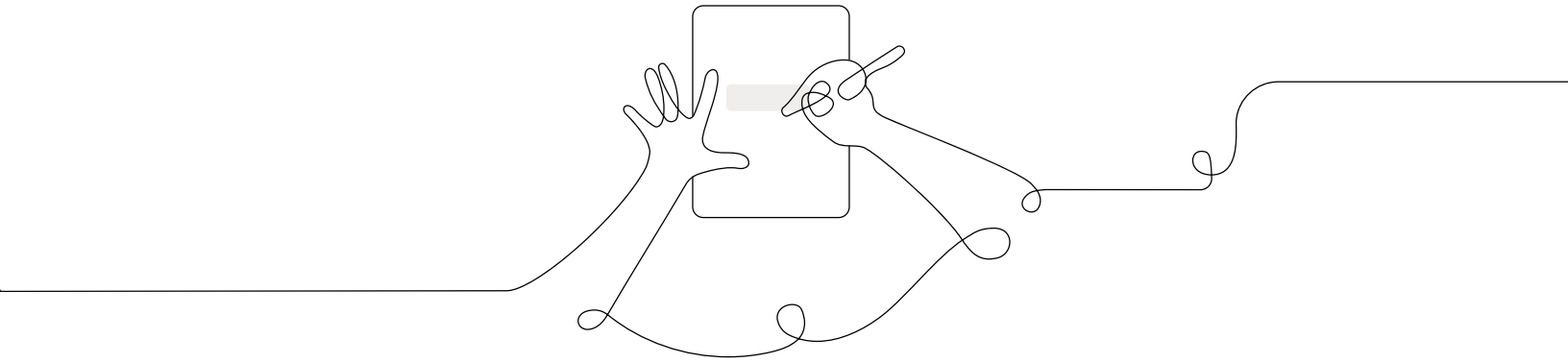
AmplifyScience

Participant Notebook

Unit Internalization and Guided Planning

Grade 7, Chemical Reactions



Unit Guide resources

Once a unit is selected, select **JUMP DOWN TO UNIT GUIDE** in order to access all unit-level resources in an Amplify Science unit.

Planning for the unit

Unit Overview	Describes what's in each unit, the rationale, and how students learn across chapters
Unit Map	Provides an overview of what students figure out in each chapter, and how they figure it out
Progress Build	Explains the learning progression of ideas students figure out in the unit
Getting Ready to Teach	Provides tips for effectively preparing to teach and teaching the unit in your classroom
Materials and Preparation	Lists materials included in the unit's kit, items to be provided by the teacher, and briefly outlines preparation requirements for each lesson
Science Background	Adult-level primer on the science content students figure out in the unit
Standards at a Glance	Lists Next Generation Science Standards (NGSS) (Performance Expectations, Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts), Common Core State Standards for English Language Arts, and Common Core State Standards for Mathematics

Teacher references

Lesson Overview Compilation	Lesson Overview of each lesson in the unit, including lesson summary, activity purposes, and timing
Standards and Goals	Lists NGSS (Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts) and CCSS (English Language Arts and Mathematics) in the unit, explains how the standards are reached
3-D Statements	Describes 3-D learning across the unit, chapters, and in individual lessons
Assessment System	Describes components of the Amplify Science Assessment System, identifies each 3-D assessment opportunity in the unit
Embedded Formative Assessments	Includes full text of formative assessments in the unit
Books in This Unit	Summarizes each unit text and explains how the text supports instruction
Apps in This Unit	Outlines functionality of digital tools and how students use them (in grades 2-5)

Printable resources

Copymaster Compilation	Compilation of all copymasters for the teacher to print and copy throughout the unit
Investigation Notebook	Digital version of the Investigation Notebook, for copying and projecting
Multi-Language Glossary	Glossary of unit vocabulary in multiple languages
Print Materials (8.5" x 11")	Digital compilation of printed cards (i.e. vocabulary cards, student card sets) provided in the kit
Print Materials (11" x 17")	Digital compilation of printed Unit Question, Chapter Questions, and Key Concepts provided in the kit

Unit Map

Why is there a mysterious reddish-brown substance in the tap water of Westfield?

In the role of student chemists, students explore how new substances are formed as they investigate a problem with the water supply in the fictional town of Westfield. They analyze a reddish-brown substance that is in the water, the iron that the town's pipes are made of, and a substance from fertilizer found to have contaminated the wells that are the source of the town's water, and use their findings to explain the source of the contaminating substance.

Chapter 1: What is the reddish-brown substance in the water?

Students figure out: The reddish-brown substance is different from the pipe substance (Fe) and from the contaminant of the water supply ($NaNO_3$). Evidence for this is that each of their properties (color and texture) is so different. In addition, the groups of atoms that make them up are different. The pipe substance is made of Fe; the contaminant is made of $NaNO_3$; and the reddish-brown substance is is made of Fe_2O_3.

How they figure it out: They make careful observations of substances, read about atom groups, and gather evidence in the Simulation about the atoms of substances found in the Westfield water.

Chapter 2: How did the rust form?

Students figure out: A chemical reaction occurred between the iron on the inside of the pipes and the sodium nitrate that was mixed in with the water flowing through the pipes. During this reaction, atoms from the pipes and sodium nitrate rearranged to form new groups of atoms resulting in the new reddish-brown substance. It has iron atoms just like the pipes, and oxygen atoms just like the contaminant, but the properties of the reddish-brown substance are different from both because the way that the atoms are grouped is different. This is true even though the iron and sodium nitrate were the substances that combined to produce the reddish-brown substance.

How they figure it out: They conduct chemical reactions and observe reactants and products both in hands-on tests and in the Simulation. They also gather evidence from a token-based physical model of a chemical reaction. They express their ideas about the Westfield water in the Modeling Tool and in writing.

Chapter 3: What was produced during the reaction between the iron pipes and the fertilizer?

Students figure out: The reddish-brown substance (Fe_2O_3) is in the water because it was formed in the reaction, but it can be filtered out. The substance $NaNO_3$ was used up in the reaction, but its atoms couldn't have been destroyed. So, another substance ($NaNO_2$) must be left behind. The NaCN can't be in the water because there were no carbon atoms in the water or the pipes, and atoms can't change types during chemical reactions.

How they figure it out: They read an article about combustion reactions that highlights conservation of atoms, and also gather related evidence by analyzing reactions in the Sim. They return to the token physical model. They analyze evidence from Westfield and express their conclusions by writing and creating a visual model.

Chapter 4: Students apply what they learn to a new question—Who might have used the unknown substance to steal the diamond?

Students solve a fictional theft. First, students identify a substance that jewelry thieves used to burn through a glass jewelry case. Next, they analyze evidence about substances that three different suspects had in order to solve who might have created the mystery substance through a chemical reaction. They engage in oral argumentation in a student-led discourse routine called a Science Seminar and then write final arguments.

Progress Build

Each Amplify Science Middle School unit is structured around a unit-specific learning progression, which we call the Progress Build. The unit's Progress Build describes the way students' explanatory understanding of the unit's focal phenomena is likely to develop and deepen over the course of a unit. It is an important tool in understanding the structure of a unit and in supporting students' learning: it organizes the sequence of instruction (generally, each level of the Progress Build corresponds to a chapter), defines the focus of assessments, and grounds the inferences about student learning progress that guide suggested instructional adjustments and differentiation. By aligning instruction and assessment to the Progress Build (and therefore to each other), evidence about how student understanding is developing may be used during the course of the unit to support students and modify instruction in an informed way.

The *Chemical Reactions* Progress Build consists of three levels of science understanding. To support a growth model for student learning progress, each level encompasses all of the ideas of prior levels and represents an explanatory account of unit phenomena, with the sophistication of that account increasing as the levels increase. At each level, students add new ideas and integrate them into a progressively deeper understanding of the relationship between properties, groups of repeating atoms, and how substances are formed during chemical reactions. Since the Progress Build reflects an increasingly complex yet integrated explanation, we represent it below by including the new ideas for each level in bold.

Prior knowledge (preconceptions): At the start of the *Chemical Reactions* unit, middle school students will likely have some everyday experience with substances appearing to change or turn into new substances. For example, they may have experience with processes, such as burning, cooking, rusting, and related physical changes, such as the dissolving of solid substances. Middle school students will have already been introduced to the idea that physical substances around us are made of matter that can be subdivided into particles that are too small to see, but they may not yet know that molecules are composed of even smaller units called atoms. From the *Phase Change* unit, students will be familiar with the idea of particulate motion. They will have learned that molecules move in relation to one another and, thus, they will have a basis for extending this idea to the motion of atoms. This experience and prior knowledge about matter and molecules can be built upon and refined, which the *Chemical Reactions* Progress Build and unit structure are designed to do.

Progress Build Level 1: Different substances have different properties. This is because every substance is made of a unique group of a certain type and number of atoms. This group repeats to make up the substance.

Different substances have different sets of properties that can be observed, such as color, smell, texture, phase, and boiling point, all of which can be compared to determine if substances are different. All substances are made of atoms in groups that repeat to form the substance. Differences in the type and number of atoms of repeating groups distinguish substances from one another.

Progress Build Level 2: During chemical reactions, atoms that make up the starting substance(s) rearrange to form different groups of atoms that repeat, resulting in different substances(s).

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change into one or more different substances (products). The atoms of the starting substance rearrange to form different repeating group(s) of atoms without changing type. Because the products have a different repeating group of atoms than the reactants, they will have a different set of properties from the reactants.

Progress Build Level 3: During chemical reactions, the ending substances are formed from the same type and number of atoms that made up the starting substances because atoms cannot be created or destroyed.

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Guided Unit Internalization Planner

Unit-level internalization

Unit title:

What is the phenomenon students are investigating in your unit?

Unit Question:

Student role:

By the end of the unit, students figure out ...

What science ideas do students need to figure out in order to explain the phenomenon?

Unit Guide Document

Unit Map

Lesson Overview Compilation

Progress Buld

Guided Unit Internalization

Part 1: Unit-level internalization

Unit title: Chemical Reactions

What is the phenomenon students are investigating in your unit?

There is a mysterious reddish-brown substance in Westfield's water.

Unit Question:

How do new substances form?

Student role:

Student chemists

By the end of the unit, students figure out ...

The reddish-brown substance in the water is rust. It formed because of a chemical reaction between the iron pipes and a fertilizer that has contaminated the wells in Westfield. During the chemical reaction, some of the atoms in the pipes and the fertilizer rearranged to form new groups of atoms resulting in the reddish-brown substance. Because of conservation of matter, the atoms that did not rearrange to form the rust must have rearranged to form another product, too.

What science ideas do students need to figure out in order to explain the phenomenon?

Different substances have different properties. This is because every substance is made of a unique group of a certain type and number of atoms. This group repeats to make up the substance. During chemical reactions, atoms that make up the starting substance(s) rearrange to form different groups of atoms that repeat, resulting in different substances(s). During chemical reactions, the ending substances are formed from the same type and number of atoms that made up the starting substances because atoms cannot be created or destroyed.

Chemical Reactions @Home Lesson Index

The Amplify Science@Home Units are versions of Amplify Science units adapted for use in a remote learning or hybrid learning situation. To help you plan instruction, below we have listed the @Home Lessons alongside the Amplify Science unit's Lesson(s) from which they come.

Index: @Home Unit Lessons and corresponding *Chemical Reactions* Lessons

@Home Lesson	**Adapted from Amplify Science *Chemical Reactions***
@Home Lesson 1	Lessons 1.2 and 1.3
@Home Lesson 2	Lesson 1.4
@Home Lesson 3	Lesson 1.5
@Home Lesson 4	Lesson 1.6
@Home Lesson 5	Lesson 2.1
@Home Lesson 6	Lesson 2.2
@Home Lesson 7	Lesson 2.3
@Home Lesson 8	Lesson 3.1
@Home Lesson 9	Lesson 3.2
@Home Lesson 10	Lessons 3.3 and 3.4
@Home Lesson 11	Lessons 4.1 and 4.2
@Home Lesson 12	Lesson 4.2
@Home Lesson 13	Lesson 4.3
@Home Lesson 14	Lesson 4.4

The student sheets and packets used in @Home Units are original or modified versions of the unit's Amplify Science Investigation Notebook pages or copymasters. When necessary, new pages were also created. In the following table we have outlined the @Home Student Sheet and Packet page titles and their origins.

Index: @Home Student Sheets/Packets and corresponding *Chemical Reactions* materials

@Home Lesson	Student Sheet/Packet page title	Investigation Notebook page, copymaster, or print material	Possible Responses
1	Investigating Substances	Modified, based on Pgs. 12–13	Lesson 1.2, Activity 3, Part 2, Possible Responses
1	Comparing Different Substances at Home	Modified, based on Lesson 1.2 copymaster	Lesson 1.2, Activity 5, Possible Responses
1	*Chemical Reactions* Glossary	Lesson 1.2 Digital Resource	N/A
2	Article "Atomic Zoom-In"	Lesson 1.4 Digital Resource	N/A
3	Investigating Substances in the Sim	New; Modified, based on Pgs. 22–23	Lesson 1.5, Activity 2, Part 3, Possible Responses
3	Second Read of "Atomic Zoom-In"	Pg. 24	Lesson 1.5, Activity 3, Possible Responses
3	Explaining Properties at Home	Modified, based on Lesson 1.5 copymaster	N/A
4	Identifying the Reddish-Brown Substance	Modified, based on Pgs. 31–32	Lesson 1.6, Activity 3, Possible Responses
4	Chapter 1 @Home Science Wall	New, based on Classroom Wall materials	N/A
5	Investigating Substance Changes	Modified, based on Pg. 39	Lesson 2.1, Activity 2, Part 3, Possible Responses
5	Mixing Substances in the Sim	Modified, based on Pgs. 40–41	Lesson 2.1, Activity 3, Part 2 Possible Responses
6	Finding Chemical Reactions	Modified, based on Pg. 46	Lesson 2.2, Activity 2, Possible Responses
6	Explaining Chemical Reactions	Modified, based on Pg. 47; Print Materials	Lesson 2.2, Activity 3, Possible Responses
6	Paper Atom Model Cut-Outs	New	N/A

7	Testing the Claims	Modified, based on Pg. 51	Lesson 2.3, Activity 2, Possible Responses
7	Paper Atom Model Graphic Organizer	New	N/A
7	Modeling How the Rust Formed	Modified, based on Pgs. 52–53	Lesson 2.3, Activity 3, Possible Responses
7	Chapter 2 @Home Science Wall	New, based on Classroom Wall materials	N/A
8	Article “What Happens When Fuels Burn?”	Lesson 3.1 Digital Resource	N/A
9	Burning Fuel in the Sim	Modified, based on Pg. 86	Lesson 3.2, Activity 2, Possible Responses
9	Second Read of “What Happens When Fuels Burn?” Article	Modified, based on Pgs. 87–88	Lesson 3.2, Activity 3, Possible Responses
10	Identifying the Other Product	Modified, based on Pg. 99	Lesson 3.4, Activity 2, Possible Responses
10	Modeling the Products of the Reaction	Modified, based on Pg. 100–101	Lesson 3.4, Activity 3, Possible Responses
10	Chapter 3 @Home Science Wall	New, based on Classroom Wall materials	N/A
11	Identifying the Unknown Substance	Modified, based on Pgs. 110–111	Lesson 4.1, Activity 2, Parts 2 and 3, Possible Responses
11	Modeling Possible Reactions	Modified, based on Pgs. 116–117; Lesson 4.2 copymaster	Lesson 4.2, Activity 2, Possible Responses
12	Science Seminar Evidence Cards	Lesson 4.2 copymaster	N/A
12	Analyzing New Evidence	Pg. 119	N/A
12	Evidence Sorting Grid	Pg. 120	N/A
12	Identifying the Primary Suspect	Modified, based on Pgs. 121–122	Lesson 4.2, Activity 4, Possible Responses
13	Argumentation Sentence Starters	Print material	N/A
13	Writing a Scientific Argument	Lesson 4.3 copymaster	Lesson 4.3, Activity 4. Possible Responses

14	Written-Response Question #1	Lesson 4.4 Digital Resources, End-of-Unit Assessment copymaster	Lesson 4.4, Activity 2, Possible Responses
14	Written-Response Question #2	Lesson 4.4 Digital Resources, End-of-Unit Assessment copymaster	Lesson 4.4, Activity 3, Possible Responses

Multi-day planning, including planning for differentiation and evidence of student work

Day@Home Lesson 1	
Minutes for science: 15 min.	**Minutes for science:** 30 min
Instructional format: ☒ Asynchronous ☐ Synchronous	**Instructional format:** ☐ Asynchronous ☒ Synchronous
Lesson or part of lesson: Introducing the poisonous newts (slides 1-10)	**Lesson or part of lesson:** Summarize the introduction to the unit, and make observations abut the properties of different substances
Mode of instruction: ☒ Preview ☐ Review ☐ Teach full lesson live ☐ Teach using synchronous suggestions ☒ Students work independently using: ☐ Printed @Home Slides ☒ Digital @Home Slides ☐ @Home Videos	**Mode of instruction:** ☐ Preview ☐ Review ☐ Teach full lesson live ☒ Teach using synchronous suggestions ☐ Students work independently using: ☐ Printed @Home Slides ☐ Digital @Home Slides ☐ @Home Videos
Students will... View slides and the video that introduces students to the unit. Jot down initial ideas about their reactions to the video.	**Teacher will...** Assign slides 1-10 in Schoology and provide direction for students to jot down their ideas about the unit problem to share when the class meets together.
Students will... Work in groups of three to four to watch the video showing the four samples and record properties of each. Then share as a class. Next, You will observe substances that you find at home and compare the properties of each substance. (this could be assigned as homework)	**Teacher will...** Revisit the unit question on slide 10 and the claims on slide 11 & 12 Present slides 13-27 and slides 28-39 giving students an opportunity to observe the properties of different substances,. Go over slides 40-42 where students observe properties of substances found at home

Look at the *Students will* columns. What are students working in the lesson(s) that you could collect, review, or provide feedback on?
See Some Types of Written Work in Amplify Science to the right for guidance.

If there isn't a work product listed above, do you want to add one? Make notes below.

Asynchronous: students jot down their initial ideas

Synchronous: record observations while engaging with the simulation and as they explore the butterfly populations

Some Types of Written Work in Amplify Science

- Daily written reflections
- Homework tasks
- Investigation notebook pages
- Written explanations (typically at the end of Chapter)
- Diagrams
- Recording pages for Sim uses, investigations, etc

How will students submit this work product to you?
See the Completing and Submitting Written Work tables to the right for guidance on how students can complete and submit work.

Asynchronous: students jot initial ideas on paper or digitally to bring with them to the asynchronous lesson

Synchronous: Students will use the student sheets to record their observations while engaging with the simulation and submit through Schoology.

Completing Written Work	Submitting Written Work
• Plain paper and pencil (videos include prompts for setup) • (6-8) Student platform • Investigation Notebook • Record video or audio file describing work/answering prompt • Teacher-created digital format (Google Classroom, etc)	• Take a picture with a smartphone and email or text to teacher • Through teacher-created digital format • During in-school time (hybrid model) or lunch/materials pick-up times • (6-8) Hand-in button on student platform

How will you differentiate this lesson for diverse learners? (Navigate to the lesson level on the standard Amplify Science platform and click on differentiation in the left menu.)

Supports:

- Encourage students to engage in student-to-student discussion
- Provide students with the Multi-Language Glossary where appropriate, add images
- Leverage primary language for discussions
- Teacher modeling of observing the properties of different substances
- Strategic partnering

Extension: Students can discuss with a partner what tools would be needed to make additional observations of the substances. Such tools might include a Bunsen burner, a stove, or, a thermometer.

Multi-day planning, including planning for differentiation and evidence of student work

<table>
<tr><td colspan="4">Day _____</td></tr>
<tr><td colspan="2">Minutes for science: _____

Instructional format:
❑ Asynchronous
❑ Synchronous</td><td colspan="2">Minutes for science: _____

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Mode of instruction:
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Teacher Overview - Chapter 1

Overview of @Home Lessons 2-5

@Home Lesson 2: GROUP 1

- Students watch a video introducing the idea that all matter is made up of atoms. Students read the article “Atomic Zoom-In,” which introduces the idea that substances have different properties because they are made up of different atoms. Pairs discuss the article and their annotation.

@Home Lesson 3: GROUP 2

- Students compare substances with similar atoms in the Sim to gather evidence that they are or are not the same substance. Students return to the “Atomic Zoom-In” article to gather evidence about the investigation question. Students pick two substances they have at home and explain to someone in their household why they have different properties.

@Home Lesson 4: GROUP 3

- Students discuss evidence about the reddish-brown substance and use the evidence to support a claim about its identity. Students review the @Home Science Wall, including the Chapter 1 Question, key concepts, and vocabulary. Students write an argument to the people of Westfield explaining what the reddish-brown substance is.

@Home Lesson 5: GROUP 4

- Students watch a video of substances being mixed in order to investigate substances can change into new substances. Students mix substances in the Sim to get atomic-scale evidence about whether substances can change into new substances. Students reflect on the Investigation Question by discussing evidence from the video and the Sim with a partner.

Suggestions for synchronous time

The following are some ideas for making the most of synchronous time with your students. As a general rule, the best way to use your synchronous time is to provide students opportunities to talk to one another, or to observe or visualize things they could not do independently.

Online synchronous time	Notes
Online discussions: It's worthwhile to establish norms and routines for online discussions in science to ensure equity of voice, turn-taking, etc. **Digital tool demonstrations:** You can share your screen and demonstrate, or invite your students to share their screen and think-aloud as they use a Simulation or other digital tool. **Interactive read-alouds**: Screen share a digital book or article, and pause to ask questions and invite discussion as you would in the classroom. **Shared Writing:** This is a great opportunity for a collaborative document that all your students can contribute to. **Co-constructed class charts:** You can create digital charts, or create physical charts in your home with student input.	

Questioning Strategies for Grades 6–8

Overview of the Role of Open-Ended Questioning

Repeated opportunities for students to listen to and speak with others are essential for promoting deep thinking and learning in science. Meaningful teacher-initiated questions create a rich context for promoting open-ended student dialogue and discussion. The *Science Framework for California Public Schools* explains that "Simply providing opportunities to talk is not enough. Effective questioning can scaffold student thinking" (*California Science Framework*, 2016, Chapter 11, p. 21). The Framework suggests that "Teacher-initiated questions are key to helping students expand their communication, reasoning, arguments, and representation of ideas in science" (*California Science Framework*, 2016, Chapter 11, p. 21). The types of questions that teachers pose are instrumental in supporting student understanding. The Framework calls for more open-ended teacher questioning that "prompts and facilitates students' discourse and thinking" and less teacher questioning that prompts "students to seek a confirmatory right answer" (*California Science Framework*, 2016, Chapter 11, p. 6).

The Amplify Science Teacher's Guide is infused with opportunities for students to discuss their developing ideas in response to open-ended prompts. Questions to promote student thinking and discussion are purposefully built into the Teacher's Guide instructional steps and Teacher Support notes that surround all our hands-on and reading activities. In addition, all units include discourse routines (e.g., Shared Listening, Think-Draw-Pair-Share, Write and Share, Word Relationships) that provide opportunities for students to use focal unit vocabulary as they think and talk with partners and the class about their understanding of key science content and practices. Many of the On-the-Fly Assessment suggestions provided throughout each unit offer open-ended follow-up questions that can be used to probe student thinking and formatively assess student understanding of the content. In addition, each unit includes multiple opportunities for students to respond to open-ended questions through additional modalities (e.g., in writing, with diagrams, through a kinesthetic model).

While the prompts embedded in each of the opportunities mentioned above provide fertile ground for student discussion, continued use of flexible, open-ended questions is invaluable for assessing students' knowledge and skills, promoting student-to-student discourse, and guiding student learning. A collection of grade-appropriate questions follows that can be used for these purposes. You will also find a list of activity types included within the Amplify Science curriculum that are particularly conducive to the use of these questions. You may choose to print out these questions and activity types for reference throughout your instruction.

Open-Ended Questions to Facilitate Student Thinking and Discourse

Questions to assess students' knowledge and skills:

- Can you explain how you decided that this claim is the best one?
- Can you explain why X happened?
- Would you (and your partner) explain the steps you went through (to create the model you made)?
- How do you know X?
- If XXX were changed, how would that change YYY?

Questions to promote student-to-student discourse:

- Do you agree or disagree with (that idea)? Why?
- Can you add evidence to support (student name)'s thinking?
- Do you have evidence to go against (refute) (that idea)?
- Does anyone else have something to add to the conversation?
- We are working together right now to figure out/better understand X. Can anyone start us off with some thinking about this (question, problem, idea)?
- Can you explain X, using science vocabulary words XX and YY (from the unit)?
- What claim does this evidence support? How do you know?
- Can you explain why this evidence is important?
- Can you explain why this evidence does not support Claim Y?
- How does your idea relate to what others have said today?

Questions to guide student learning:

- I hear what you are saying (or I read your question/response). Can you explain your thinking to me a bit more so I can understand your idea?
- Some students have said that they think X happened. Can those students work together to find more evidence to support this idea?
- You are claiming that Y happened/explains this phenomenon.
    - Can you find more evidence to support your claim? Please go back to these resources (e.g., simulation, article) and see if you can find more evidence.
    - Which evidence can you use to make a stronger argument?
- How can we investigate why this happened?
- What did you notice? What else do we need to figure out?

Activity Types Within the Amplify Science Curriculum That Are Especially Suited for Additional Teacher Questioning

The activity types listed below are student-centered and often contain prompts for pairs or small groups of students to use to discuss content or to vet evidence together. As you circulate through the classroom during these activities, you can use the open-ended questions to assess students' knowledge and skills, promote student-to-student discourse, and guide student learning.

- Hands-on activities
- Discourse routines (e.g., Write and Share, Word Relationships)
- Discussion after reading
- Paired Modeling Tool activities
- Paired Reasoning Tool activities
- Paired Simulation activities
- Evidence Card sorts
- Evidence Gradient card sorts
- Discussion of evidence in preparation for a Science Seminar (discussing which claim the evidence supports and why, sorting evidence in pairs)
- Science Seminar

Amplify Science@Home resources reference

Use this guide to keep track of the different resources available for remote and hybrid learning.

Instructional materials: Click Remote and hybrid learning resources, then select your grade level from the dropdown menu. Select your unit.	
@Home Unit resources: These will appear when you select your unit.	
Teacher Overview	General information for teaching with @Home Units, planning information, chapter and lesson outlines
Lesson Index	Lists the original Amplify Science lessons associated with each @Home lesson, and the Investigation Notebook pages, copymasters, and print materials associated with the @Home Unit Student Sheets
Family Overview	Information to send home to families to help them support students with remote learning
Student lesson materials for @Home Units	Printable or digital lessons condensed to be about 30 minutes long. You can access compilations of all student materials for your unit, or select from individual lessons.
@Home Video resources: After selecting your grade level and unit, select the @Home Videos tab below your unit title.	
@Home Video links	Links to video lessons that include all activities from the original units. Lesson playlists are on YouTube, and they autoplay in a playlist form.
Additional remote and hybrid instructional materials: These can be accessed from the tabs below your unit title.	
Hands-on investigations support	Videos of every unit's hands-on activities (note, these videos also appear in the student lesson materials).
Read-aloud videos	Link to a YouTube playlist of read-aloud videos of all books in your unit.
Orientation and Tutorials: Click Remote and hybrid learning resources, then select your grade from the dropdown menu. Click Orientation and Tutorials. You'll not only find videos to help you use the resources, but also videos you can share with students and caregivers.	

Notes