This document includes the following:

- LEAP 2025 Science Assessments Support Key Shifts in Science Instruction
- Achievement-Level Definitions
- Achievement-Level Descriptors

LEAP 2025 Science Assessments Support Key Shifts in Science Instruction

The operational test will assess a student's understanding of the grade 3 LSS for Science reflecting the multiple dimensions of the standards.

Shift: Apply content knowledge and skills (Disciplinary Core Idea, DCI)

In the classroom, students develop skills and content knowledge reflected in the Performance Expectations (PE) and detailed in the Disciplinary Core Ideas (DCI), the key skills and knowledge students are expected to master by the end of the course.

On the test, students answer questions which require content knowledge and skills aligned to PE bundles (groupings of like PEs) and the corresponding DCIs.

Shift: Investigate, evaluate, and reason scientifically (Science and Engineering Practice, SEP)

In the classroom, students do more than learn about science: they "do" science. Simply having content knowledge and scientific skills are not enough; students must investigate and apply content knowledge to scientific phenomena. Phenomena are real world observations that can be explained through scientific knowledge and reasoning (e.g., water droplets form on the outside of a water glass, plants tend to grow toward their light source, different layers of rock can be seen on the side of the road). Science instruction must integrate the practices, or behaviors, of scientists and engineers as students investigate real-world phenomena and design solutions to problems.

On the test, students do more than answer recall questions about science; they apply the practices, or behaviors, of scientists and engineers as students investigate each real-world phenomenon and design solutions to problems.

Shift: Connect ideas across disciplines (Crosscutting Concept, CCC)

In the classroom, students develop a coherent and scientifically-based view of the world, they must make connections across the domains of science (life science, physical science, earth and space science, environmental science, and engineering, technology, and applications of science). These connections are identified as crosscutting concepts (CCC).

On the test, sets of questions assess student application of knowledge across the domains of science for a comprehensive picture of student readiness for their next grade or course in science.

Achievement-Level Definitions

Achievement-level definitions briefly describe the expectations for student performance at each of Louisiana's five achievement levels. The achievement levels are part of Louisiana's cohesive assessment system and indicate a student's ability to demonstrate proficiency on the Louisiana student standards defined for a specific course.

The following list identifies the achievement-level definitions for the LEAP 2025 assessment program.

- **Advanced:** Students performing at this level have **exceeded** college and career readiness expectations and are well prepared for the next level of studies in this content area.
- **Mastery:** Students performing at this level have **met** college and career readiness expectations and are prepared for the next level of studies in this content area.
- **Basic:** Students performing at this level have **nearly met** college and career readiness expectations and may need additional support to be fully prepared for the next level of studies in this content area.
- **Approaching Basic:** Students performing at this level have **partially met** college and career readiness expectations and will need much support to be prepared for the next level of studies in this content area.
- **Unsatisfactory:** Students performing at this level have **not yet met** the college and career readiness expectations and will need extensive support to be prepared for the next level of studies in this content area

Achievement-Level Descriptors

Achievement-level descriptors (ALDs) are content specific and describe the knowledge, skills, and processes that students typically demonstrate at each achievement level. The Achievement-Level Descriptors Table, shown below, is color-coded to highlight the key shifts in science instruction built into the LEAP 2025 science assessments. The codes are: **SEP = blue**; **DCI = orange**; **CCC = green**

Science and Engineering Practices (SEP) are the practices that scientists and engineers use when investigating real world phenomena and designing solutions to problems. There are eight science and engineering practices that apply to all grade levels and content areas.

1. Asking questions (science) and defining problems (engineering)
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematical and computational thinking
6. Constructing explanations (science) and designing solutions (engineering)
7. Engaging in argument with evidence
8. Obtaining, evaluating, and communicating information

Crosscutting Concepts (CCC) are common themes that have application across all disciplines of science and allow students to connect learning within and across grade levels or content areas. The seven crosscutting concepts apply to all grade levels and content areas.

1. Patterns (PAT)
2. Cause and effect (C/E)
3. Scale, proportion, and quantity (SPQ)
4. Systems and models (SYS)
5. Energy and matter (E/M)
6. Structure and function (S/F)
7. Stability and change (S/C)

Grade 3 Achievement-Level Descriptors

Performance Expectation	Level 5: Advanced	Level 4: Mastery	Level 3: Basic	Level 2: Approaching Basic
Investigate				
3-PS2-1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. CCC: C/E SEP: 3	Revise an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	Plan an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	Identify data that can be used to describe the effects of balanced and unbalanced forces on the motion of an object.	Identify the effects of forces on the motion of an object.
3-PS2-2 Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. CCC: PAT SEP: 3	Make predictions for future motion based on patterns of an object's observed and/or measured motion.	Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	Compare observations and/or measurements of an object's motion to provide evidence of a pattern.	Use observations and measurements to identify a pattern in an object's motion.
3-PS2-3 Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. CCC: C/E SEP: 1	Evaluate questions to describe cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.	Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.	Identify evidence that can describe cause and effect relationships of magnetic interactions between two objects not in contact with each other.	Identify whether magnetic interactions are present between two objects not in contact with each other.
3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets. CCC: PAT SEP: 1	Revise a simple design problem that can be solved by applying scientific ideas about magnets.	Define a simple design problem that can be solved by applying scientific ideas about magnets.	Identify variables in a simple problem that can be solved by applying scientific ideas about magnets.	Identify the characteristics of magnets.

Performance Expectation	Level 5: Advanced	Level 4: Mastery	Level 3: Basic	Level 2: Approaching Basic
Evaluate				
3-LS2-1 Construct and support an argument that some animals form groups that help members survive. CCC: SYS SEP: 7	Construct an argument supported by evidence that some animals form groups that help members survive.	Support an argument that some animals form groups that help members survive.	Use evidence to show that some animals form groups that help members survive.	Identify an argument that some animals form groups that help members survive.
3-LS3-1 Analyze and interpret data to provide evidence that plants and animals have traits inherited from their parents and that variation of these traits exists in a group of similar organisms. CCC: PAT SEP: 4	Analyze data to make a claim that plants and animals have traits inherited from their parents and that variation of these traits exists in a group of similar organisms.	Analyze and interpret data to support a claim that plants and animals have traits inherited from their parents and that variation of these traits exists in a group of similar organisms.	Use data to provide evidence that plants and animals have traits inherited from their parents and that variation of these traits exists in a group of similar organisms.	Identify pictures or drawings to provide evidence that plants and animals have traits inherited from their parents.
3-LS4-1 Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. CCC: SPQ SEP: 4	Use data to make a claim about fossils based on evidence about the organisms and the environments in which they lived long ago.	Analyze and interpret data from fossils to support a claim about fossils based on evidence about the organisms and the environments in which they lived long ago.	Use data from fossils that provide evidence about the organisms and the environments in which they lived long ago.	Identify pictures or drawings of fossils to provide evidence of the organisms and the environments in which they lived long ago.
3-LS4-3 Construct and support an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. CCC: C/E SEP: 7	Construct an argument using evidence that in a particular habitat the traits of organisms can determine how well they survive.	Support an argument that in a particular habitat the traits of organisms can determine how well they survive.	Use evidence to show that the traits of an organism can affect its survival in a particular habitat.	Identify an argument that the traits of an organism can affect its survival in a particular habitat.

Performance Expectation	Level 5: Advanced	Level 4: Mastery	Level 3: Basic	Level 2: Approaching Basic
3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. CCC: SYS SEP: 7	Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	Support a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	Describe evidence of a problem caused when the environment changes and the types of plants and animals that live there may change.	Identify a problem caused when the environment changes and the types of plants and animals that live there may change.
3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. CCC: PAT SEP: 4	Analyze data in tables and graphical displays to make a claim about typical weather conditions expected during a particular season.	Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	Use data in tables and graphical displays to describe typical weather conditions.	Use data in tables or graphical displays to identify weather conditions.
3-ESS3-1 Make a claim about the merit of a design solution that reduces the impact of a weather-related hazard. CCC: C/E SEP: 7	Make a claim about the merit of a design solution that reduces the impact of a weather-related hazard.	Support a claim about the merit of a design solution that reduces the impact of a weather-related hazard.	Identify a valid claim about the merit of a design solution that reduces the impact of a weather-related hazard.	Identify parts of a design solution that reduce the impact of a weather-related hazard.
Reason Scientifically				
3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. CCC: PAT SEP: 2	Use models to make predictions about life cycles of organisms, based on life cycle characteristics that organisms have in common, including birth, growth, reproduction, and death.	Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	Use models to compare that organisms have different life cycles but all have in common birth, growth, reproduction, and death.	Use a model to identify features in the life cycle of an organism.

Performance Expectation	Level 5: Advanced	Level 4: Mastery	Level 3: Basic	Level 2: Approaching Basic
3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment. CCC: C/E SEP: 6	Use evidence to make predictions about how particular traits can be influenced by the environment.	Use evidence to support an explanation that traits can be influenced by the environment.	Describe variables to show that traits can be influenced by the environment.	Identify variables to show that traits can be influenced by the environment.
3-LS4-2 Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. CCC: C/E SEP: 6	Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	Use evidence to support an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	Describe observations to show how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	Identify observations that show how the variations in characteristics among individuals of the same species may provide advantages in surviving.

3-ESS2-2 may be assessed and would be reported as part of the overall score. This particular PE does not fit neatly into any one of the three categories; rather, it partly touches all three categories.

Performance Expectation	Level 5: Advanced	Level 4: Mastery	Level 3: Basic	Level 2: Approaching Basic
3-ESS2-2 Obtain and combine information to describe climates in different regions around the world. CCC: PAT SEP: 8	Use information to explain/support conclusions about climates in different regions around the world.	Obtain and combine information to describe climates in different regions around the world.	Compare information that can be used to describe climates in different regions around the world.	Identify information that describes different climates.