Grade: 3 **Subject:** Science	**Unit of Study: The Solar System**
Big Idea/Rationale	This unit is a study of the structure of the solar system, the characteristics of the members of that system, and a more detailed look at the rotations and revolutions of the Earth and the moon
Enduring Understanding (Mastery Objective)	• Describe the solar system as the sun, moon, Earth, other planets and their moons, meteors, asteroids and comets. • Identify and explain the relationships among and between elements in the solar system. • Explain what makes Earth unique in the solar system. • Define the terms revolution and rotation, with respect to the Earth and the moon. • Describe how the rotation of the Earth produces day and night. • Recognize that the revolution of the Earth on a tilted axis around the sun produces the seasons. • Investigate why the full moon and new moon occur, using models. • Describe the phases of the moon. • Compare the sizes of the sun, the moon, and the Earth. • Name the planets in order from the sun. • Describe some characteristics of each planet. • Explain how historical data and technological advances have increased our knowledge of the solar system.
Essential Questions (Instructional Objective)	• How are properties used to identify, sort, and classify rocks and minerals? • What kind of simple tools are used to help determine the properties and how are the tools used? • How does acid rain affect rocks that contain calcite? What kinds of rocks would be a good choice for building material? Why?
Content (Subject Matter)	• Compare the sizes of the Sun, the Moon, and the Earth. • Define the terms revolution and rotation, with respect to the Earth and the Moon. • Describe how the rotation of the Earth produces day and night. • Recognize that the revolution of the Earth around the Sun on a tilted axis produces the seasons. • Investigate why the full moon and new moon occur, using models.
Skills/ Benchmarks (CCSS Standards)	• 5.1.P.A.1 Display curiosity about science objects, materials, activities, and longer-term investigations in progress. • 5.1.4.B.1 Design and follow simple plans using systematic observations to explore questions and predictions. • 5.1.P.B.1 Observe, question, predict, and investigate materials, objects, and phenomena (e.g., using simple tools to crack a nut and look inside)

	during indoor and outdoor classroom activities and during any longer-term investigations. • 5.1.4.B.2 Measure, gather, evaluate, and share evidence using tools and technologies. • 5.1.P.B.2 Use basic science terms and topic-related science vocabulary. • 5.1.P.B.3 Identify and use basic tools and technology to extend exploration in conjunction with science investigations. • 5.1.4.B.4 Communicate and justify explanations with reasonable and logical arguments. • 5.1.P.C.1 Communicate with other children and adults to share observations, pursue questions, and make predictions and/or conclusions. • 5.1.4.C.1 Monitor and reflect on one's own knowledge regarding how ideas change over time. • 5.1.P.D.1 Represent observations and work through drawing, recording data, and writing. • 5.1.4.D.2 Work collaboratively to pose, refine, and evaluate questions, investigations, models, and theories. • 5.1.4.D.3 Demonstrate how to safely use tools, instruments, and supplies. • 5.4.2.A.1 Determine a set of general rules describing when the Sun and Moon are visible based on actual sky observations. • 5.4.4.A.1 Formulate a general description of the daily motion of the Sun across the sky based on shadow observations. Explain how shadows could be used to tell the time of day. • 5.4.4.A.2 Identify patterns of the Moons appearance and make predictions about its future appearance based observational data. • 5.4.4.A.4 Analyze and evaluate evidence in the form of data tables and photographs to categorize and relate solar system objects (e.g., planets, dwarf planets, moons, asteroids, and comets).
Materials and Resources	• Teacher Guides • Web Resources
Notes	