Unit 1 Summary: Pattern's in the Sky

The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth. The apparent brightness of a star alone can't be used to judge its distance from Earth.

The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year.

Title of Unit:	**Subject Area:**
Pattern's in the Sky	Science

Next Generation Science Standards: 5-ESS1 & 5-ESS2

Students who demonstrate understanding can:

5-ESS1-1.	Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth.
5-ESS1-2.	Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

I Can Statements

I can explain why the sun is brighter than other stars.

I can explain patterns of daily changes in day and night.

I can explain patterns of daily changes in the direction and length of shadows.

I can explain patterns of daily changes in the seasonal appearance of stars in the night sky.

Academic Vocabulary

ON LEVEL	ADVANCED
Apparent Motion	
Earth	
Moon	
Orbit	
Sun	
Star	
Moon phases	
Eclipses	
Seasons	
Tides	
Rotation	
Constellations	

Assessments

Formative	**Summative**
Samples could be --questioning (blooms) --accountable talk --Think, Pair, Share --Whip Around --Stand up/Sit down --Thumbs up/down **Common Formative**	Pattern's in the Sky Unit Test. (still in creation stage)
Lesson Sequence Varies per teacher and class	**Resources** ***--Science Studies Weekly*** ***-Science Clubhouse Workshop lessons*** ***--Read Works, Science Close Reading Passages*** ***--Youtube*** ***--United Streaming/Discovery*** ***--Picture Perfect Science***

Unit 2 Summary: Forces and Interactions: Gravity on Earth

Students will use prior knowledge from previous learning and examples from real life to explain the concept of Gravity. They then use this knowledge to demonstrate the affects of gravity in everyday experiences. Gravity is a force that pulls all object down towards the center of Earth.

Title of Unit:	**Subject Area:**
Gravity on Earth	Science

Next Generation Science Standards: 5-PS2-1

Students who demonstrate understanding can:

5-PS2-1 **Support an argument that the gravitational force exerted by Earth on objects is directed down.**

I Can Statements

I can explain what gravity is and how it affects me.

I can support an argument that the gravitational force exerted by Earth on objects is directed down with evidence.

Academic Vocabulary

ON LEVEL	ADVANCED
Force	
Gravity	
Weight	
Mass	

Assessments

Formative Samples could be --questioning (blooms) --accountable talk --Think, Pair, Share --Whip Around --Stand up/Sit down --Thumbs up/down **Common Formative**	**Summative** Gravity on Earth Unit Test.
Lesson Sequence Varies per teacher and class Roller Coaster Building Marble Run Building Gravity Experiments	**Resources** ***--Science Studies Weekly*** ***-Science Clubhouse Workshop lessons*** ***--Read Works, Science Close Reading Passages*** ***--Youtube*** ***--United Streaming/Discovery*** ***--Picture Perfect Science*** *--*

Unit 3 Summary: Matter and Its Interactions

Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. The amount of matter is conserved when it changes form, even in transitions in which it seems to vanish. Measurements of a variety of properties can be used to identify materials. When two or more substances are mixed, a new substance with different properties may be formed.

Title of Unit:	**Subject Area:**
Matter and Its Interactions	Science

Next Generation Science Standards: 5-PS1-1, 5-PS1-2, 5-PS1-3, 5-PS1-4

Students who demonstrate understanding can:

5-PS1-1 **Develop a model to describe that matter is made of particles too small to be seen.**

5-PS1-2 **Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.**

5-PS1-3 **Make observations and measurements to identify materials based on their properties.**

5-PS1-4 **Conduct an investigation to determine whether the mixing of two of more substances results in new substances.**

I Can Statements

I can develop a model to describe that matter is made of particles too small to be seen.

I can measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.

I can make observations and measurements to identify materials based on their properties.

I can conduct an investigation to determine whether the mixing of two of more substances results in new substances.

Academic Vocabulary

ON LEVEL	ADVANCED
Matter	
Properties	
Chemical properties	
Physical properties	
Hardness	
Reflectivity	
Electrical Conductivity	
Thermal Conductivity	
Solubility	

Assessments

Formative	**Summative**
Samples could be --questioning (blooms) --accountable talk --Think, Pair, Share --Whip Around --Stand up/Sit down --Thumbs up/down **Common Formative**	Matter and Its interactions Unit Test.

Lesson Sequence	**Resources**
Varies per teacher and class Elephant Toothpaste Heating and Cooling Labs Mineral Hardness Scales Periodic Table of Elements Research Project	***--Science Studies Weekly*** ***-Science Clubhouse Workshop lessons*** ***--Read Works, Science Close Reading Passages*** ***--Youtube*** ***--United Streaming/Discovery*** ***--Picture Perfect Science*** ***--Science Penguin***

Unit 4 Summary: Energy and Life

The students will understand a basic food web with the components of decomposers, producers, and consumers. The students will understand that all energy was once in the form of sunlight and that plants use that energy to form their own food.

Title of Unit:	**Subject Area:**
Energy and Life	Science

Next Generation Science Standards: 5-PS3-1, 5-LS1-1, 5-LS2-1

Students who demonstrate understanding can:

5-PS3-1 **Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body heat) was once energy from the sun.**

5-LS1-1 **Support an argument that plant get the materials they need for growth chiefly from air and water.**

5-LS2-1 **Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.**

I Can Statements

I can use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body heat) was once energy from the sun.

I can support an argument that plant get the materials they need for growth chiefly from air and water**.**

I can develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

Academic Vocabulary

ON LEVEL	ADVANCED
Decomposers	
Prey	
Predator	
Herbivores	
Carnivores	
Omnivores	
Photosynthesis	

Assessments

Formative	**Summative**
Samples could be --questioning (blooms) --accountable talk --Think, Pair, Share --Whip Around --Stand up/Sit down --Thumbs up/down **Common Formative**	Energy and Life Unit Test.

Lesson Sequence	**Resources**
Varies per teacher and class Food Web projects Photosynthesis Brochure Tickle Me Plants	***--Science Studies Weekly*** ***--Science Clubhouse Workshop lessons*** ***--Read Works, Science Close Reading Passages*** ***--Youtube*** ***--United Streaming/Discovery*** ***--Picture Perfect Science*** ***--Science Penguin***

Unit 5 Summary: Earth's Systems

Earth's major systems work together both positively and negatively as they interact. Students will understand that the amount of unable fresh water on Earth is less that 1% of the total water on Earth. Students will look at examples of communities and find ways that they come up with science ideas to protect the Earth's resources and environment.

Title of Unit:	**Subject Area:**
Earth's Systems	Science

Next Generation Science Standards: 5-ESS2-1, 5-ESS2-2, 5-ESS3-1

Students who demonstrate understanding can:

5-ESS2-1 **Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmospheres interact.**

5-ESS2-2 **Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water of Earth.**

5-ESS3-1 **Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.**

I Can Statements

I can develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmospheres interact.

I can describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water of Earth.

I can obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Academic Vocabulary

ON LEVEL	ADVANCED
Geosphere	
Hydrosphere	
Biosphere	
Atmosphere	

Assessments

Formative	**Summative**
Samples could be --questioning (blooms) --accountable talk --Think, Pair, Share --Whip Around --Stand up/Sit down --Thumbs up/down **Common Formative**	Earth's Systems Unit Test.
Lesson Sequence Varies per teacher and class	**Resources** ***--Science Studies Weekly*** ***-Science Clubhouse Workshop lessons*** ***--Read Works, Science Close Reading Passages*** ***--Youtube*** ***--United Streaming/Discovery*** ***--Picture Perfect Science*** ***--Science Penguin***