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#LATeacherLeaders
TL
SUMMIT 2022
MAKING A COMEBACK!

Collaborative Scoring of Constructed Response Items for Grades 3 - 4

Objectives and Agenda

Participants will

- learn and apply a collaborative scoring process to score student responses to practice test constructed-response items.

Agenda:

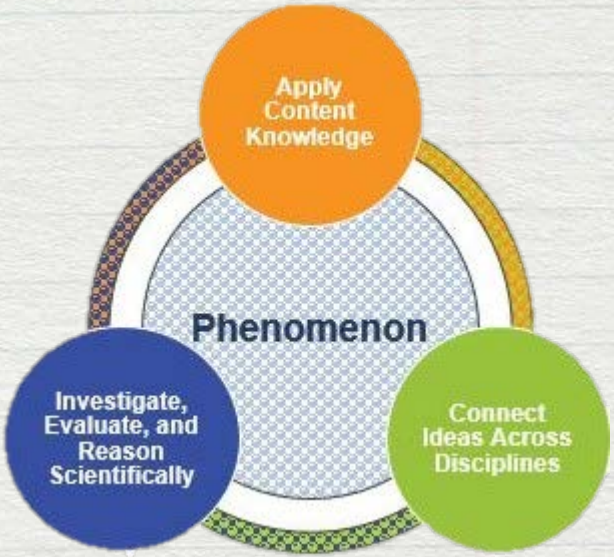
1. Science Vision
2. Collaborative Scoring
3. Constructed-Response Scoring

Science Vision

The Louisiana Student Standards for Science (LSS for Science) represent the knowledge and skills needed for students to transition to postsecondary and education and the workplace.

The standards call for students to:

- apply content knowledge;
- investigate, evaluate, and reason scientifically; and
- connect ideas across disciplines.



Collaborative Scoring & Rangefinding

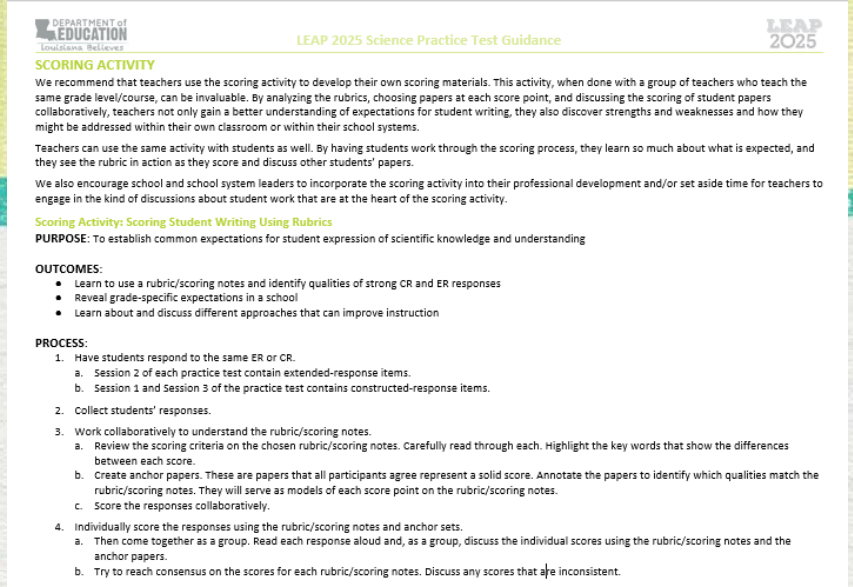
WHAT IS IT?

- **Rangefinding** is an assessment practice that compiles a representative sample of student responses at each score point for an extended or constructed response item. This sample is then used as reference or training material for our handscoring team.
  - *Assessment Educator Committee*

- **Collaborative scoring** is a process that allows us to compile the representative sample of student responses in a fair and objective manner
  - *Consensus can be reached,*
  - *Item or rubric concerns highlighted**
  - *Item or Rubric adjustments to clarify intent of item or score points**

Collaborative Scoring and Rangefinding Process

1. Read and examine the stimulus.
2. Read and deconstruct the prompt.
3. Read the scoring notes.
4. Calibrate by reviewing the anchor set.
5. Score student responses.



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LEAP 2025 Science Practice Test Guidance

LEAP 2025

SCORING ACTIVITY

We recommend that teachers use the scoring activity to develop their own scoring materials. This activity, when done with a group of teachers who teach the same grade level/course, can be invaluable. By analyzing the rubrics, choosing papers at each score point, and discussing the scoring of student papers collaboratively, teachers not only gain a better understanding of expectations for student writing, they also discover strengths and weaknesses and how they might be addressed within their own classroom or within their school systems.

Teachers can use the same activity with students as well. By having students work through the scoring process, they learn so much about what is expected, and they see the rubric in action as they score and discuss other students' papers.

We also encourage school and school system leaders to incorporate the scoring activity into their professional development and/or set aside time for teachers to engage in the kind of discussions about student work that are at the heart of the scoring activity.

Scoring Activity: Scoring Student Writing Using Rubrics

PURPOSE: To establish common expectations for student expression of scientific knowledge and understanding

OUTCOMES:

- Learn to use a rubric/scoring notes and identify qualities of strong CR and ER responses
- Reveal grade-specific expectations in a school
- Learn about and discuss different approaches that can improve instruction

PROCESS:

1. Have students respond to the same ER or CR.
   a. Session 2 of each practice test contain extended-response items.
   b. Session 1 and Session 3 of the practice test contains constructed-response items.
2. Collect students' responses.
3. Work collaboratively to understand the rubric/scoring notes.
   a. Review the scoring criteria on the chosen rubric/scoring notes. Carefully read through each. Highlight the key words that show the differences between each score.
   b. Create anchor papers. These are papers that all participants agree represent a solid score. Annotate the papers to identify which qualities match the rubric/scoring notes. They will serve as models of each score point on the rubric/scoring notes.
   c. Score the responses collaboratively.
4. Individually score the responses using the rubric/scoring notes and anchor sets.
   a. Then come together as a group. Read each response aloud and, as a group, discuss the individual scores using the rubric/scoring notes and the anchor papers.
   b. Try to reach consensus on the scores for each rubric/scoring notes. Discuss any scores that are inconsistent.

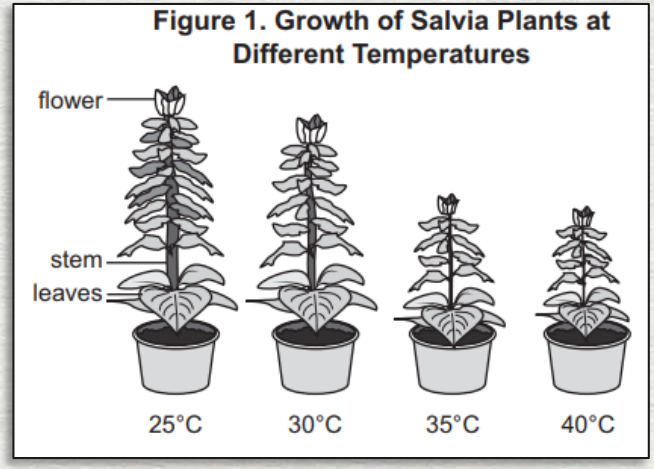
Use the Scoring Activity in the Science Practice Test Guidance to develop your own scoring materials and apply the scoring process with colleagues and students.

Let's Practice – Examine the Stimulus
Grade 3 – Plants and Heat

Each type of plant has different needs. A cactus grows well where it is hot and dry. A fern grows best where it is damp. Some plants grow best in the sunlight. Other plants do better in the shade. Students investigated how hot weather affects plants. Students test a type of plants called salvia to determine what conditions are best for the salvia plant to grow in.

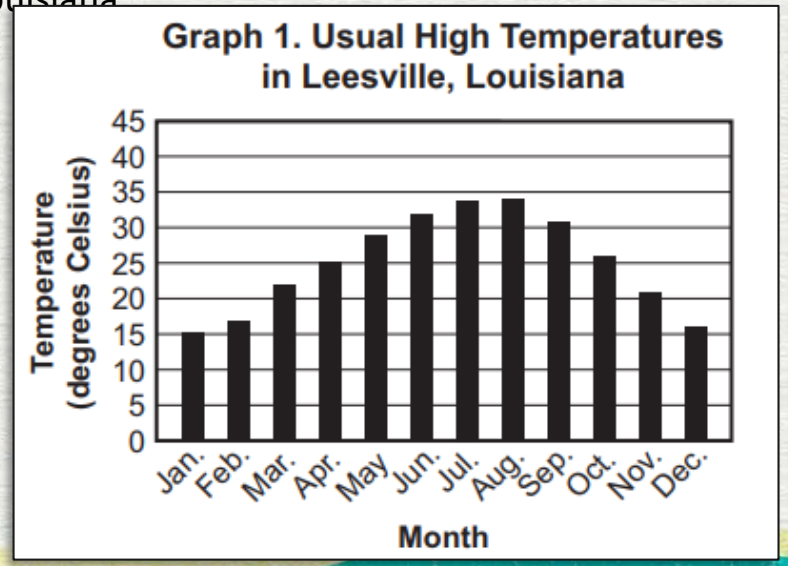
Students completed the following investigation:

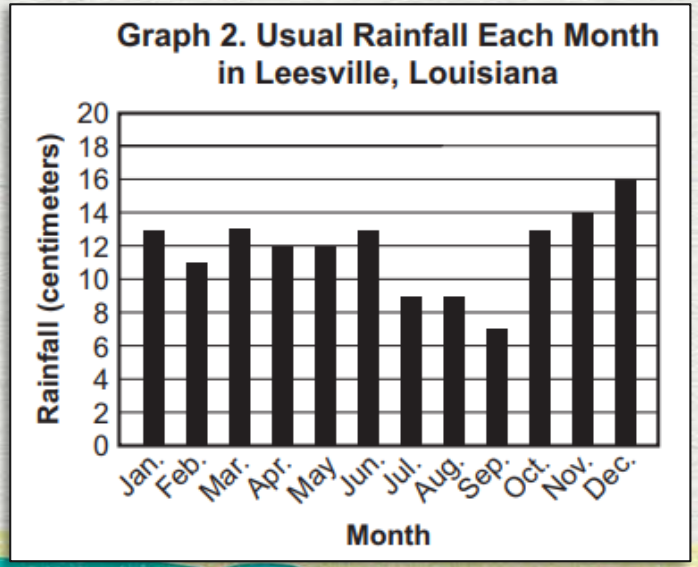
- Students bought four plants that were each the same height and age.
- All plants were placed in the same soil.
- All plants were given the same amount of water, light, and nutrients.
- All plants were kept at a temperature of 25oC most of the time.
- Every three days, the plants were exposed to different temperatures for several hours.
- The plants were compared after several weeks.



Plants and Heat (Stimulus Materials, cont.)

Rainfall and temperature change during the year. Plants may grow better at certain times of the year. The graphs show usual high temperatures and rainfall for each month in Leesville, Louisiana.



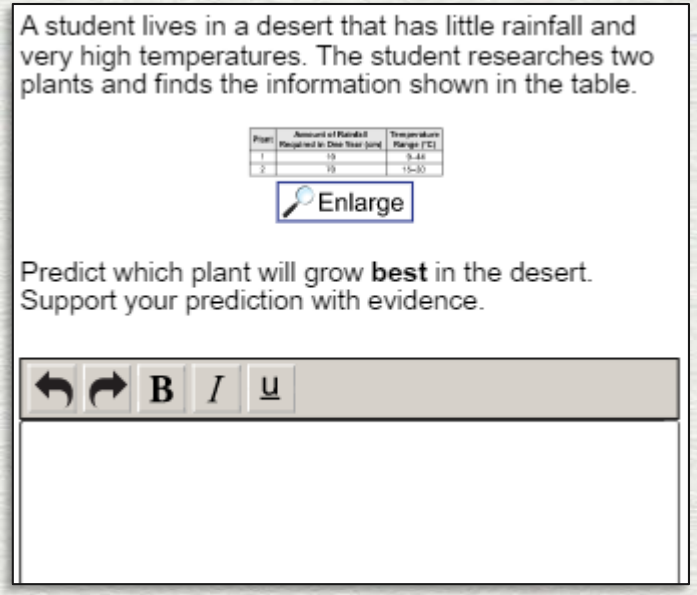


Read and Deconstruct the Prompt

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

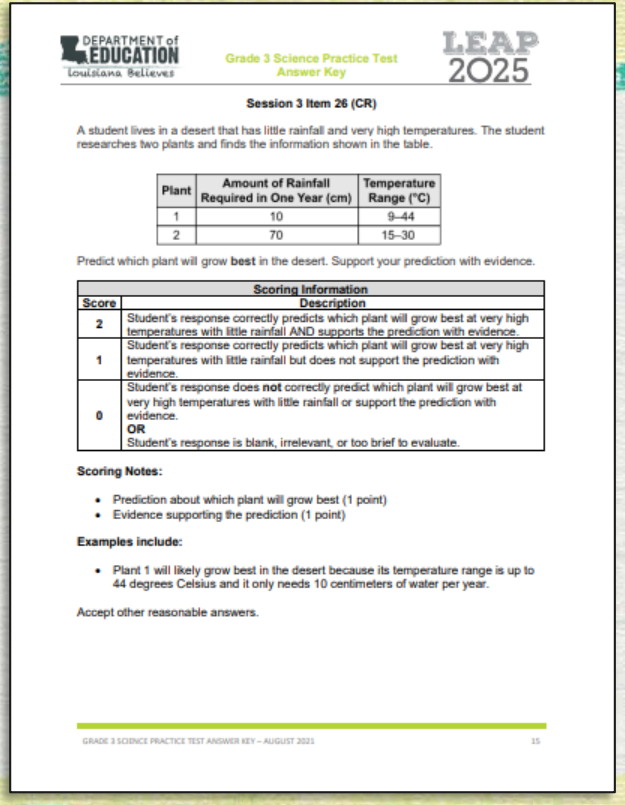
Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow best in the desert. Support your prediction with evidence.



Read the Scoring Notes

- Read the scoring notes.
- Note where points are awarded for each part.
- Read the examples given.
- Note that other plausible explanations can be accepted.



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Grade 3 Science Practice Test
Answer Key

LEAP 2025

Session 3 Item 26 (CR)

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow **best** in the desert. Support your prediction with evidence.

Scoring Information	
Score	**Description**
2	Student's response correctly predicts which plant will grow best at very high temperatures with little rainfall AND supports the prediction with evidence.
1	Student's response correctly predicts which plant will grow best at very high temperatures with little rainfall but does not support the prediction with evidence.
0	Student's response does **not** correctly predict which plant will grow best at very high temperatures with little rainfall or support the prediction with evidence. **OR** Student's response is blank, irrelevant, or too brief to evaluate.

Scoring Notes:

- Prediction about which plant will grow best (1 point)
- Evidence supporting the prediction (1 point)

Examples include:

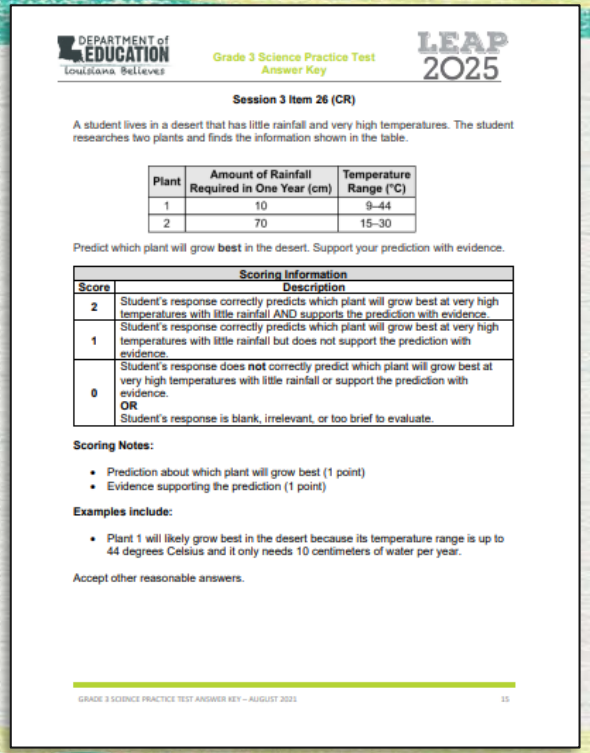
- Plant 1 will likely grow best in the desert because its temperature range is up to 44 degrees Celsius and it only needs 10 centimeters of water per year.

Accept other reasonable answers.

GRADE 3 SCIENCE PRACTICE TEST ANSWER KEY – AUGUST 2021 15

Let's Practice

- Read the responses.
- Score the responses according to the rubric/scoring notes.



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Grade 3 Science Practice Test
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LEAP 2025

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GRADE 3 SCIENCE PRACTICE TEST ANSWER KEY – AUGUST 2021 15

Sample Response 1

Grade 3 Constructed-Response Item

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow best in the desert. Support your prediction with evidence.

Plant 1 will grow best in the desert because 10 cm of rain and 9-44 in temurature is all it requireds. The text says a desert has little rainfall and very high tempurature.

Sample Response 1

Grade 3 Constructed-Response Item

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow best in the desert. Support your prediction with evidence.

Score: 2

Plant 1 will grow best in the desert because 10 cm of rain and 9-44 in temurature is all it requireds. The text says a desert has little rainfall and very high tempurature.

Sample Response 2

Grade 3 Constructed-Response Item

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow best in the desert. Support your prediction with evidence.

Plant 1 will grow best in the desert because plants in the desert do not need that much water and it can only survive in very hot temperatures.

Sample Response 2

Grade 3 Constructed-Response Item

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow best in the desert. Support your prediction with evidence.

Score: 2

Plant 1 will grow best in the desert because plants in the desert do not need that much water and it can only survive in very hot temperatures.

Sample Response 3

Grade 3 Constructed-Response Item

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow best in the desert. Support your prediction with evidence.

I think Plant 1.

Sample Response 3

Grade 3 Constructed-Response Item

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow best in the desert. Support your prediction with evidence.

Score: 1

I think Plant 1.

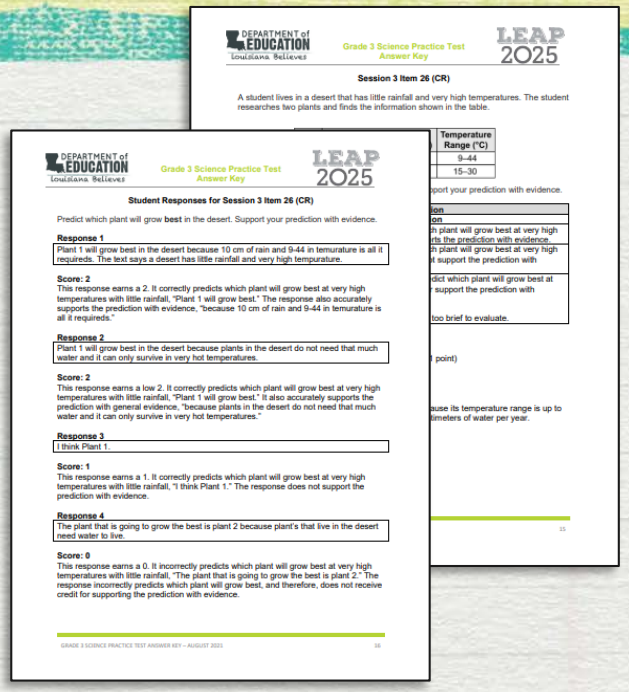
Answer the Prompt

SMALL GROUP

1. Access the session packet for your grade/course.
2. Examine the stimulus.
3. Read and deconstruct the prompt.
4. Respond to the prompt.
5. Score your response using the rubric.
6. Discuss the outcome.

Calibrate Using the Anchor Set

1. Access the session packet for your grade/course.
2. Re-examine the prompt as needed.
3. Examine the stimulus and rubric/scoring notes.
4. Analyze each response in the anchor set.
5. Discuss how the response earned the given score, and what is missing to obtain a higher score.



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Grade 3 Science Practice Test Answer Key

LEAP 2025

Session 3 Item 26 (CR)

A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

	Temperature Range (°C)
	9–44
	15–30

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Grade 3 Science Practice Test Answer Key

LEAP 2025

Student Responses for Session 3 Item 26 (CR)

Predict which plant will grow **best** in the desert. Support your prediction with evidence.

Response 1

Plant 1 will grow best in the desert because 10 cm of rain and 9-44 in temurature is all it requireds. The text says a desert has little rainfall and very high tempurature.

Score: 2

This response earns a 2. It correctly predicts which plant will grow best at very high temperatures with little rainfall, "Plant 1 will grow best." The response also accurately supports the prediction with evidence, "because 10 cm of rain and 9-44 in temurature is all it requireds."

Response 2

Plant 1 will grow best in the desert because plants in the desert do not need that much water and it can only survive in very hot temperatures.

Score: 2

This response earns a low 2. It correctly predicts which plant will grow best at very high temperatures with little rainfall, "Plant 1 will grow best." It also accurately supports the prediction with general evidence, "because plants in the desert do not need that much water and it can only survive in very hot temperatures."

Response 3

I think Plant 1.

Score: 1

This response earns a 1. It correctly predicts which plant will grow best at very high temperatures with little rainfall, "I think Plant 1." The response does not support the prediction with evidence.

Response 4

The plant that is going to grow the best is plant 2 because plant's that live in the desert need water to live.

Score: 0

This response earns a 0. It incorrectly predicts which plant will grow best at very high temperatures with little rainfall, "The plant that is going to grow the best is plant 2." The response incorrectly predicts which plant will grow best, and therefore, does not receive credit for supporting the prediction with evidence.

Scoring

INDEPENDENT/SMALL GROUP

1. Access the session packet for your grade/course.
2. Re-examine the prompt, stimulus, and rubric/scoring notes if needed.
3. Individually score sample responses, noting your rationale for the scores.
4. As a group, discuss scores and rationale. Come to a consensus on the scores for each response.

Reflection and Next Steps

- What patterns are evident in student responses for the constructed-response items?

- What “ah-ha” moments did you experience while engaging in the scoring process?

- What next steps will you take with the collaborative scoring process in your classroom, school, and/or school system?

ER/CR Writing Tips

- Science is technical writing.
  - Students should not write narratives.
  - Students may cite or paraphrase evidence from the stimulus but must also add their own thoughts.
- Students may use bullets when writing; responses do not have to be in paragraph form.
- Students should answer the question and stop; many times, students have content inaccuracies due to excessive writing and lose points unnecessarily.

Review the session slides and your notes for understanding.

Share your understanding with colleagues.

Contact the LDOE for clarifications and questions - Leah.boulton@la.gov Danna.clinton@la.gov assessment@la.gov

Additional Resources

Assessment Guidance Library

- LEAP 2025 Assessment Guides for Science

K-12 Science Planning Library

- Louisiana Student Standards for Mathematics

Practice Test Library

- Access to the Science Practice Test Guidance (contains practice scoring activities for all grade levels)

LEAP 360 Library

- Access to **EAGLE** and its science tasks, sets, and standalone items