Pacing Guide

Level 3 Module 3

FORCES AND MOTION

with Spotlight Lessons on the Solar System

Each *PhD Science® Texas* Level 3 lesson requires 45 minutes of instructional time. This guide is intended for teachers who are providing in-person instruction. This guide presents lesson objectives and activities by concept and multiple pacing options to allow teachers to maximize instructional time while remaining responsive to student needs. Choose one or more options for each lesson. Note that pacing options do not omit parts of lessons. Teacher choice days are also included in this pacing guide to allow for review, reteaching, assessment, and extension activities.

Pacing Option Key

Lesson Split: This symbol identifies single lessons teachers may split across 2 days.

Cross-Curricular Activity: This symbol identifies parts of lessons teachers may incorporate during instructional time for other content areas, such as English, math, social and emotional learning, and center time. Teachers may implement these parts before or after science instruction; for example, if the class reads a *PhD Science* core text during English instruction, students can discuss the core text during science instruction rather than reading the full text during that time.

Investigation Preparation: This symbol identifies preparation the teacher may do in advance of an investigation. This advance preparation does not interfere with student learning.

Teacher Think Aloud: This symbol identifies activities that are appropriate for a teacher Think Aloud. Suggested primarily for use during station activities, this option allows completion of these activities as a class. During a teacher Think Aloud, the teacher assumes the role of a student and verbalizes the thought process of a student completing the activity to engage students with intentional questioning techniques. The teacher may also ask students to model appropriate procedures and participate in collaborative conversations.

Shared Media Experience: This symbol identifies media (e.g., videos, images) that the teacher may share with the whole class rather than having students view the media individually or in groups. After students observe the media as a class, they complete an activity.

Focal Point: This symbol identifies parts of lessons teachers should emphasize. For example, in an activity with multiple resources (e.g., videos, texts, charts), a focal point identifies the most important resources, thus ensuring the coherence of the lessons.

Instructional Note: This symbol identifies parts of lessons that have instructional notes that describe time-saving strategies. Examples of such instructional notes are Differentiation supports that provide sentence frames for writing assignments and Teacher Notes that suggest alternative activities.

Instructional Routine: This symbol identifies opportunities to use alternative instructional routines. See the Implementation Guide for information on instructional routines.

Module at a Glance

This module contains 30 lessons plus 9 spotlight lessons on the Solar System. Even with lesson splits and teacher choice days, this module should take no more than 51 days to complete. This maximum number of days ensures the implementation of all Level 3 modules within a school year that has 150 days of science instruction.

Forces and Motion

ANCHOR PHENOMENON:

Motion in Space

ESSENTIAL QUESTION:

Why do objects move differently in space than they do on Earth?

Concept	Recommended Number of Days	TEKS Alignment	ELPS Alignment
Concept 1 (Lessons 1–9): Motion **Focus Question:** How can we describe and predict an object's motion? Patterns of an object's motion can be observed and described in order to make predictions.	9–12 days	3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.1G, 3.2B, 3.2C, 3.3A, 3.3B, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E, 3.7A, 3.7B, 3.8A, 3.8B	1E, 2E, 3F, 3G, 3H, 4D
Concept 2 (Lessons 10–18): Forces **Focus Question:** What can cause the motion of an object to change? Multiple forces can act on an object. If the forces are balanced, the object's motion does not change. If the forces are unbalanced, the object's motion changes.	9–13 days	3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.1G, 3.2B, 3.3A, 3.3B, 3.3C, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E, 3.7A, 3.7B, 3.8B	2C, 2D, 2I, 3E, 3F, 3G, 4C, 5B
Concept 3 (Lessons 19–22): Magnetic and Electric Forces **Focus Question:** How can an object move without being touched? Magnetic and electric forces can be exerted between objects with certain properties even when the objects are not in contact.	4 days	3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.2B, 3.3A, 3.3B, 3.4A, 3.5A, 3.5B, 3.5D, 3.6A, 3.7A, 3.7B	2C, 4D, 4F
Application of Concepts (Lessons 23–27): Engineering Challenge **Phenomenon Question:** How can we use magnets to design a solution to help astronauts in space? Problems can be solved by applying scientific ideas about magnets.	5 days	3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1G, 3.2B, 3.2C, 3.2D, 3.3A, 3.3B, 3.3C, 3.4A, 3.4B, 3.5A, 3.5B, 3.5C, 3.5D, 3.5F, 3.5G, 3.6A, 3.7A	2E, 3E, 5B

Concept	Recommended Number of Days	TEKS Alignment	ELPS Alignment
Applications of Concepts (Lessons 28–30): End-of-Module Socratic Seminar, Assessment, and Debrief **Essential Question:** Why do objects move differently in space than they do on Earth? The forces acting on an object may affect its motion (speed and direction). Forces that are balanced do not change an object's motion, but forces that are unbalanced change an object's motion.	3–4 days	3.1A, 3.1B, 3.1F, 3.2B, 3.3A, 3.3B, 3.3C, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E, 3.5F, 3.6A, 3.7A, 3.7B, 3.8A, 3.8B	3E, 3F

Spotlight Lessons on the Solar System

Lesson Sets	Recommended Number of Days	TEKS Alignment	ELPS Alignment
Lessons 1–3: Solar Eclipses **Phenomenon Question:** What can we observe during a solar eclipse? The Sun provides light and thermal energy, and people use light, thermal, and sound energy every day.	3–4 days	3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.1G, 3.2A, 3.2B, 3.3A, 3.3B, 3.4A, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E, 3.6A, 3.8A, 3.9A	1A, 4C, 4G
Lesson 4: Stars **Phenomenon Question:** Why does the Sun look different from other stars? The Sun is a star made of gases that is closer to Earth than other stars.	1–2 days	3.1A, 3.1B, 3.1D, 3.1E, 3.1G, 3.2B, 3.3A, 3.5A, 3.5B, 3.5C, 3.6B, 3.9A	2I
Lessons 5–7: The Planets and the Moon **Phenomenon Question:** What objects can cause a solar eclipse? Earth and other planets in the Solar System orbit the Sun, and the Moon orbits Earth.	3–4 days	3.1B, 3.1C, 3.1D, 3.1E, 3.1G, 3.2A, 3.2B, 3.3A, 3.3B, 3.5A, 3.5B, 3.5C, 3.5D, 3.6A, 3.6B, 3.9A, 3.9B	2E, 3H
Lessons 8–9: The Solar System **Phenomenon Question:** How can we describe the planets in the Solar System? Objects and materials in the Solar System can be modeled and described.	2–3 days	3.1E, 3.1G, 3.2A, 3.3A, 3.5A, 3.5C, 3.5E, 3.6A, 3.6B, 3.8A, 3.9A, 3.9B	4F, 4G

Year at a Glance

This year at a glance chart shows where all three modules fit in a year. To ensure completion of each module, it is recommended to teach science 5 days a week.

Module 1	Module 2	Module 3
August	November	February
September	December	March
October	January	April

MODULE 3

Forces and Motion

CONCEPT 1

How can we describe and predict an object's motion? 9–12 days

Lessons 1–3: Motion in Space

TEKS 3.7A, 3.7B, 3.1A, 3.1C, 3.1D, 3.1E, 3.1G, 3.3B, 3.5A, 3.5B, 3.5D **ELPS** 2E, 4D

Lessons	Pacing Options
Lesson 1: Observe the motion of objects in space.	**Day 1:** Launch through Read Moonshot: *The Flight of Apollo 11* (Floca 2019) **Day 2:** Observe Motion in Space through Land
Lesson 2: Observe a soccer ball on Earth, and compare its motion with the motion of a soccer ball in space.	Use Teacher Note in Explore with a Soccer Ball.
Lesson 3: Ask questions about the motion of objects in space and on Earth.	Use inline Teacher Note in Build Driving Question Board.

Lessons 4–6: Describing Motion

TEKS 3.7B, 3.8A, 3.8B, 3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.1G, 3.2B, 3.3A, 3.3B, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E
ELPS 1E, 3H

Lessons	Pacing Options
Lesson 4: Observe and measure the motion of a variety of objects.	Use English Language Development note in Launch. Use third Teacher Note in Prepare to Visit Motion Stations. Think Aloud one station in Visit Motion Stations.
Lesson 5: Plan and conduct an investigation to demonstrate that motion can be described in terms of speed, direction, and rest.	**Day 1:** Launch through Analyze Observations **Day 2:** Investigate and Define Speed through Land Use the first Teacher Note in Analyze Observations.
Lesson 6: Identify patterns that can be used to describe and classify the motion of objects.	**Day 1:** Launch through Identify Patterns of Motion **Day 2:** Classify Motion through Land Think Aloud ball pattern sketch and description in Launch.

Lessons 7–9: Predicting Motion

TEKS 3.7B, 3.8A, 3.8B, 3.1A, 3.1B, 3.1D, 3.1E, 3.1F, 3.1G, 3.2B, 3.2C, 3.3A, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E **ELPS** 3F, 3G

Lessons	Pacing Options
Lesson 7: Design an investigation to test how changing a variable affects the motion of an object.	Use first sidebar Teacher Note in Explore Motion of Pendulum and Toy Car.
Lesson 8: Conduct a fair test investigation to explain how changing a variable affects the motion of an object.	Use third Teacher Note in Investigate Patterns of Motion. Use Differentiation note in Analyze Data.
Lesson 9: Predict an object's motion based on observed patterns.	**Conceptual Checkpoint**

CONCEPT 2

What can cause the motion of an object to change? 9–13 days

Lessons 10–11: Forces and Motion

TEKS 3.7A, 3.7B, 3.8B, 3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.1G, 3.2B, 3.3A, 3.3B, 3.5B, 3.5C, 3.5D, 3.5E
ELPS 2I, 3F, 3G

Lessons	Pacing Options
Lesson 10: Explore pushes and pulls on an object in order to describe force.	Use inline Teacher Note in Explore Changes in Motion. Use fourth sidebar Teacher Note in Explore Changes in Motion.
Lesson 11: Explore how a force acting on an object can cause the object's motion to change	**Day 1:** Launch through Explore Atwood Machines **Day 2:** Develop Force Models through Land Use second Teacher Note in Explore Atwood Machines.

Lessons 12–14: Multiple Forces

TEKS 3.7A, 3.7B, 3.1B, 3.1D, 3.1E, 3.1G, 3.2B, 3.3A, 3.3B, 3.3C, 3.5A, 3.5B, 3.5D **ELPS** 2D, 4C

Lessons	Pacing Options
Lesson 12: Make observations to describe the effect of multiple forces acting on an object.	Use an alternative instructional routine in Explore Forces in Two Directions.
Lesson 13: Observe and describe the effect of gravity on an object.	**Day 1:** Launch through Explore Gravity **Day 2:** Explore Forces on Classroom Objects through Land
Lesson 14: Evaluate a claim about the effect of multiple forces acting on an object.	**Day 1:** Launch through Describe Forces as Balanced and Unbalanced **Day 2:** Evaluate a Claim through Land Think Aloud force model in Launch.

Lessons 15–16: Slowing Motion

TEKS 3.7A, 3.7B, 3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.1G, 3.2B, 3.2C, 3.3A, 3.3B, 3.5B, 3.5C **ELPS** 2C, 5B

Lessons	Pacing Options
Lesson 15: Plan and conduct an investigation to gather evidence of a force that can cause a moving object to slow down and stop.	**Day 1:** Launch through Develop an Investigation Plan **Day 2:** Conduct an Investigation through Land Use Differentiation note in Develop an Investigation Plan.
Lesson 16: Analyze and interpret data to explain that friction can cause a moving object to slow down and stop.	Use the first Teacher Note in Interpret Data.

Lessons 17–18: Objects at Rest

TEKS 3.7A, 3.7B, 3.8B, 3.1A, 3.1B, 3.1D, 3.1E, 3.1F, 3.1G, 3.2B, 3.3A, 3.3B, 3.5B **ELPS** 3E, 3F

Lessons	Pacing Options
Lesson 17: Explore forces acting on an object at rest.	Use an alternative instructional routine in Model Friction.
Lesson 18: Explain how forces can cause the motion of an object to change.	None

CONCEPT 3

How can an object move without being touched? 4 days

Lessons 19–21: Magnetic and Electric Forces

TEKS 3.6A, 3.7A, 3.7B, 3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.2B, 3.3A, 3.3B, 3.4A, 3.5A, 3.5B, 3.5D **ELPS** 2C

Lessons	Pacing Options
Lesson 19: Observe interactions between objects to gather evidence of magnetic force.	Use Differentiation note in Ask Questions About Magnets. Think Aloud Magnetic Objects Station in Visit Magnet Stations.
Lesson 20: Use observations as evidence to explain that magnets can exert a force on other objects.	Use first Teacher Note in Land.
Lesson 21: Use observations as evidence to explain that certain objects can exert an electric force on other objects.	**Conceptual Checkpoint**

Lesson 22: Uses of Magnets

TEKS 3.6A, 3.7A, 3.1A, 3.3B, 3.4A, 3.5A **ELPS** 4D, 4F

Lessons	Pacing Options
Lesson 22: Obtain information about the use of magnets to solve problems.	Read aloud "So Repulsive, It's Attractive!" (D'Alto 2009) in Obtain Information About Uses of Magnets before the lesson.

APPLICATION OF CONCEPTS

How can we use magnets to design a solution to help astronauts in space? 5 days

Lessons 23–27: Engineering Challenge

TEKS 3.6A, 3.7A, 3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1G, 3.2B, 3.2C, 3.2D, 3.3A, 3.3B, 3.3C, 3.4A, 3.4B, 3.5A, 3.5B, 3.5C, 3.5D, 3.5F, 3.5G **ELPS** 2E, 3E, 5B

Lessons	Pacing Options
Lesson 23: Apply the engineering design process to construct and refine a prototype to secure objects in space.	Use Differentiation note in Ask About an Engineering Problem. **Engineering Challenge**
Lesson 24: Apply the engineering design process to construct and refine a prototype to secure objects in space.	**Engineering Challenge**

Lessons	Pacing Options
Lesson 25: Apply the engineering design process to construct and refine a prototype to secure objects in space.	Use Differentiation note in Create a Solution. Use English Language Development note in Test a Solution. **Engineering Challenge**
Lesson 26: Apply the engineering design process to construct and refine a prototype to secure objects in space.	**Engineering Challenge**
Lesson 27: Apply the engineering design process to construct and refine a prototype to secure objects in space.	Use Differentiation note in Share a Solution. **Engineering Challenge**

APPLICATION OF CONCEPTS

Why do objects move differently in space than they do on Earth? 3–4 days

Lessons 28–30: End-of-Module Socratic Seminar, Assessment, and Debrief

TEKS 3.6A, 3.7A, 3.7B, 3.8A, 3.8B, 3.1A, 3.1B, 3.1F, 3.2B, 3.3A, 3.3B, 3.3C, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E, 3.5F

ELPS 3E, 3F

Lessons	Pacing Options
Lesson 28: Explain how the forces exerted on an object affect the object's motion. (Socratic Seminar)	Use English Language Development note in Engage in Socratic Seminar. **Socratic Seminar**
Lesson 29: Explain how the forces exerted on an object affect the object's motion. (End-of-Module Assessment)	**End-of-Module Assessment**
Lesson 30: Explain how the forces exerted on an object affect the object's motion. (End-of-Module Assessment Debrief)	**End-of-Module Assessment Debrief**
Teacher Choice Day	Review, reteach, assess, or complete extension activities.

SPOTLIGHT LESSONS ON

The Solar System

How can we explain a solar eclipse? 9–13 days

Lessons 1–3: Solar Eclipses

TEKS 3.6A, 3.8A, 3.9A, 3.1A, 3.1B, 3.1C, 3.1D, 3.1E, 3.1F, 3.1G, 3.2A, 3.2B, 3.3A, 3.3B, 3.4A, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E
ELPS 1A, 4C, 4G

Lessons	Pacing Options
Lesson 1: Develop an anchor model to show the decrease in light energy reaching Earth during a solar eclipse.	None
Lesson 2: Investigate temperature changes to identify the Sun as a source of thermal energy.	**Day 1:** Launch through Investigate Temperature (through first Check for Understanding) **Day 2:** Investigate Temperature (discuss results) through Land Use third Teacher Note in Investigate Temperature. Use second Differentiation Note in Investigate Temperature.
Lesson 3: Observe how the sounds some animals make may change during a solar eclipse, and explore how people make use of sound energy in everyday life.	None

Lesson 4: Stars

TEKS 3.6B, 3.9A, 3.1A, 3.1B, 3.1D, 3.1E, 3.1G, 3.2B, 3.3A, 3.5A, 3.5B, 3.5C **ELPS** 2I

Lessons	Pacing Options
Lesson 4: Describe the Sun as a star composed of gases that is closer to Earth than other stars.	**Day 1:** Launch through Compare the Sun and Alpha Centauri A **Day 2:** Investigate Distance and Appearance through Land Use Differentiation note in Compare the Sun and Alpha Centauri A. Use the first Teacher Note in Investigate Distance and Appearance.

Lessons 5–7: The Planets and the Moon

TEKS 3.6A, 3.6B, 3.9A, 3.9B, 3.1B, 3.1C, 3.1D, 3.1E, 3.1G, 3.2A, 3.2B, 3.3A, 3.3B, 3.5A, 3.5B, 3.5C, 3.5D **ELPS** 2E, 3H

Lessons	Pacing Options
Lesson 5: Investigate the properties of the planets and arrange the planets in order by their distance from the Sun.	**Day 1:** Launch through Compare Planets **Day 2:** Model the Solar System through Land Use first Teacher Note in Launch. Use Differentiation note in Compare Planets.
Lesson 6: Construct a model of the Sun-Earth-Moon system.	Use inline Teacher Note in Create a Model. Assemble wooden dowels, polystyrene foam balls, and modeling clay before the lesson.
Lesson 7: Investigate whether the Moon can block the Sun and cause a solar eclipse.	None

Lessons 8–9: The Solar System

TEKS 3.6A, 3.6B, 3.8A, 3.9A, 3.9B, 3.1E, 3.1G, 3.2A, 3.3A, 3.5A, 3.5C, 3.5E **ELPS** 4F, 4G

Lessons	Pacing Options
Lesson 8: Model and describe objects and materials in the Solar System. (End-of-Spotlight Assessment)	**End-of-Spotlight Assessment**
Lesson 9: Model and describe objects and materials in the Solar System. (End-of-Spotlight Debrief)	**End-of-Spotlight Debrief**
Teacher Choice Day	Review, reteach, assess, or complete extension activities. Optional Assessment: Benchmark 2

Texas Essential Knowledge and Skills (TEKS)

Content Standards

3.6 Matter and energy. The student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used. The student is expected to

- **3.6A** measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float in water.
- **3.6B** describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container.

3.7 Force, motion, and energy. The student knows the nature of forces and the patterns of their interactions. The student is expected to

- **3.7A** demonstrate and describe forces acting on an object in contact or at a distance, including magnetism, gravity, and pushes and pulls; and
- **3.7B** plan and conduct a descriptive investigation to demonstrate and explain how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons.

3.8 Force, motion, and energy. The student knows that energy is everywhere and can be observed in cycles, patterns, and systems. The student is expected to

- **3.8A** identify everyday examples of energy, including light, sound, thermal, and mechanical; and
- **3.8B** plan and conduct investigations that demonstrate how the speed of an object is related to its mechanical energy.

3.9 Earth and space. The student knows there are recognizable objects and patterns in Earth's solar system. The student is expected to

- **3.9A** construct models and explain the orbits of the Sun, Earth, and Moon in relation to each other; and
- **3.9B** identify the order of the planets in Earth's solar system in relation to the Sun.

Scientific and Engineering Practices

3.1 Scientific and engineering practices. The student asks questions, identifies problems, and plans and safely conducts classroom, laboratory, and field investigations to answer questions, explain phenomena, or design solutions using appropriate tools and models. The student is expected to

- **3.1A** ask questions and define problems based on observations or information from text, phenomena, models, or investigations;
- **3.1B** use scientific practices to plan and conduct descriptive investigations and use engineering practices to design solutions to problems;
- **3.1C** demonstrate safe practices and the use of safety equipment during classroom and field investigations as outlined in Texas Education Agency–approved safety standards;
- **3.1D** use tools, including hand lenses; metric rulers; Celsius thermometers; wind vanes; rain gauges; graduated cylinders; beakers; digital scales; hot plates; meter sticks; magnets; notebooks; Sun, Earth, Moon system models; timing devices; materials to support observation of habitats of organisms such as terrariums, aquariums, and collecting nets; and materials to support digital data collection such as computers, tablets, and cameras, to observe, measure, test, and analyze information;
- **3.1E** collect observations and measurements as evidence;
- **3.1F** construct appropriate graphic organizers to collect data, including tables, bar graphs, line graphs, tree maps, concept maps, Venn diagrams, flow charts or sequence maps, and input-output tables that show cause and effect; and
- **3.1G** develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem.

3.2 Scientific and engineering practices. The student analyzes and interprets data to derive meaning, identify features and patterns, and discover relationships or correlations to develop evidence-based arguments or evaluate designs. The student is expected to

- **3.2A** identify advantages and limitations of models such as their size, scale, properties, and materials;
- **3.2B** analyze data by identifying any significant features, patterns, or sources of error;
- **3.2C** use mathematical calculations to compare patterns and relationships; and
- **3.2D** evaluate a design or object using criteria.

3.3 Scientific and engineering practices. The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions. The student is expected to

- **3.3A** develop explanations and propose solutions supported by data and models;
- **3.3B** communicate explanations and solutions individually and collaboratively in a variety of settings and formats; and
- **3.3C** listen actively to others' explanations to identify relevant evidence and engage respectfully in scientific discussion.

3.4 Scientific and engineering practices. The student knows the contributions of scientists and recognizes the importance of scientific research and innovation for society. The student is expected to

- **3.4A** explain how scientific discoveries and innovative solutions to problems impact science and society and
- **3.4B** research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

Recurring Themes and Concepts

3.5 Recurring themes and concepts. The student understands that recurring themes and concepts provide a framework for making connections across disciplines. The student is expected to

- **3.5A** identify and use patterns to explain scientific phenomena or to design solutions;
- **3.5B** identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems;
- **3.5C** use scale, proportion, and quantity to describe, compare, or model different systems;
- **3.5D** examine and model the parts of a system and their interdependence in the function of the system;
- **3.5E** investigate the flow of energy and cycling of matter through systems;
- **3.5F** explain the relationship between the structure and function of objects, organisms, and systems; and
- **3.5G** explain how factors or conditions impact stability and change in objects, organisms, and systems.

English Language Proficiency Standards (ELPS)

- **1A** Use prior knowledge and experiences to understand meanings in English.
- **1E** Internalize new basic and academic language by using and reusing it in meaningful ways in speaking and writing activities that build concept and language attainment.
- **2C** Learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions.
- **2D** Monitor understanding of spoken language during classroom instruction and interactions and seek clarification as needed.
- **2E** Use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language.
- **2I** Demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs.
- **3E** Share information in cooperative learning interactions.
- **3F** Ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments.
- **3G** Express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics.
- **3H** Narrate, describe, and explain with increasing specificity and detail as more English is acquired.
- **4C** Develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials.
- **4D** Use prereading supports such as graphic organizers, illustrations, and pretaught topic-related vocabulary and other prereading activities to enhance comprehension of written text.

4F Use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language.

4G Demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs.

5B Write using newly acquired basic vocabulary and content-based grade-level vocabulary.