**Each section is color coded and corresponds to the NGSS Appendences from** [**http://www.nextgenscience.org/**](http://www.nextgenscience.org/)

When you are reading the correlation sheets you will view the UoS = Unit of Study which would be followed by the SEPs = Science and Engineering Practices, DCIs = Disciplinary Core Ideas, and CCCs = Crosscutting Concepts that fall under that specific UoS.

***Below is a breakdown of each section with examples.***

NGSS = Next Generation Science Standards

UoS = Unit of Study

This is the main topic in which you are studying.

Example:

**K-LS1** From Molecules to Organisms: Structures and Processes

PE= Performance Expectations

Example:

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

SEPs = Science and Engineering Practices

1. Asking questions (for science) and defining problems (for engineering)

2. Developing and using models

3. Planning and carrying out investigations

4. Analyzing and interpreting data

5. Using mathematics and computational thinking

6. Constructing explanations (for science) and designing solutions (for engineering)

7. Engaging in argument from evidence

8. Obtaining, evaluating, and communicating information

Example:

**SEP** Use observations to describe patterns in the natural world in order to answer scientific questions.

* Students discuss marine mammal characteristics (patterns). (e.g. hair, production of milk, liver birth, warm-blooded, breathe air through lungs.
* Students discuss the location of marine mammals in the ocean.

DCIs = Disciplinary Core Ideas

Disciplinary core ideas have the power to focus K–12 science curriculum, instruction and assessments on the most important aspects of science. To be considered core, the ideas should meet at least two of the following criteria and ideally all four:

Information from this section was taken verbatim from [www.nextgenscience.org](http://www.nextgenscience.org)

* Have **broad importance**across multiple  sciences or engineering disciplines or be a **key organizing concept**of a single discipline;
* Provide a **key tool**for understanding or investigating more complex ideas and solving problems;
* Relate to the **interests and life experiences of students**or be connected to **societal or personal concerns**that require scientific or technological knowledge;
* Be **teachable** and **learnable** over multiple grades at increasing levels of depth and sophistication.

Disciplinary ideas are grouped in four domains: the [physical sciences](http://www.nap.edu/openbook.php?record_id=13165&page=103); the [life sciences](http://www.nap.edu/openbook.php?record_id=13165&page=139); the [earth and space sciences](http://www.nap.edu/openbook.php?record_id=13165&page=169); and [engineering, technology and applications of science](http://www.nap.edu/openbook.php?record_id=13165&page=201).

Example:

**LS1.C** All animals need food in order to live and grow. They obtain food from plants or from other animals. Plants need water and light to live and grow.

* Students discuss marine mammal characteristics (patterns). (e.g. hair, production of milk, liver birth, warm-blooded, breathe air through lungs.

Students play a whale feeding strategy game that helps students observe the process of different feeding strategies. (Baleen whales feed on plankton and small benthic organisms. The game uses combs (baleen) and floating parsley (plankton)).

CCCs = Crosscutting Concepts

Crosscutting concepts have application across all domains of science. As such, they are a way of linking the different domains of science. They include: Patterns, similarity, and diversity; Cause and effect; Scale, proportion and quantity; Systems and system models; Energy and matter; Structure and function; Stability and change. The Framework emphasizes that these concepts need to be made explicit for students because they provide an organizational schema for interrelating knowledge from various science fields into a coherent and scientifically-based view of the world

Information from this section was taken verbatim from [www.nextgenscience.org](http://www.nextgenscience.org)

Example:

CCC Patterns in the natural and human designed world can be observed as used as evidence

* Students observe the patterns in the needs of living things.
* Students observe the patterns in animal behavior.
* Students observe physical patterns in marine mammals using pictures and artifacts (eyes, ears, mouth, etc.)