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. 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)

	 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 GuidesWeb Resources