

Unit 1- Space Systems: Patterns and Cycles

Content Area: **Science**
Course(s): **Science 1**
Time Period: **September**
Length: **10 Days**
Status: **Published**

Unit Summary

In this unit of study, students observe, describe, and predict some patterns in the movement of objects in the sky. The crosscutting concept of patterns is called out as an organizing concept for the disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in planning and carrying out investigations and analyzing and interpreting data. Students are also expected to use these practices to demonstrate an understanding of the core ideas.

Standards

CCSS.Math.Practice.MP2	Reason abstractly and quantitatively.
MA.1.OA.A.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
CCSS.Math.Practice.MP4	Model with mathematics.
CCSS.Math.Practice.MP5	Use appropriate tools strategically.
MA.1.MD.C.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
LA.W.1.7	Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions).
LA.W.1.8	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
LA.SL.1.1	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
LA.SL.1.1.A	Follow agreed-upon norms for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
LA.SL.1.1.B	Build on others’ talk in conversations by responding to the comments of others through multiple exchanges.
LA.SL.1.1.C	Ask questions to clear up any confusion about the topics and texts under discussion.
LA.SL.1.2	Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
LA.SL.1.3	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.

SCI.1.1-ESS1-1	Use observations of the sun, moon, and stars to describe patterns that can be predicted.
SCI.1.1-ESS1-2	Make observations at different times of year to relate the amount of daylight to the time of year.
TECH.8.1.2.A.CS1	Understand and use technology systems.

Student Learning Objectives

Students will learn to...

- Use observations of the sun, moon, and stars to describe patterns that can be predicted.
- Make observations at different times of year to relate the amount of daylight to the time of year.

Essential Questions

- What patterns of change can be predicted when observing the sun, moon, and stars?
- What is the relationship between the amount of daylight and the time of year?

Enduring Understandings

Students will understand that...

- Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted.
- Seasonal patterns of sunrise and sunset can be observed, described, and predicted.

Application

Students will be able to independently use their learning to...

- Observe patterns in the natural world to describe phenomena and used as evidence.

Skills

Students will be skilled at...

- planning and carrying out investigations to answer questions or test solutions.
- making observations (firsthand or from media) to collect data that can be used to make comparisons.
- analyzing data to collect record and share observations.
- using observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.