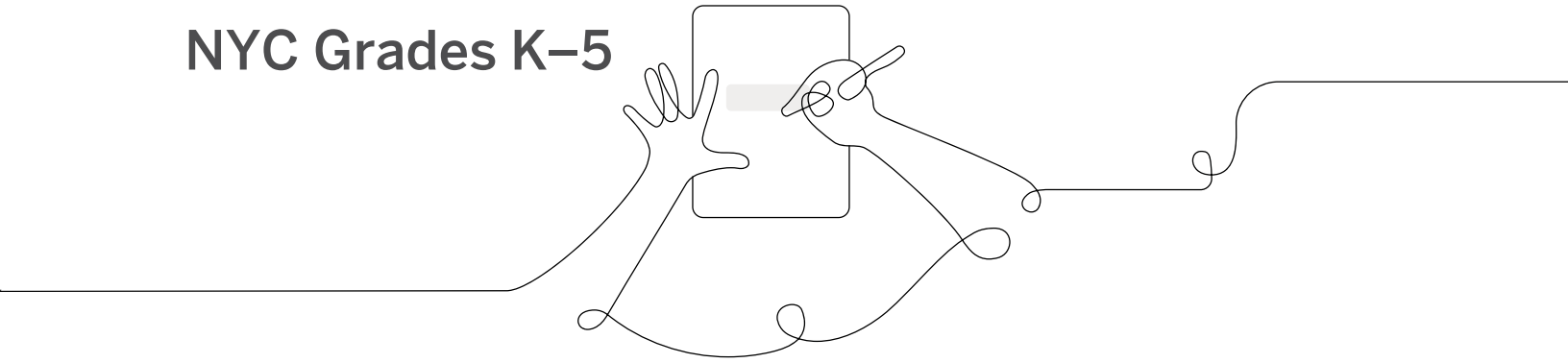
AmplifyScience

Participant Notebook

The Amplify Science Approach: Practicing Multiple-Modalities & 3-Dimensional Learning

NYC Grades K–5



Welcome to the workshop

This Participant Notebook will guide and support the work we do together in this strengthening workshop. It will also be a valuable resource for self-study following the workshop.

Grades K - 5

Amplify Science

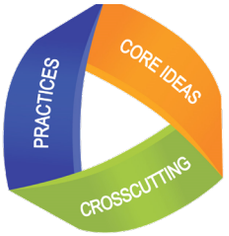
@Home Resources Scavenger Hunt

Directions: Use this scavenger hunt to practice navigating the Program Hub and decide which @Home Resources best supports your current instructional needs.

Part 1: @Home Units Task	**Notes**
Navigate to the @Home Unit resources. ● Select Remote learning: Amplify Science @Home ● Select Grade-level resources → Grade-level → Unit	
How long is each @Home lesson? Hint: Teacher Overview	
Which types of activities are recommended for synchronous and in-person learning? Hint: Teacher Overview	
How many @Home lessons are in Chapter 1 of your unit? Hint: Teacher Overview	
In which lesson is your unit's phenomenon introduced? Hint: Teacher Overview	
How does the @Home Packet for Lesson 1 differ from the @Home Slides for that same lesson? Hint: Student Materials	
When would you use @Home Student Sheets? Hint: Teacher Overview	
How does the @Home Family Overview support caregivers? Hint: Family Overview	

Part 2: @Home Videos Task	**Notes**
Navigate to the @Home Unit resources. ● Select Remote learning: Amplify Science @Home ● Select Grade-level resources → Grade-level → Unit ● Scroll down to the @Home Video Playlist ● Select the lesson in which the problem or phenomenon is introduced	
Describe the phenomenon (or observable event, something that students can see or experience) in your unit.	

NYSSLS reference sheet



3-D learning engages students in using scientific and engineering practices and applying crosscutting concepts as tools to develop understanding of and solve challenging problems related to disciplinary core ideas.

Science and Engineering Practices

1. **Asking Questions and Defining Problems**
2. **Developing and Using Models**
3. **Planning and Carrying Out Investigations**
4. **Analyzing and Interpreting Data**
5. **Using Mathematics and Computational Thinking**
6. **Constructing Explanations and Designing Solutions**
7. **Engaging in Argument from Evidence**
8. **Obtaining, Evaluating, and Communicating Information**

Disciplinary Core Ideas

Earth and Space Sciences:
ESS1: Earth's Place in the Universe
ESS2: Earth's Systems
ESS3: Earth and Human Activity

Life Sciences:
LS1: From Molecules to Organisms
LS2: Ecosystems
LS3: Heredity
LS4: Biological Evolution

Physical Sciences:
PS1: Matter and its Interactions
PS2: Motion and Stability
PS3: Energy
PS4: Waves and their Applications

Engineering, Technology and the Applications of Science:
ETS1: Engineering Design
ETS2: Links among Engineering Technology, Science and Society

Crosscutting Concepts

1. **Patterns**
2. **Cause and Effect**
3. **Scale, Proportion, and Quantity**
4. **Systems and System Models**
5. **Energy and Matter**
6. **Structure and Function**
7. **Stability and Change**

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Amplify Science multimodal approach & 3-dimensional learning

Coherent activity sequence analysis

In Amplify Science units, students figure out **phenomena** by using s**cience and engineering practices**. They gather evidence from **multiple sources** and make explanations and arguments through **multiple modalities**: doing, talking, reading, writing, and visualizing. While we have retained this core approach in the **@Home Lessons**, enacting it at home will require **adaptations**.

Based on the **coherent activity sequence** you've just observed, circle the modalities and science & engineering practices that were utilized in order to promote an **authentic and purposeful context for inquiry**:

Multiple Modalities	
Doing? ❒ Notes:	Talking? ❒ Notes:
Writing? ❒ Notes:	Reading? ❒ Notes:

Science & Engineering Practices	
Asking questions and defining problems? ❒ Notes:	Developing and using models? ❒ Notes:
Analyzing and Interpreting data? ❒ Notes:	Using mathematics and computational thinking? ❒ Notes:
Engaging in argument from evidence? ❒ Notes:	Obtaining, evaluating, and communicating information? ❒ Notes:
Planning and carrying out investigations? ❒ Notes:	Constructing explanations and designing solutions? ❒ Notes:

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.

In-person synchronous time	Online synchronous time
Discourse routines: Use the formalized student talk opportunities like Think-Pair-Share, Shared Listening, Thought Swap, Evidence Circles, etc., or establish your own routines. **Class discussions:** These could include class discussions from the Instructional Guide or other discussion opportunities. **Hands-on investigations:** While you may want to avoid students touching materials, teacher demonstrations are a good option. Consider running a demonstration multiple times with small groups, so students can see close-up. **Physical modeling activities:** These include kinesthetic body models, like acting out a phenomenon or creating a full-class scale model.	**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.

Additional Amplify Resources

Program Guide

Additional insight into the program's structure, intent, philosophies, supports, and flexibility.

my.amplify.com/programguide

California Edition:
http://amplify.com/science/california/review

Louisiana Edition:
https://my.amplify.com/programguide/content/louisiana/welcome/elementary-school/

Amplify Help

Frequently updated compilation of articles with advice and answers from the Amplify team.

my.amplify.com/help

Family Resources Site

https://amplify.com/amplify-science-family-resource-intro/

Amplify Support

Contact the Amplify support team for information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-7PM EST.

Email: scihelp@amplify.com

Phone: 800-823-1969

Or, reach Amplify Chat by clicking the  icon at the bottom right of the digital Teacher's Guide.

When contacting the support team:

- Identify yourself as an Amplify Science user.
- Note the unit you are teaching.
- Note the type of device you are using (Chromebook, iPad, Windows, laptop).
- Note the web browser you are using (Chrome or Safari).
- Include a screenshot of the problem, if possible. Copy your district or site IT contact on emails.