



Grade 1 Science Yearlong Curriculum Plan
Last modified: June 2017 (Pilot 2017-18 School Year)

SUMMARY

This YLP starts off the year with learning about heredity and variation of traits. Students will use observations to identify similarities and differences among individual plants and animals of the same kind. We will then move on to discovering the Earth's place in the Universe. Students will learn to analyze data to identify seasonal patterns of change including temporal change and patterns of precipitation. During the second block of science instruction, students will learn more about the Earth's place in the Universe by observing the sun, moon and stars. Block three will shift learning to physical sciences. Students will learn about sound and light before culminating both topics with the construction of a device that uses light or sound to send a signal. The fourth and fifth blocks of science learning will focus on plant and animal life. Students will learn to use evidence to explain how different animals use their bodies to live and move through their environments including exploring the relationship between parents and their offspring. They will also explore plant life by learning how the parts of a plant function to help a plant survive. Throughout the year, technology will be integrated into learning across content areas. Students in grade 1 will question, observe and gather information about their environments, eventually using these skills to generate solutions to problems they encounter in everyday life.

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How to Use This Yearlong Plan

This yearlong plan (YLP) document, created by teachers and other curriculum leaders throughout the five districts, provides many of the pieces you need to begin planning your school year.

This document includes:

- A **yearlong map** divided into five blocks that shows when standards should be taught
- A **standards overview** from the state outlining the main categories of the content-area standards as well as general practice standards
- **Block-by-block maps** with additional details of the standards and resources.
- A **guiding document** to help teachers see the 5DP vision for science integration across domains.



FREQUENTLY ASKED QUESTIONS

1. *Does this mean I no longer have freedom to decide how to plan my year?*

The 5DP's goal is to generally align curriculum for the sake of our highly mobile student population. The goal is to create a cohesive learning environment and provide teachers with more opportunities to collaborate, not dictate lesson plans.

2. *Are there pacing guides? How long should I spend on each standard?*

Some districts have created pacing guides with suggested time frames. Many of these documents are available on the 5DP Server (www.5districts.com/5dp) under the district-specific documents. If your pacing guides are not posted, please discuss with your curriculum director.

3. *Will this plan align with my textbook and other content resources?*

It is unlikely that these will align perfectly with any textbook or resource. This YLP was created with no specific textbook in mind and with the understanding that it needed to work for all five districts, each of which has unique resources. Newer textbooks are better aligned to Common Core standards but may not follow the order of this YLP. Check the 5DP Server to see if your school has created supporting documents to help you match resources to standards.

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Overview of Standards

Standard	Block 1 Sept-Oct	Block 2 Nov-Dec	Block 3 Jan-Feb	Block 4 Mar-Apr	Block 5 May-Jun	Comments
Earth's Place in the Universe						
1-ESS1-1		X				See ETS1-1 for integration ("ask question, make observations, and gather information")
1-ESS1-2	X					Begin after completing Heredity (1-LS3-1) See ETS1-1 for integration ("ask question, make observations, and gather information")
From Molecules to Organisms: Structures and Processes						
1-LS1-1				X	X	With 1-LS1-1(b) – see ETS1-1 for integration ("gather information about a situation people want to change that can be solved by developing or improving an object or tool"- e.g. reduce / reuse / recycle to benefit the natural environment)
1-LS1-2				X	X	
Heredity: Inheritance and Variation of Traits						
1-LS3-1	X					Start year with this standard See ETS1-1 for integration ("ask questions, make observations, and gather information")
Waves and Their Applications in Technologies for Information Transfer						
1-PS4-1			X			Connections to music class
1-PS4-3			X			
1-PS4-4			X			see ETS1-2 for integration
Engineering Design						
1.K-2-ETS1-1	X	X	X	X	X	Stagger questioning, observations, and gathering information throughout all units.
1.K-2-ETS1-2	X	X	X	X	X	Strong connection to 1-PS4-4

GRADE 1 SCIENCE – Block 1 (September-October)**SCIENCE STANDARDS**

1-LS1-3	Use information from observations (first-hand and from media) to identify similarities and differences among individual plants or animals of the same kind. <i>Clarification Statements: Examples of observations could include that leaves from the same kind of plant are the same shape but can differ in size. Inheritance, animals that undergo metamorphosis, or hybrids are not expected.</i>
1-ESS1-2	Analyze provided data to identify relationships among seasonal patterns of change, including relative sunrise and sunset time changes, seasonal temperature and rainfall or snowfall patterns, and seasonal changes to the environment. <i>Clarification Statement: Examples of seasonal changes to the environment can include foliage changes, bird migration, and differences in amount of insect activity.</i>

ENGINEERING DESIGN STANDARDS

1.K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change that can be solved by developing or improving an object or tool.
1.K-2-ETS1-2	Generate multiple solutions to a design problem and make a drawing (plan) to represent one or more of the solutions.

GRADE 1 SCIENCE – Block 2 (November-December)**SCIENCE STANDARDS**

1-ESS1-1	Use observations of the Sun, Moon, and stars to describe that each appears to rise in one part of the sky, appears to move across the sky, and appears to set.
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ENGINEERING DESIGN STANDARDS

1.K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change that can be solved by developing or improving an object or tool.
1.K-2-ETS1-2	Generate multiple solutions to a design problem and make a drawing (plan) to represent one or more of the solutions.

GRADE 1 SCIENCE – Block 3 (January-February)**SCIENCE STANDARDS**

1-PS4-1	Demonstrate that vibrating materials can make sound and that sound can make materials vibrate. Clarification Statements: Examples of vibrating materials that make sound could include tuning forks, a stretched string or rubber band, and a drum head. Examples of how sound can make materials vibrate could include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.
1-PS4-3	Conduct an investigation to determine the effect of placing materials that allow light to pass through them, allow only some light through them, block all the light, or redirect light when put in the path of a beam of light. Clarification Statements: Effects can include some or all light passing through, creation of a shadow, and redirecting light. Quantitative measures are not expected.
1-PS4-4	Use tools and materials to design and build a device that uses light or sound to send a signal over a distance. Clarification Statements: Examples of devices could include a light source to send signals, paper cup and string “telephones,” and a pattern of drum beats. Technological details for how communication devices work are not expected.

ENGINEERING DESIGN STANDARDS

1.K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change that can be solved by developing or improving an object or tool.
1.K-2-ETS1-2	Generate multiple solutions to a design problem and make a drawing (plan) to represent one or more of the solutions.

GRADE 1 SCIENCE – Block 4 (March-April)**SCIENCE STANDARDS**

1-LS1-1	Use evidence to explain that (a) different animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air, and (b) plants have roots, stems, leaves, flowers, and fruits that are used to take in water, air, and other nutrients, and produce food for the plant. Clarification Statement: Descriptions are not expected to include mechanisms such as the process of photosynthesis.
1-LS1-2	Obtain information to compare ways in which the behavior of different animal parents and their offspring help the offspring to survive. Clarification Statement: Examples of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring).

ENGINEERING DESIGN STANDARDS

1.K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change that can be solved by developing or improving an object or tool.
1.K-2-ETS1-2	Generate multiple solutions to a design problem and make a drawing (plan) to represent one or more of the solutions.

GRADE 1 SCIENCE – Block 5 (May-June)**SCIENCE STANDARDS**

1-LS1-1	Use evidence to explain that (a) different animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air, and (b) plants have roots, stems, leaves, flowers, and fruits that are used to take in water, air, and other nutrients, and produce food for the plant. Clarification Statement: Descriptions are not expected to include mechanisms such as the process of photosynthesis.
1-LS1-2	Obtain information to compare ways in which the behavior of different animal parents and their offspring help the offspring to survive. Clarification Statement: Examples of behaviors could include the signals that offspring make (such as crying, cheeping, and other vocalizations) and the responses of the parents (such as feeding, comforting, and protecting the offspring).

ENGINEERING DESIGN STANDARDS

1.K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change that can be solved by developing or improving an object or tool.
1.K-2-ETS1-2	Generate multiple solutions to a design problem and make a drawing (plan) to represent one or more of the solutions.

