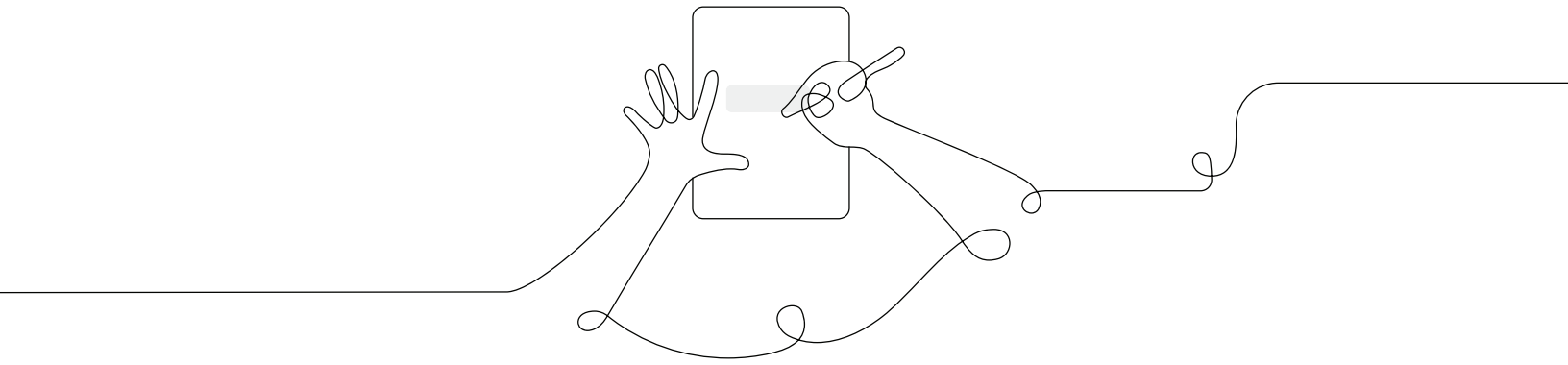
AmplifyScience

Professional Learning Workshop

Reaching ALL Learners: Utilizing Program Assessments Effectively

Grades K-1



Reaching ALL Learners: Utilizing Program Assessments Effectively

Workshop Agenda

- **Welcome**
- **K-5 Assessment System**
    - **Data collection strategies**
- **Unpacking On-the-Fly Assessments**
    - **Look for/now what**
    - **Embedded differentiation supports**
- **Closing**

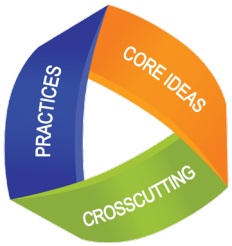
Demo account for your workshop:

URL: **learning.amplify.com** (Log in with Amplify)

Temporary account: _____**@tryamplify.net**

Password: **AmplifyNumber1**

Three dimensions of NGSS reference



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**

Elementary school course curriculum structure

Grade K

- Needs of Plants and Animals
- Pushes and Pulls
- Sunlight and Weather

Grade 1

- Animal and Plant Defenses
- Light and Sound
- Spinning Earth

Grade 2

- Plant and Animal Relationships
- Properties of Materials
- Changing Landforms

Grade 3

- Balancing Forces
- Inheritance and Traits
- Environments and Survival
- Weather and Climate

Grade 4

- Energy Conversions
- Vision and Light
- Earth's Features
- Waves, Energy, and Information

Grade 5

- Patterns of Earth and Sky
- Modeling Matter
- The Earth System
- Ecosystem Restoration

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authored by THE LAWRENCE HALL OF SCIENCE UNIVERSITY OF CALIFORNIA, BERKELEY

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 NGSS Standards (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) standards 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 Chapter Questions and key concepts provided in the kit

Assessment System reference (grades K-1)

Assessment type	Description	Student experience	Teacher resources
Pre-Unit Assessment	Formative, 3-D performance assessment meant to gauge students' initial understanding and pre-conceptions about core ideas in the unit	• Full-class teacher-led discussion, supported by visual cues	• Assessment Guide (available in Digital Resources)
End-of-Unit Assessment	Summative, 3-D performance assessment to evaluate students' understanding of core ideas in the Progress Build	• Full-class teacher-led discussion, supported by visual cues	• Rubric and Possible Responses in Assessment Guide (available in Digital Resources)
Critical Juncture Assessments	Embedded formative assessments for assessing students' progress along the Progress Build	• Activities are embedded into existing instructional activities leveraged for assessment opportunities – often student-to-student discussions, investigations, or modeling activities	• Full text of assessment includes "Assess Understanding" section and "Tailor Instruction" suggestions accessible in Instructional Guide by clicking the hummingbird icon • All Critical Juncture Assessments are included in Reference: Embedded Formative Assessments (available in the Unit Guide) • Clipboard Assessment Tool includes tailored sets of questions and the specific activities that present an opportunity to ask those questions. Also included is space to write notes about students' ideas. • Augmenting Instruction notes (accessible in Teacher Support tab) provide additional suggestions for supplemental instruction at the class, group, and student level
On-the-Fly Assessments	Embedded formative assessments for noting students' progress with one or more of the following: science disciplinary core ideas, science and engineering practices, crosscutting concepts, sense-making strategies, and collaborative science work	• Activities are embedded into existing instructional activities, leveraged for assessment opportunities. Artifacts can include full-class or student-to-student discussion, kinesthetic activities, notebook pages, etc.	• Full text of assessment includes what to "Look for" and "Now What?" instructional suggestions accessible in Instructional Guide by clicking the hummingbird icon • All On-the-Fly Assessments are included in Reference: Embedded Formative Assessments (available in the Unit Guide) • Clipboard Assessment Tool includes tailored sets of questions and the specific activities that present an opportunity to ask those questions. Also included is space to write notes about students' ideas.

Assessment System reference (grades K-1) cont.

Assessment type	Description	Student experience	Teacher resources
Student Self-Assessments	Opportunity for students to reflect on whether they understand or don't yet understand the core concepts from the unit	• Reflection prompts through teacher-led discussion and partner talk • Provided at or near the end of each chapter	• Information about Student Self-Assessments in Reference: Assessment System (in Unit Overview) • Teacher Support Notes accessible in Instructional Guide by clicking the Teacher Support tab • Discussion prompts in the Instructional Guide
Investigation Assessments	Summative, 3-D performance assessment to evaluate students' performance of the science and engineering practices of Planning and Carrying Out Investigations and Analyzing and Interpreting Data, as well as their application of disciplinary core ideas and crosscutting concepts	• Prompts for planning investigation and recording results in the Investigation Notebook or a copymaster (available in Digital Resources). Additional support and spoken teacher prompts in K-1. • Physical materials for conducting investigation	• Rubrics and Possible Responses in Assessment Guide (available in Digital Resources) • Possible Responses also accessible in Instructional Guide by clicking the Possible Responses tab
Portfolio Assessments	Opportunity for students to compile and reflect on key work products collected at the end of each unit. Final portfolio compilation occurs at the end of the school year and allows students to select and reflect on work products which they feel best demonstrate their growth in understanding throughout the year	• Compilation of work products that show growth over the course of the year • Reflection on chosen work products • Rubrics for evaluating work products (available in Program Guide → *Assessments → Additional Assessment Resources*)	• Assessment Rubrics (available in Program Guide → *Assessments → Additional Assessment Resources*) • Guidance for communicating to parents about student progress (available in Program Guide → *Assessments → Additional Assessment Resources*)

Using an Embedded Formative Assessment

Use this graphic organizer to plan for an upcoming assessment in the unit you're currently teaching.

<table>
<tr><td colspan="5">Situating the assessment in the Progress Build: Which level of the Progress Build are students working on during this assessment opportunity?</td></tr>
<tr><td colspan="5">❑ Level 1 Notes:
❑ Level 2
❑ Level 3</td></tr>
<tr><td colspan="2">Planning to collect data</td><td colspan="2">Analyzing student data</td><td>Taking action based on student data</td></tr>
<tr><td>How will I collect data?</td><td>Which misconception? What will evidence look like?</td><td>Which students?</td><td>When?</td><td>How?</td></tr>
<tr><td rowspan="2"></td><td>❑ Key Concept
❑ Practice
❑ Crosscutting Concept

Notes:</td><td></td><td>❑ In the moment
❑ In upcoming activity
❑ Outside of lesson

Notes:</td><td>❑ Keep an eye on certain students
❑ Provide additional instruction
❑ Revisit an activity

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Notes:</td></tr>
</table>

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[On-The- Fly Status of the Class Data Organization Tool]

Teacher: _____ **Grade Level** : _____ **Date:** _____

Unit Name: _____ **Chapter** _____ **Lesson** _____

Directions:

1. Navigate to the lesson.
2. Select the embedded formative assessment icon and read the *Look For* and *Now What*.
3. Determine the *Look Fors* for the embedded formative assessment:
    a. Look for 1:
    b. Look for 2:
    c. Look for 3:
    d. Look for 4:
    e. Look for 5:
4. Use the chart below to collect student data based on the *Look For* evidence described above.
5. Place a plus (+) if student demonstrates a strong understanding of the *Look For*, a backslash (/) if student demonstrates some understanding and a delta (Δ) if student demonstrates no understanding.
6. After data collection is complete, refer to the *Now What* for ideas on how to respond to your students' needs.

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[On-The- Fly Status of the Class Data Organization Tool]

Student Name	Look For # 1	Look For # 2	Look For # 3	Look For # 4	Look For # 5	Notes

Analyzing and taking action based on student data

Use this graphic organizer to analyze the data from observations of Modeling the Relationship Between Atmosphere and Climate and to reflect on how you might adjust and/or supplement instruction based on the data.

Analyzing student data: refer to the Look for section of the Lesson 1.5 assessment and refer to your observation notes.		**Taking action based on student data:** refer to the Now what section of the 1.5 assessment and consider how you might adjust instruction in your classroom.	
Which misconception?	**Which students?**	**When?**	**How?**
❏ Key Concept ❏ Practice ❏ Crosscutting Concept Notes:		❏ In the moment ❏ In upcoming activity ❏ Outside of lesson Notes:	❏ Keep an eye on certain students ❏ Provide additional instruction ❏ Revisit an activity Notes:
❏ Key Concept ❏ Practice ❏ Crosscutting Concept Notes:		❏ In the moment ❏ In upcoming activity ❏ Outside of lesson Notes:	❏ Keep an eye on certain students ❏ Provide additional instruction / support ❏ Revisit an activity Notes:

Keeping Diverse Learner Needs in Mind

Reflection Tool

Unit Name: _____ Chapter #: _____ Lesson #: _____

Cirlce the Selected Learner Profile: A B C D

Directions: Reflect on each lesson activity and jot down strategies to support the student you selected from the Learner Profile.

Lesson Activity	My Student May be **Challenged by...**	Suggestions from the **Differentiation Brief**	Suggestions from my own **Teacher Toolkit**
1			
2			
3			
4			
5			

Take a Moment: How will this activity influence your planning practices?

Planning for differentiated supports

Lesson #	Type of support	Instructional suggestion	For whom? When?
How would you use or modify the suggestion?			

Lesson #	Type of support	Instructional suggestion	For whom? When?
How would you use or modify the suggestion?			

Lesson #	Type of support	Instructional suggestion	For whom? When?
How would you use or modify the suggestion?			

3-2-1 Reflection

3	**Strategies to take away**

2	**Things I learned**

1	**Question I still have**

Amplify Science help

Program Guide

Glean additional insight into the program's structure, intent, philosophies, supports, and flexibility.
my.amplify.com/programguide

Amplify Help

Find lots OF advice and answers from the Amplify team.
my.amplify.com/help

Customer care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-7PM EST.

scihelp@amplify.com

800-823-1969

Amplify Chat

When contacting customer care, be sure to:

- 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, etc.).
- Note the web browser you are using (Chrome or Safari).
- Include a screenshot of the problem, if possible.
- Cc: your district or site IT contact.

Notes