Grade 3 Science Practice Test Answer Key

This document contains the answer keys, rubrics, and Scoring Notes for items on the Grade 3 Science Practice Test. Additional Practice Test resources are available in the LDOE Practice Test Library.

Session	Set	Sequence	Item Type	Key	Point Value	Alignment
1	Amazon River Dolphins	1	MC	D	1	PE: 3-LS2-1 SEP: 7. Engaging in argument from evidence DCI: UE.LS2D.a CCC: Systems and System Models
1		2	MC	B	1	PE: 3-LS1-1 SEP: 2. Developing and using models DCI: UE.LS1B.a
1		3	TPD: MC/ MC	C/D	2	PE: 3-LS1-1 DCI: UE.LS1B.a CCC: Patterns
1		4	CR	See Rubric	2	PE: 3-LS2-1 SEP: 7. Engaging in argument from evidence DCI: UE.LS2D.a
1	Winter Storms	5	MC	D	1	PE: 3-ESS2-1 SEP: 4. Analyzing and interpreting data DCI: UE.ESS2D.a
1		6	MC	A	1	PE: 3-ESS2-1 SEP: 4. Analyzing and interpreting data DCI: UE.ESS2D.a
1		7	TPI: MC/ MC	C/A	2	PE: 3-ESS3-1 SEP: 7. Engaging in argument from evidence CCC: Cause and Effect
		8	CR	See Rubric	2	PE: 3-ESS3-1 SEP: 7. Engaging in argument from evidence DCI: UE.ESS2B.a CCC: Cause and Effect
1	Standalone Items	9	MS	B, E	1	PE: 3-ESS3-1 SEP: 7. Engaging in argument from evidence DCI: UE.ETS1B.a CCC: Cause and Effect
1		10	MS	A, D	1	PE: 3-LS3-1 SEP: 4. Analyzing and interpreting data DCI: UE.LS3A.a
1		11	MC	B	1	PE: 3-LS3-2 DCI: UE.LS3A.b CCC: Cause and Effect
1		12	MS	B, C	1	PE: 3-LS4-1 SEP: 4. Analyzing and interpreting data CCC: Scale, Proportion and Quantity
1		13	MC	A	1	PE: 3-LS4-3 SEP: 7. Engaging in argument from evidence DCI: UE.LS4C.a CCC: Cause and Effect
1		14	MS	B, C	1	PE: 3-LS4-4 SEP: 7. Engaging in argument from evidence DCI: UE.LS4D.a CCC: Systems and System Models

Session	Set	Sequence	Item Type	Key	Point Value	Alignment
.1	Standalone Items	15	MC	B	1	PE: 3-PS2-4 DCI: UE.PS2B.b CCC: Patterns
1		16	TPI: MC/ MC	C/B	2	PE: 3-ESS2-2 SEP: 8. Obtaining, evaluating, and communicating information DCI: UE.ESS2D.b CCC: Patterns
1		17	TPI: MC/ MC	C/A	2	PE: 3-LS4-3 SEP: 7. Engaging in argument from evidence DCI: UE.LS4C.a
2	Rattlesnake Rattles	18	MC	D	1	PE: 3-LS3-1 DCI: UE.LS3A.a CCC: Patterns
2		19	MC	C	1	PE: 3-LS3-1 SEP: 6. Constructing explanations (for science) and designing solutions (for engineering) DCI: UE.LS3A.a CCC: Cause and Effect
2		20	TPD: MC/ MS	C/ B, D	2	PE: 3-LS4-2 SEP: 6. Constructing explanations (for science) and designing solutions (for engineering) DCI: UE.LS4B.a CCC: Cause and Effect
2		21	TPI: MS/ MC	B, C/ D	2	PE: 3-LS3-1 SEP: 4. Analyzing and interpreting data DCI: UE.LS3A.a CCC: Patterns
2		22	ER	See Rubric	6	PE: 3-LS4-2 SEP: 6. Constructing explanations (for science) and designing solutions (for engineering DCI: UE.LS4B.a CCC: Cause and Effect
3	Plants and Heat	23	MS	A, B	1	PE: 3-LS3-2 DCI: UE.LS3A.b CCC: Cause and Effect
3		24	MS	A, D	1	PE: 3-LS3-2 DCI: UE.LS3A.b CCC: Cause and Effect
3		25	TPD: MC/ MC	A/B	2	PE: 3-ESS2-1 SEP: 4. Analyzing and interpreting data DCI: UE.ESS2D.a CCC: Patterns

Session	Set	Sequence	Item Type	Key	Point Value	Alignment
3	Plants and Heat	26	CR	See Rubric	2	PE: 3-LS3-2 SEP: 6. Constructing explanations (for science) and designing solutions (for engineering) DCI: UE.LS3A.b CCC: Cause and Effect
3	Seesaws	27	MS	A, D	1	PE: 3-PS2-1 SEP: 3. Planning and carrying out investigations DCI: UE.PS2A.b CCC: Cause and Effect
3		28	TPD: MC/ MC	B/C	2	PE: 3-PS2-2 SEP: 3. Planning and carrying out investigations DCI: UE.PS2A.c CCC: Patterns
3		29	TPI: MC/ MC	A/A	2	PE: 3-PS2-1 SEP: 3. Planning and carrying out investigations DCI: UE.PS2A.b CCC: Cause and Effect
3		30	MC	D	1	PE: 3-PS2-2 SEP: 3. Planning and carrying out investigations DCI: UE.PS2A.c CCC: Patterns
3	Standalone Items	31	MC	C	1	PE: 3-PS2-3 SEP: 1. Asking questions (for science) and defining problems (for engineering) DCI: UE.PS2B.b
3		32	MC	D	1	PE: 3-PS2-3 DCI: UE.PS2B.b CCC: Cause and Effect
3		33	MC	D	1	PE: 3-LS4-1 SEP: 4. Analyzing and interpreting data DCI: UE.LS4A.b
3		34	MC	C	1	PE: 3-LS4-2 DCI: UE.LS4B.a CCC: Cause and Effect
3		35	MC	D	1	PE: 3-PS2-1 SEP: 3. Planning and carrying out investigations DCI: UE.PS2A.a
3		36	MC	C	1	PE: 3-PS2-2 DCI: UE.PS2A.c CCC: Patterns
3		37	MC	A	1	PE: 3-LS4-4 SEP: 7. Engaging in argument from evidence DCI: UE.LS4D.a

Session	Set	Sequence	Item Type	Key	Point Value	Alignment
3	Standalone Items	38	MC	B	1	PE: 3-LS2-1 SEP: 7. Engaging in argument from evidence CCC: Systems and System Models
3		39	TPD: MC/ MC	B/C	2	PE: 3-PS2-4 SEP: 1. Asking questions (for science) and defining problems (for engineering) DCI: UE.ETS1A.a

Item Types and Scoring:

- Multiple-choice (MC) questions with four answer options and only one correct answer. All MC items are worth one point each.

  Multiple-select (MS) questions with five answer options and more than one correct answer. For MS items, the question identifies the number of correct answers. All MS items are worth one point each.

- Two-part Items: require students to answer two related questions, worth a total of two points. Two-part items may combine MC and MS item types.
  - Two-part Dependent (TPD): the first part must be correct in order to earn credit for the second part. TPDs are scored as follows:
    - If both parts are correct, score is 2.
    - If Part A is correct and Part B is incorrect or partially correct, score is 1.
    - If Part A is incorrect, score is 0 regardless of Part B.
  - Two-part Independent (TPI): each part is scored independently, with each part worth one point.

- Constructed Response (CR): requires a brief response provided by the student and will be scored using a 2-point rubric. These items may require a brief paragraph, a few sentences, and/or completion of a chart.

- Extended Response (ER): asks students to write an in-depth response that expresses the students' ability to apply all three dimensions of the LSS for Science and will be scored using a 6-point rubric.

Session 1 Item 4 (CR)

Sometimes a dolphin will be forced out of its group. Predict one effect of a dolphin living without a group. Use evidence to support your response.

Scoring Information	
Score	**Description**
2	Student's response correctly predicts one effect AND uses evidence to support the response.
1	Student's response correctly predicts one effect, but does not use evidence to support the response.
0	Student's response does **not** correctly predict one effect or use evidence to support the response. **OR** Student's response is blank, irrelevant, or too brief to evaluate.

Scoring Notes:

- Correct prediction (1 point)
- Evidence to support the response (1 point)

Examples include:

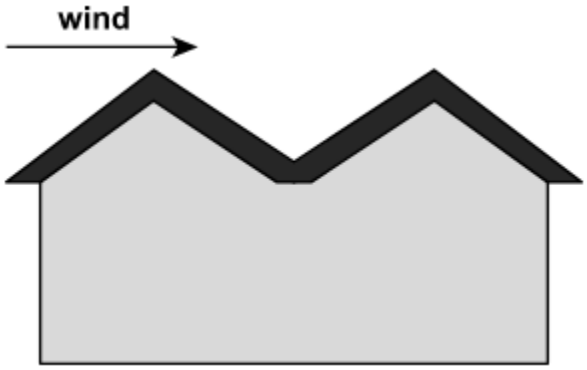
- The dolphin might be more likely to be eaten by predators as there are no other dolphins to provide protection from predators.
- The dolphin may not be able to find as much food without the cooperation of other dolphins.

Accept other reasonable answers.

Session 1 Item 8 (CR)

Snowstorms can cause large amounts of snow to fall in a short amount of time. The snow can cover the roof of a house. If too much snow sits on the roof, it can cause a roof leak or even cause the roof to fall in.

A new group of houses are being built in a state that has many snowstorms.



Use evidence to support an explanation about why this design will **not** prevent damage from snow. Be sure to explain why this design will cause snow to sit on the roof.

Scoring Information	
Score	**Description**
2	Student's response correctly describes how this design does not prevent damage from snow AND explains why this design will cause snow to sit on the roof.
1	Student's response correctly describes how this design does not prevent damage from snow but does **not** explain why this design will cause snow to sit on the roof.
0	Student's response does **not** correctly describe how this design does not prevent damage from snow or explain why this design will cause snow to sit on the roof. **OR** Student's response is blank, irrelevant, or too brief to evaluate.

Scoring Notes:

- Description of how this design does not prevent damage from snow (1 point)
- Explanation of why this design will cause snow to sit on the roof (1 point)

Session 1 Item 8 (CR), continued

Examples include:

- Snow will collect when an object prevents the wind from blowing snow away. On this roof, wind will cause snow to pile up on the right side of the roof. The snow may not slide off the roof, so the roof may fall in.
- Wind will cause snow to pile up on the right side of the roof and in the middle of the roof. This is because snow will collect when an object blocks the wind from blowing snow away. The snow in the middle of the roof will cause the roof to fall in.

Accept other reasonable answers.

Session 2 Item 22 (ER)

Some ranchers in South and Central Texas have observed the following:

- Some rattlesnakes with rattles no longer shake their tails when they are scared.
- The feral (wild) hog populations in South and Central Texas have been getting bigger.
- Feral hogs have been known to eat snakes.

The ranchers claim that rattlesnakes are changing their rattling behavior. Use evidence to explain why not rattling their tails may help rattlesnakes in South and Central Texas survive. In your explanation, be sure to:

- Explain how not rattling their tails can affect the survival of the snakes.
- Explain why not rattling their tails may provide the snakes with an advantage over other snakes.

Score Points

- The student's score is the sum total of all the points earned (up to a maximum of 6 points) in the item.
- The student's score is 0 if the response is blank, incorrect, or does not address the prompt.
- 3 points for explaining how snakes not rattling their tails can affect the survival of the snakes:
    - Score 3 points: Explanation of how not rattling their tails can affect the survival of the snakes and using evidence to support the answer

    OR

    - Score 2 points: Explanation of how not rattling their tails can affect the survival of the snakes with no evidence to support the answer

    OR

    - Score 1 point: Statement that not rattling their tails can affect the survival of the snakes with no evidence to support the answer

Session 2 Item 22 (ER), continued

- 3 points for explaining the possible survival advantage:
  - Score 3 points: Explanation of the possible survival advantage and using evidence to support the answer

  OR

  - Score 2 points: Explanation of the possible survival advantage with no evidence to support the answer

  OR

  - Score 1 point: Statement that there is a possible survival advantage with no evidence to support the answer

Score Information

1. Explanation of how not rattling their tails can affect the survival of the snakes:

Rattling behavior makes noise. This allows the feral hogs to notice the snake. If the feral hog notices the snake, it can catch and eat the snake. Since there are more feral hogs than there used to be, rattling behavior means the snake will die.

2. Explain why not rattling their tails may provide the snakes with an advantage over other snakes:

Feral hogs eat snakes and there are now many feral hogs in South and Central Texas. Holding their tails still when they are scared means the snakes make less noise. Snakes that make less noise are less likely to be killed and eaten by feral hogs.

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.