

# ZOOM CONFERENCE INFO

## Rename Yourself



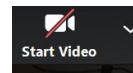
1. Open “Participants”
2. Hover over your name
3. Click “Rename”
4. Type your name, your school, and grade level

## Audio



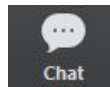
1. Please remain muted unless speaking to avoid background noise. You can unmute yourself by clicking “Unmute” in the lower left-hand corner of the Zoom call.
2. You do not have to use audio if you do not have a microphone.

## Video



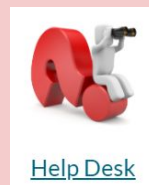
We love seeing your smiling faces! But if you would like you can turn the video off by clicking “Stop Video” in the lower left-hand corner of the Zoom call.

## Chat



To view or type in chat, click the “Chat” icon.

**Have a Question? Need Additional Tech Support? Contact the Help Desk from the main page of the ASSIST Conference webpage.**





# Using Science Interims and Formative Tools Data to Drive Instruction

Chris Noel  
Science Assessment Specialist  
[chris.noel@mt.gov](mailto:chris.noel@mt.gov)

Putting Montana Students First **A+**

# Welcome and Introductions

- Use the chat to introduce yourself:
  - Name
  - School/District/Organization
  - Role



# Agenda

- Definitions - Summative, Interim, Formative
- Science Standards and Evidence Statements
- Interim Assessments
- Formative Tools

# Definitions

- Summative
- Interim
- Formative



## Joining Breakout Rooms...

Breakout Room 1

It may take a few moments.

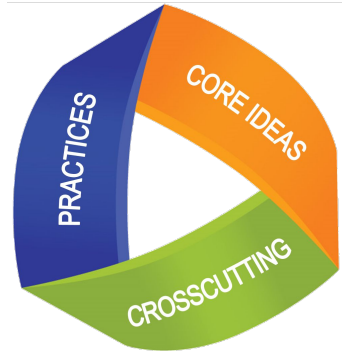
In your breakout room discuss -

- What do these terms mean?
- How are they different from each other?

# Definitions

- Summative
  - ?
- Interim
  - ?
- Formative
  - ?

# Science Standards and Evidence Statements



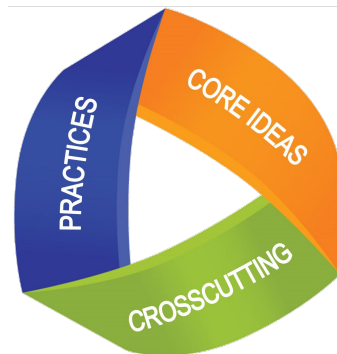
## Science Standards -

- Three Dimensions
  - Disciplinary Core Ideas (DCI)
  - Science and Engineering Practices (SEP)
  - Cross Cutting Concepts (CCC)

## Evidence Statements

- Evidence Statements break the standard down further to outline what an assessment would generate evidence of in order to assess this standard

# Sample Standard



Students who demonstrate understanding can:

- 3-LS3-1.** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. *[Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]*

The performance expectation above was developed using the following elements from the NRC document *A Framework for K-12 Science Education*.

## Science and Engineering Practices

### Analyzing and Interpreting Data

Analyzing data in 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

- Analyze and interpret data to make sense of phenomena using logical reasoning.

## Disciplinary Core Ideas

### LS3.A: Inheritance of Traits

- Many characteristics of organisms are inherited from their parents.

### LS3.B: Variation of Traits

- Different organisms vary in how they look and function because they have different inherited information.

## Crosscutting Concepts

### Patterns

- Similarities and differences in patterns can be used to sort and classify natural phenomena.

*Connections to other DCIs in third grade: N/A*

*Articulation of DCIs across grade-levels:*

**1.LS3.A ; 1.LS3.B ; MS.LS3.A ; MS.LS3.B**

*Common Core State Standards Connections:*

*ELA/Literacy—*

**RI.3.1**

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (3-LS3-1)

**RI.3.2**

Determine the main idea of a text; recount the key details and explain how they support the main idea. (3-LS3-1)

**RI.3.3**

Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. (3-LS3-1)

**W.3.2**

Write informative/explanatory texts to examine a topic and convey ideas and information clearly. (3-LS3-1)

**SL.3.4**

Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace. (3-LS3-1)

*Mathematics—*

**MP.2**

Reason abstractly and quantitatively. (3-LS3-1)

**MP.4**

Model with mathematics. (3-LS3-1)

**3.MD.B.4**

Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (3-LS3-1)



# Sample Evidence Statement

Observable features of the student performance by the end of the grade:	
1	Organizing data
a	Students organize the data (e.g., from students' previous work, grade-appropriate existing datasets) using graphical displays (e.g., table, chart, graph). The organized data include: <ul style="list-style-type: none"> <li>i. Traits of plant and animal parents.</li> <li>ii. Traits of plant and animal offspring.</li> <li>iii. Variations in similar traits in a grouping of similar organisms.</li> </ul>
2	Identifying relationships
a	Students identify and describe* patterns in the data, including: <ul style="list-style-type: none"> <li>i. Similarities in the traits of a parent and the traits of an offspring (e.g., tall plants typically have tall offspring).</li> <li>ii. Similarities in traits among siblings (e.g., siblings often resemble each other).</li> <li>iii. Differences in traits in a group of similar organisms (e.g., dogs come in many shapes and sizes, a field of corn plants have plants of different heights).</li> <li>iv. Differences in traits of parents and offspring (e.g., offspring do not look exactly like their parents).</li> <li>v. Differences in traits among siblings (e.g., kittens from the same mother may not look exactly like their mother).</li> </ul>
3	Interpreting data
a	Students describe* that the pattern of similarities in traits between parents and offspring, and between siblings, provides evidence that traits are inherited.
b	Students describe* that the pattern of differences in traits between parents and offspring, and between siblings, provides evidence that inherited traits can vary.
c	Students describe* that the variation in inherited traits results in a pattern of variation in traits in groups of organisms that are of a similar type.

# Reflection

How can you use the standard and evidence statements to support the use of interim and formative assessment?



# Interims

In your breakout room group you will walk through a single interim assessment

Step 1 - Identify a member of your group able to log-in to access the Interim Assessments (If you do not have a group member let us know!)

Step 2 - have that individual share their screen, walk through the assessment together

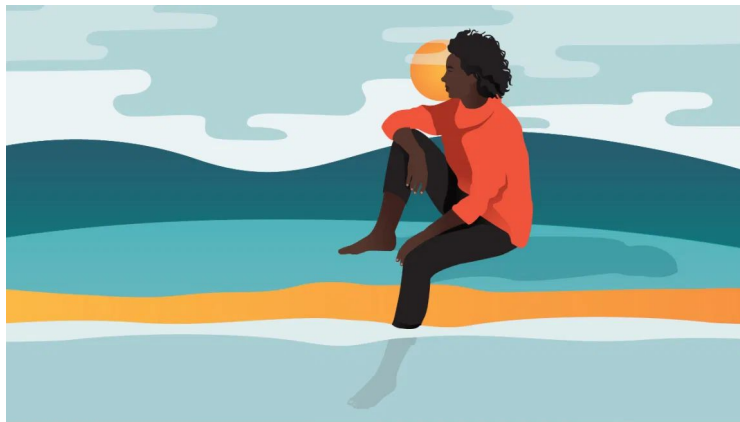
## Optional Science Interims

 <b>Start Interim ES Earth and Space Science - Earth's Systems 1: 4-ESS2-1</b> This is opportunity 1 of 99	 <b>Start Interim ES Earth and Space Science - Earth's Systems 2: 5-ESS2-2</b> This is opportunity 1 of 99
 <b>Start Interim ES Earth and Space Science - Weather and Climate: 3-ESS2-1</b> This is opportunity 1 of 99	 <b>Start Interim ES Life Science - Common Ancestry and Diversity: 3-L84-1</b> This is opportunity 1 of 99
 <b>Start Interim ES Life Science - Ecosystems: 5-L82-1</b> This is opportunity 1 of 99	 <b>Start Interim ES Life Science - Inheritance of Traits: 3-L83-1</b> This is opportunity 1 of 99
 <b>Start Interim ES Physical Science - Chemical Reactions: 5-PS1-4</b> This is opportunity 1 of 99	 <b>Start Interim ES Physical Science - Energy Transfer: 4-PS3-4</b> This is opportunity 1 of 99
 <b>Start Interim ES Physical Science - Forces and Interaction: 5-PS2-1</b> This is opportunity 1 of 99	 <b>Start Interim ES Physical Science - Forces and Motion: 3-PS2-2</b> This is opportunity 1 of 99
 <b>Start Interim ES Physical Science - Properties of Matter: 5-PS1-2</b> This is opportunity 1 of 99	 <b>Start Interim ES Physical Science - Wave Properties 1: 4-PS4-1</b> This is opportunity 1 of 99
 <b>Start Interim ES Physical Science - Wave Properties 2: 4-PS4-2</b> This is opportunity 1 of 99	 <b>Start Interim ES Physical Science - Wave Properties 3: 4-PS4-3</b> This is opportunity 1 of 99

# Reflection - in Breakout Groups

What do you notice about the interim assessment you engaged with?

What do you wonder?



Be prepared to share out with the whole group!

# Whole Group Discussion

- What do we Notice?
- What do we Wonder?



# Whole Group Discussion

- How can the Interim Assessments help educators and students to be prepared for the summative assessment?



# Formative Tools and Data

- Building off of the conversation we just had... talk with your group about what types of data do you have access to within your classroom that would help you to know when students are ready to engage with the interim assessments?





# Whole Group Discussion





# End of Session

The session is now over.

- ❖ Use the Interactive Schedule to select your next session.
  - You will be placed in the waiting room until the start of the next session.
- ❖ Complete the session evaluation.
- ❖ Ask Questions at the Help Desk
- ❖ Join the “networking room”!

