, and by coming up with their own versions of the Big History story, students will be better able to connect and remember what they are learning in this course.

4. Lesson 3.1 Narrative and Thresholds – New Chemical Elements
   Big History Project research has shown the importance of both teachers and students deeply understanding the driving course narrative, which is built around eight thresholds of increasing complexity. Internalizing the narrative of the BHP story helps students have a framework in which to place the content they learn throughout the course, and as a result, they experience deeper and more lasting learning. This activity continues the series of repeated tasks to help build knowledge of the thresholds and the overall Big History story.
5. **Lesson 4.0 Narrative and Thresholds – Earth & the Solar System**
Big History research has shown that repeated activities help build a stronger grasp of concepts than independent, singular activities. This activity will continue the Narrative and Thresholds progression’s mission of deepening students’ understanding of the BHP narrative and specific, key ideas and events in the course. Students will have multiple at-bats as they perform an image analysis, synthesize information, watch a video, and participate in a collaborative conversation about the Big History story line.

6. **Lesson 5.1 Narrative and Thresholds – Life**
This activity will build on all the work that has been done in the Narrative and Thresholds progression. Thus far, students have practiced synthesizing, image analysis, and working with the BHP narrative. The purpose of this activity is to use the skills that they have been developing in the course to build their own BHP story up until this threshold. By doing so, they will be deepening their understanding of each individual threshold and the larger story. Additionally, this activity will set students up to reflect on the plot points and narrative as they continue in the course.

**Narrative and Threshold**
Little Big History Project

The Little Big History (LBH) Project is the culminating project of the Big History course. It allows students the opportunity to delve into an event, object, or idea from a Big History perspective. This project has both collaborative and individual aspects, and results in either a presentation or service project. Each LBH should include a compelling narrative that tells the story of an object across at least three thresholds (one of them prehuman) and incorporates the perspectives of at least three disciplines, including history. Working in teams, your students might choose to investigate one of the following: 1) an object or a commodity (anything that is bought and sold); 2) a process or technical innovation; 3) a social construct or institution; or 4) an activity. Basically, it can be just about anything that interests them and that they can research. At the end of the project, each member of the group will complete a collaborative group paper, an individual paper, and a group presentation on the subject of their LBH. The best Little Big History Projects are great stories that highlight connections and insights about the subject. Students need to work together to ensure they bring their story to life. The Little Big History Project is a significant amount of work. Students begin work selecting their topics in the second half of the course and begin writing in earnest in Unit 8.

1. Lesson 6.1 Little Big History – Kickoff
   In this activity, you’ll introduce your students to the Little Big History project (LBH), which is the culminating project for the course. It’s a good idea to get your students started on this as soon as possible so they have time to work on elements of the project throughout the rest of the course. Your students will be using a Big History approach to examine a single object about which they’ll create a Little Big History. This is an opportunity for them to practice what they’ve learned throughout the course. Remind them of the “Little Big History of Silver” from Unit 3.

2. Lesson 6.3 Little Big History – Choosing Your Focus
   For this activity, students will make a final decision about the LBH object they’ll study and research for their culminating project of the year. This is an important step in the process and will keep students focused on the task and working toward completing their Little Big Histories.

3. Lesson 7.0 Little Big History – Biography
   In this activity, students will answer a general set of questions about their Little Big History topic. This activity will help them become more familiar with their LBH topic, which will enable them to formulate better research questions when they start their final project. In addition, students will spend focused time reviewing and applying the collaboration rubric that will be used at the end to grade their participation in the group.

4. Lesson 7.2 Little Big History – Research Questions
   For this activity, students will explore the questions they might answer in researching their Little Big History project. This is an important step in the process and will keep students focused on completing the task and working toward completing their Little Big Histories.

5. Lesson 8.3 Little Big History – Final Project
   This is the last structured Little Big History activity before the final presentations. It’s important for students to work through the activity in order to narrow down the subject of their paper and to choose how they would like to present it. Please be sure to schedule class time, check-ins, or homework around these final activities so students continue to work on the projects. Do what works best for your students and your schedule.
**This Threshold Today**

The This Threshold Today (TTT) activities are meant to help students connect what they are learning about the past to today. In each occurrence, students will read news articles and try to make connections to the relevant threshold. In addition to showing students how even the most distant history is still important today, students will gain experience finding and evaluating online sources. In today’s world, it is increasingly easy to encounter false stories and spurious claims. Students are encouraged to engage in sourcing of their articles, which helps them examine the credibility and bias of the stories they encounter as part of their research. Additionally, TTT helps prepare students for their Little Big History Projects and any other research they might do as part of the course.

1. **Lesson 2.0 – The Big Bang**
   In this activity, students will read news articles that reveal unexpected connections between today’s world and the Big Bang to understand how things we learn today are related to what we know about the Big Bang. Understanding the relevance to today should help students engage more with the theories related to the Big Bang, which are sometimes tricky.

2. **Lesson 3.0 – The Stars Light Up**
   In this activity, students will read news articles that reveal unexpected connections between today’s world and the time when the first stars lit up. We are learning new things all the time related to what we know about Threshold 2. Students will also dig into the authority of the articles and websites they encounter online to determine what level of credibility the authors have.

3. **Lesson 4.1 – Earth & the Solar System**
   In this activity, students will read news articles that reveal unexpected connections between today’s world and the formation of Earth and the Solar System. Students will begin to touch on the idea of corroboration in this activity by trying to find three sources or websites that all agree on the same topic.

4. **Lesson 7.0 – Agriculture**
   Students will again look for news article that connect this threshold to today. As part of their work, students continue to explore issues related to authority and credibility as related to the articles and websites they encounter online. Here, students are pressed to start thinking about the purpose of an article or website and how this impacts bias and credibility.

5. **Lesson 9.3 – The Modern Revolution**
   In this final activity in the TTT series, students will again look for news stories that connect to this threshold. At this points, students should be well versed in online research and how to evaluate authority, credibility, and bias in what they encounter as part of their research.
## TTT Research Card

**BIG HISTORY PROJECT / LESSON 2.0 ACTIVITY**

**THIS THRESHOLD TODAY – THE BIG BANG**

<table>
<thead>
<tr>
<th>Threshold 1: The Big Bang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headline/Title:</td>
</tr>
<tr>
<td>Date of article:</td>
</tr>
<tr>
<td>Name of website:</td>
</tr>
<tr>
<td>Author:</td>
</tr>
</tbody>
</table>

**Authority**

- What makes the author an authority on this topic?
- What makes the website an authority on this topic?

**Relevance to This Threshold**

- How does the information in the article support what you already know about Threshold 1?
- How does the information in the article extend what you already know about Threshold 1?
- How does the information in the article challenge what you already know about Threshold 1?
Debates

The Big History Project course features four debates. Debates are useful for a multitude of reasons. They are great for engaging students and making things livelier and more interesting in the classroom. They also help students develop important critical thinking and presentation skills, and they encourage the use of academic discourse in the classroom. In BHP, debates are a great way to support students as they work on making and testing claims. At their core, debates are really all about making claims, supporting them, and anticipating counterclaims. Debates are a great way for students to practice their claim-testing skills.

1. **Lesson 2.1 – Views of the Universe Debate**
   This debate will give students a better understanding of the viewpoints of different scientists and insight into why some people might have resisted or argued against new models of the Universe.

2. **Lesson 6.2 – Culture and Collective Learning Debate**
   In this activity, students are asked to think about collective learning and its relationship to culture. Students will argue that culture either is or is not a product of collective learning. This deepens students understanding of collective learning, and illustrates how collective learning has social and cultural implications, not just those related to information, goods, and services.

3. **Lesson 8.3 – Has the Scientific Revolution Ended?**
   In this activity, students will be asked to think about whether or not the scientific revolution has ever ended. Thinking about the progress of science prior to the Age of Enlightenment and the progress since gets students considering what counts as science, what makes a revolution, and if it’s possible for a revolution to go on for over 300 years. In addition, this debate compels students to reflect on what is currently happening in science, which helps them see how they are a part of historical narratives.

4. **Lesson 9.1 – Is Change Accelerating?**
   In this activity, students will be asked to apply what they have learned about acceleration by examining whether or not rates of innovation can keep up with rates of acceleration. Understanding this helps students to better predict the state of our world in the future.
**DQ Notebook**

This repeated activity asks students to respond to the driving question for each unit. Sometimes students are asked to think about this question even before they get into the content, because they may not know much about the topic, but they know something. And, it turns out, this is important. Learning scientists call this “activating prior knowledge.” Students create a mental model that later allows them to organize the ideas and correct misconceptions they brought to the course, as well as expand on their initial understanding. Students will revisit their DQ Notebooks two times per unit. For the second occurrence, they should be able to cite evidence from the materials they’ve studied, and then they will reflect upon how their thinking evolved over the course of the unit. The DQ Notebook is meant to be a low stakes opportunity for students to record their thinking about the unit driving question, allowing them to grapple with ideas without feeling the pressure of more formal writing activities.

**DQ Notebook**

| Driving Question: How and why do individuals change their minds? |
| How did human understanding of the Universe change? |

**Directions:** Use this worksheet in Lesson 2.1, and again in Lesson 2.2 to answer the unit driving question that your teacher has assigned. Try to use what you’ve learned so far in the unit to support your ideas each time you answer. In your Lesson 2.2 response, also share how your thinking about the question itself has changed since you wrote your answer for Lesson 2.1.

<table>
<thead>
<tr>
<th>Lesson 2.1</th>
<th>Lesson 2.2</th>
<th>How and why has your thinking changed?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Investigations

At the end of each unit, we ask students to write something we call an Investigation. Like document-based questions (DBQs), these activities start with a driving question such as, “Why do we look at things from far away and close up?” and “What makes humans difference from other species?” Each Investigation asks students to read a collection of documents related to the driving question, and then write a multi-paragraph essay complete with thesis, intro, and conclusion, using evidence from the documents and course to back up their claims. Students engage in both close reading and formal writing when these assessment activities are completed as intended. While we encourage you to use these Investigations with your students, it’s unrealistic to expect teachers to complete them all in the course of one school year. Many teachers opt to modify the writing portion of some of the Investigations, allowing students to create a variety of presentation types so they are still engaging with the content, even if they don’t have time for all of the formal writing.

In each Investigation activity, students return to the unit’s driving question and develop their conjectures about the topic. They will have thought about these topics already in the DQ Notebook exercises. We recommend that you complete at least three Investigations with your students. The Big History Project research with the University of Michigan looks specifically at investigations 0, 6, and 9, so those are great ones to choose if you are not doing them all. If you assign Investigation 0 during the first week of school, it will be easy for students to track their writing growth all year long.

1. **Lesson 1.0 Investigation 0 – How and why do individuals change their minds?**
   (NOTE: This investigation is used for research conducted in partnership with the University of Michigan to study student writing growth in the course. If your students completed this during the first week of school, we encourage you to submit their work via BHP Score.)

   Investigation 0 is the baseline writing assessment for the course. We will use it to provide you and your students with an understanding of their ability to use a range of texts to construct an evidence-based, well-structured explanation or argument. Although they should try hard to do the best they can, they shouldn’t worry about their score – they should instead consider how they will improve their score as the school year progresses. Note: Investigation 2 is the same material as Investigation 0, except Investigation 0 is treated as a baseline.

2. **Lesson 1.3 Investigation 1 – Why do we look at things from far away and close up?**

   This Investigation introduces students to the idea of scale and to the ways we have structured Investigations. We selected the texts and the activities to help students think about the value and the challenges of shifting from faraway views to close-up views of our lives.

3. **Lesson 2.2 Investigation 2 – How and why do individuals change their minds?**

   This is the first of a series of Investigations that focus on the concept of collective learning. In this Investigation, students will be asked to write about two individuals—Copernicus and Galileo—to determine why they changed their minds about the structure of the Universe. Students are to use the documents in the Investigation Library and their knowledge of the shift from the Ptolemaic view of a geocentric Universe to the heliocentric view to develop an argument about how and why people should change their minds. This Investigation will help you assess students’ initial skills in comprehending a range of texts—pictures, primary, and secondary sources—and their ability to then use that information and documents to write an argument for when people should change their minds. We focus students’ attention on how individuals—in this case Copernicus and Galileo—use intuition, logic, and empirical evidence to
develop a new idea, one that challenges authority. In subsequent Investigations, students will consider the impact of a new idea (Unit 3), how an idea becomes accepted by the scientific community (Unit 4), and how a theory evolves (Unit 5).

4. Lesson 3.2 Investigation 3 – How can looking at the same information from different perspectives pave the way for progress?
   Students don’t always see ideas as powerful forces for change. This Investigation encourages them to consider how a new point of view can pave the way for new discoveries and create progress. The Investigation asks students to look at chronological and causal relationships among ideas, such as Lavoisier’s view of elements and Mendeleev’s periodic table, and discoveries of new elements and new uses for those elements. Extending their understanding of the content in Unit 3, students should also further develop their skills in considering source and context, while corroborating information located in different documents.

5. Lesson 4.3 Investigation 4 – When and why do people accept a theory?
   This Investigation asks students to consider how a hypothesis — sometimes a ridiculed idea — becomes a theory that is widely accepted within the scientific community. In addition, this Investigation adds a layer of knowledge about plate tectonics and the evidence that supported Wegener’s and others’ claims. The Library introduces students to texts that explain the scientific theory of continental drift and that document the scientific community’s reaction to this theory. It’s a great chance to help students understand the collective process of questioning, testing, and eventually accepting a scientific theory. Such collective testing of ideas — peer review at its best — is an important feature of collective learning. In this Investigation, it’s very important that students pay attention to when documents were published and how each exhibits the transition from skepticism to scientific confidence.

6. Lesson 5.3 Investigation 5 – How and why do theories evolve?
   This Investigation seeks to help students understand that ideas and theories grow over time by asking them to consider the scientific history of Darwin’s theory after Darwin wrote On the Origin of Species. It is like Investigation 2 and Investigation 4, since this Investigation also encourages students to look beyond the ideas of an originator of a theory (Ptolemy in Unit 2 and Wegener in Unit 4) to consider how others have supported, extended, or challenged an idea or theory.

7. Lesson 6.3 Investigation 6 – How does language make humans different?
   (NOTE: Used for research on student writing growth. If you submitted Investigation 0 to BHP Score, please submit investigation 6!)
   Many scholars have argued that our capacity to develop, use, and pass on symbolic systems has enabled humans to collect learning and develop increasingly complicated cultures. Indeed, some argue that it is language that makes us human and thus differentiates us from other animals. Other researchers call into question these assumptions, particularly those working on nonhuman animals’ natural systems of communication and those who teach primates to use symbolic language. A wide range of scholars have been engaged in studying the role that human language has played and continues to play in Big History. We use this Investigation as a second writing assessment. Students will use the documents in the Investigation Library and their knowledge of language and communication to develop an argument about whether language makes humans different from other animals.
8. **Lesson 7.2 Investigation 7 – To what extent was farming an improvement over foraging?**

   The transition from foraging (or hunter-gatherer) societies to agrarian societies is one of the most significant events in human history and an important part of the Big History narrative. People often celebrate the merits of the agricultural revolution, but some scholars are reconsidering whether this transition was actually a success. In this Investigation, students assess anthropological evidence and examine data sets as they join a contemporary debate about whether agriculture improved humans’ quality of life. It’s important for students to articulate their conjectures first, as this Investigation challenges many assumptions that we make. Students should also consider competing points of view and address them as they make their arguments.

9. **Lesson 8.3 Investigation 8 – How and why have our reaction and response to disease changed?**

   Making comparisons is an important intellectual tool for all people and especially for historians and scientists. Historians, in particular, make comparisons across time to understand what has changed and what has remained constant. This question looks at the spread of plague and our collective reaction to plague at two different times in human history—the fourteenth century and the nineteenth century. Such a comparison enables us to see clearly how we have changed. This Investigation engages students in a formal comparison as they look at the same phenomenon—plague—at two different points in time to analyze changes in our collective understanding of it.

10. **Lesson 9.3 Investigation 9 – To what extent has the Modern Revolution been a positive or negative force?**

    (NOTE: Used for research on student writing growth. If you submitted investigations 0 and 6 to BHP Score, please submit investigation 9!)

    The Modern Revolution is the most recent threshold of increasing complexity, according to David Christian. It is defined by faster rates of innovation, greater exploitation of fossil fuels, and more complex global exchange networks. Overall health and life expectancies have improved, and collective learning has broadened. But modern dangers include far deadlier weapons and human-made threats to the environment. Christian argues that each threshold makes the Universe more fragile, but also more complex and interesting. This Investigation includes the final writing assessment. Students use the documents in the Investigation Library and their own knowledge to craft an argument about whether the Modern Revolution has been a positive or a negative force. The documents provide students with information about changes in population, governments, health, inventions, and literacy.
Vocabulary

Vocabulary activities are suggested throughout the course to help your students to become familiar with the key words that represent big ideas. Understanding these words will increase comprehension of the course readings. Vocabulary has to be more than just a list of words students memorize and bemoan. These words represent big (and sometimes medium-sized) concepts critical to the unit, to the lesson, and to the individual readings and videos. And, it turns out, just memorizing the definition doesn’t always help students understand what the word means. To really get the idea of each word, you need to see the word in a variety of contexts.

For each reading and video in the course, the Big History Project provides a vocabulary report (the Unit Vocab Guide) from Text Genome. This report will highlight key concepts referenced in that asset and provide context. Throughout the course, Text Genome will provide related terms (semantic network), forms of the word (morphology), and examples, rather than the definition. These words were selected to be age appropriate and highlight key ideas from the course. Note that related terms include both synonyms and antonyms, so you might want to help your student distinguish between these.

While the Unit Vocab Guide from Text Genome is meant to be age appropriate for ninth graders, we suggest you audit the provided words before every unit and decide if those are the most relevant and important words for your students to learn in order to engage with the course material. Feel free to add to the Vocab Guide or choose other words altogether. Teachers frequently post their vocab lists and activity on Yammer, don’t hesitate to look there for alternative ideas.

There are two to three vocabulary activities in each unit. The first two activities, Word Walls and Vocab Tracking are not meant to be “one and done” activities, rather, they’re meant to be revisited daily in class. The third type are meant to be fun and engaging activities in which students can apply the words they’ve learned. We often refer to these as deeper exploration activities.

Word walls. It’s difficult to learn vocabulary when presented with a giant list all at once. Students will likely benefit more from a slow trickle of words coming in, maybe three to five per week. For each unit, we recommend starting the word wall and then trying to add to it daily. You can also have a word of the day or word of the week that students can call out any time it comes up in class (it can be a fun game). Different ways to kick off the word wall are presented in Units 1 through 5; you can use these ideas or come up with your own. For Units 6 through 10, we suggest structuring the word wall in whatever way seems to work best for your students to learn the words.

Vocab tracking. The vocab tracker is a way for students to keep their own personal glossary of unfamiliar words. Each student has their own individual base of knowledge coming into the course, so it’s important that students develop their own personal lexicon. They will rely on guidance from you about how to look up and record these words. You could have them look online, at a particular website, in classroom resource books, or in the course glossary (although, that might not be comprehensive enough).

Deeper explorations. The third set of activities are meant to be deeper explorations of the unit’s vocab words in which students work to apply the meaning of the words as part of a series of five fun activities. Feel free to use these as they are, repeating the first five activities in Units 6 through 10. Alternatively, you can repeat a few of these over and over with your students, or add your own interactive activities. What’s most important is that you establish deliberate routines and practices related to vocabulary, and you stick to them throughout the year.
1. **Lessons 1.0, 2.0, 3.0...10.0 – Word Wall**
   Understanding vocabulary is integral to students being able to access course content. This word wall activity will expose students to some of the most important words in each unit.

2. **Lesson 1.1, 2.1, 3.1...9.2, and 10.0 – Vocab Tracking**
   BHP provides a glossary of words that students need to know to be able to engage productively with the course. However, students will often encounter words in this course that are unfamiliar to them and aren’t part of the course glossary. This repeated activity will help students become familiar with a process for how to independently figure out the meaning of new words.

3. **Lesson 1.3 Vocab– Live Concept Mapping**
   Students move beyond simply defining words to applying them in this activity, and by doing so, solidify their understanding and use of the words in context.

4. **Lesson 2.2 Vocab – Word Wheel**
   Students will engage in a deeper exploration of the unit’s vocabulary. Students move beyond defining words to representing them in a variety of ways, including acting them out, drawing pictures, defining them in sentences, providing antonyms, and connecting them to course content.

5. **Lesson 3.2 Vocab – Word Relay**
   In this word relay activity, students will practice matching definitions to the appropriate words. This is a fun, active way to reinforce unit vocabulary, and will help students become even more familiar with the words they need to know to engage with the content in Unit 3.

6. **Lesson 4.3 Vocab – Word Sneak**
   In this vocab activity, students are given a stack of vocab words to “sneak” into a conversation with a fellow classmate. This is probably the most difficult—and perhaps silliest—of all the vocab activities. Students have to incorporate Unit 4 vocabulary as seamlessly as possible into a conversation. Although difficult, this is one of the best ways to use and apply new vocabulary – in context.

7. **Lesson 5.2 – What’s My Word?**
   In this activity, students are each assigned a vocab word, but they don’t know what it is. Their job is to go around the room and ask enough questions of their fellow students to try to figure out what the word is. Students will have to use their questioning and deduction skills to figure out the word. In many ways, they’re being asked to take context clues to help them figure out their word. This is a great way to determine if students really understand the words from the unit.
Vocabulary Activities

<table>
<thead>
<tr>
<th>Word/Phrase</th>
<th>Definition</th>
<th>Synonym</th>
<th>Antonym</th>
<th>Use in a sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapt (v.)</td>
<td>Make (something) suitable for a new use or purpose; modify</td>
<td>Modify, alter, change, adapt, convert, transform</td>
<td>Conform, match, misapply, misadjust, adjust</td>
<td>Any life form must adapt or interact with its physical environment.</td>
</tr>
<tr>
<td>adjective/adapt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VOCAB - WORD WHEEL**

- **Act it out**
- **Use it in a sentence**
- **Draw it**
- **Think of an antonym**
- **Explain how it relates**
- **You decide!**
- **To course content**