PLTW Launch Standards Connection
First Grade

Connections to Standards in PLTW Launch

PLTW curriculum is designed to empower students to thrive in an evolving world. As a part of the design process when developing and updating our curriculum, we focus on connections to a variety of standards. PLTW Launch modules connect to standards in the following:

Waves and Their Applications in Technologies for Information Transfer

1-PS4-1

Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

1-PS4-2

Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

1-PS4-3

Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

1-PS4-4

Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

From Molecules to Organisms: Structures and Processes

1-LS1-1

Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [ ] Animated Storytelling
- [x] Designs Inspired by Nature

Next Generation Science Standards

1-LS1-2
Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Heredity: Inheritance and Variation of Traits

1-LS3-1
Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Earth’s Place in the Universe

1-ESS1-1
Use observations of the sun, moon, and stars to describe patterns that can be predicted.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

1-ESS1-2
Make observations at different times of year to relate the amount of daylight to the time of year.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Engineering Design

K-2-ETS1-1
Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

Next Generation Science Standards

K-2-ETS1-2

Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

K-2-ETS1-3

Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

Science and Engineering Practices

Asking Questions and Defining Problems

Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

Developing and Using Models

Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Next Generation Science Standards

Analyzing and Interpreting Data

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

Using Mathematics and Computational Thinking

Mathematical and computational thinking in K–2 builds on prior experience and progresses to recognizing that mathematics can be used to describe the natural and designed world(s).

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

Engaging in Argument from Evidence

Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s).

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

Obtaining, Evaluating, and Communicating Information

Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

Next Generation Science Standards

Disciplinary Core Ideas (K-2)

Physical Science

PS4.A Wave Properties

• Sound can make matter vibrate, and vibrating matter can make sound.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

PS4.B Electromagnetic Radiation

• Objects can be seen if light is available to illuminate them or if they give off their own light.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

PS4.B Electromagnetic Radiation

• Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

PS4.C Information Technologies and Instrumentation

• People also use a variety of devices to communicate (send and receive information) over long distances.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

Life Science

LS1.A Structure and Function

• All organisms have external parts. Different animals use their body parts 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. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [ ] Animated Storytelling
- [x] Designs Inspired by Nature

Next Generation Science Standards

LS1.B Growth and Development of Organisms

• Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

LS1.D Information Processing

• Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

LS3.A Inheritance of Traits

• Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

LS3.B Variation of Traits

• Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Earth and Space Science

ESS1.A The Universe and its Stars

• Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Next Generation Science Standards

ESS1.B Earth and the Solar System

• Seasonal patterns of sunrise and sunset can be observed, described, and predicted.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Engineering, Technology, and Applications of Science

ETS1.A Defining and Delimiting Engineering Problems

• Asking questions, making observations, and gathering information are helpful in thinking about problems.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

ETS1.A Defining and Delimiting Engineering Problems

• Before beginning to design a solution, it is important to clearly understand the problem.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

ETS1.B Developing Possible Solutions

• Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

ETS1.C Optimizing the Design Solution

• Because there is always more than one possible solution to a problem, it is useful to compare and test designs.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

Crosscutting Concepts (K-2)

Patterns – Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.

• Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

Cause and Effect: Mechanism and Prediction – Events have causes, sometimes simple, sometimes multifaceted. Deciphering causal relationships, and the mechanisms by which they are mediated, is a major activity of science and engineering.

• Events have causes that generate observable patterns.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

• Simple tests can be designed to gather evidence to support or refute student ideas about causes.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Systems and System Models – A system is an organized group of related objects or components; models can be used for understanding and predicting the behavior of systems.

• Objects and organisms can be described in terms of their parts.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

• Systems in the natural and designed world have parts that work together.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Next Generation Science Standards

Structure and Function – The way an object is shaped or structured determines many of its properties and functions.

- The shape and stability of structures of natural and designed objects are related to their function(s).

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Connections to Nature of Science (K-2)

Science Knowledge is Based on Empirical Evidence

- Scientists look for patterns and order when making observations about the world.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Scientific Investigations Use a Variety of Methods

- Science investigations begin with a question.

- ☑ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Scientific Knowledge Assumes an Order and Consistency in Natural Systems

- Science assumes natural events happen today as they happened in the past.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

- Many events are repeated.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Scientific Investigations Use a Variety of Methods

- Scientists use different ways to study the world.

- ☑ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Connections to Engineering, Technology, and Applications of Science (K-2)

Influence of Engineering, Technology, and Science on Society and the Natural World

• People depend on various technologies in their lives; human life would be very different without technology.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

• Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [ ] Animated Storytelling
- [x] Designs Inspired by Nature

Computer Science Teachers Association K-12 Computer Science

In Spring 2023 PLTW submitted all necessary documentation required by the Computer Science Teachers Association (CSTA) for a crosswalk review of our Launch and Gateway curricula by the CSTA Standards Review Team. While we anticipate approval and validation by CSTA, the review is pending.

Computing Systems

Devices

1A-CS-01

Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Hardware & Software

1A-CS-02

Use appropriate terminology in identifying and describing the function of common physical components of computing systems (hardware).

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Troubleshooting

1A-CS-03

Describe basic hardware and software problems using accurate terminology.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Networks and the Internet

Cybersecurity

1A-NI-04

Explain what passwords are and why we use them, and use strong passwords to protect devices and information from unauthorized access.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Computer Science Teachers Association K-12 Computer Science

Data and Analysis

Storage

1A-DA-05
Store, copy, search, retrieve, modify, and delete information using a computing device and define the information stored as data.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Inference & Models

1A-DA-07
Identify and describe patterns in data visualizations, such as charts or graphs, to make predictions.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Algorithms and Programming

Algorithms

1A-AP-08
Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Variables

1A-AP-09
Model the way programs store and manipulate data by using numbers or other symbols to represent information.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Control

1A-AP-10
Develop programs with sequences and simple loops, to express ideas or address a problem.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Computer Science Teachers Association K-12 Computer Science

Modularity

1A-AP-11

Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

Program Development

1A-AP-12

Develop plans that describe a program's sequence of events, goals, and expected outcomes.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

1A-AP-13

Give attribution when using the ideas and creations of others while developing programs.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

1A-AP-14

Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

1A-AP-15

Using correct terminology, describe steps taken and choices made during the iterative process of program development.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

Impacts of Computing

Culture

1A-IC-16
Compare how people live and work before and after the implementation or adoption of new computing technology.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

Social Interactions

1A-IC-17
Work respectfully and responsibly with others online.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

Safety Law & Ethics

1A-IC-18
Keep login information private, and log off of devices appropriately.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

International Society for Technology in Education Standards for Students

Empowered Learner

1a

Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

- ☐ Light and Sound
- ☑ Animated Storytelling
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Designs Inspired by Nature
- ☐ Animal Adaptations

1c

Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

- ☐ Light and Sound
- ☑ Animated Storytelling
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Designs Inspired by Nature
- ☐ Animal Adaptations

Digital Citizen

2a

Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

- ☐ Light and Sound
- ☑ Animated Storytelling
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Designs Inspired by Nature
- ☐ Animal Adaptations

2b

Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

- ☐ Light and Sound
- ☑ Animated Storytelling
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Designs Inspired by Nature
- ☐ Animal Adaptations

2c

Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

- ☐ Light and Sound
- ☑ Animated Storytelling
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Designs Inspired by Nature
- ☐ Animal Adaptations

International Society for Technology in Education Standards for Students

2d
Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

- [ ] Light and Sound
- [x] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

Knowledge Constructor

3d
Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

- [x] Light and Sound
- [x] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

Innovative Designer

4a
Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

- [x] Light and Sound
- [x] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

4b
Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

- [ ] Light and Sound
- [x] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

4c
Students develop, test and refine prototypes as part of a cyclical design process.

- [x] Light and Sound
- [x] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

International Society for Technology in Education Standards for Students

4d
Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

Computational Thinker

5a
Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

5c
Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

5d
Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

Creative Communicator

6a
Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

International Society for Technology in Education Standards for Students

6b
Students create original works or responsibly repurpose or remix digital resources into new creations.

- [ ] Light and Sound
- [x] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

6c
Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

- [x] Light and Sound
- [x] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

6d
Students publish or present content that customizes the message and medium for their intended audiences.

- [x] Light and Sound
- [ ] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

Global Collaborator

7c
Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

- [x] Light and Sound
- [x] Animated Storytelling
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Designs Inspired by Nature
- [ ] Animal Adaptations

Common Core State Standards English Language Arts - First Grade

Reading Standards for Literature

Key Ideas and Details

CCSS.ELA-LITERACY.RL.1.1
Ask and answer questions about key details in a text.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

CCSS.ELA-LITERACY.RL.1.2
Retell stories, including key details, and demonstrate understanding of their central message or lesson.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

CCSS.ELA-LITERACY.RL.1.3
Describe characters, settings, and major events in a story, using key details.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

Reading Informational Text

Key Ideas and Details

CCSS.ELA-LITERACY.RI.1.1
Ask and answer questions about key details in a text.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [ ] Animated Storytelling
- [x] Designs Inspired by Nature

CCSS.ELA-LITERACY.RI.1.2
Identify the main topic and retell key details of a text.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [x] Designs Inspired by Nature

Common Core State Standards English Language Arts - First Grade

Range of Reading and Level of Text Complexity

CCSS.ELA-LITERACY.RI.1.10
With prompting and support, read informational texts appropriately complex for grade 1.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Writing Standards

Text Types and Purposes

CCSS.ELA-LITERACY.W.1.3
Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Production and Distribution of Writing

CCSS.ELA-LITERACY.W.1.6
With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☑ Animated Storytelling
- ☐ Designs Inspired by Nature

Research to Build and Present Knowledge

CCSS.ELA-LITERACY.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).

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

CCSS.ELA-LITERACY.W.1.8
With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Common Core State Standards English Language Arts - First Grade

Speaking and Listening

Comprehension and Collaboration

CCSS.ELA-LITERACY.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.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

CCSS.ELA-LITERACY.SL.1.1.A
Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

CCSS.ELA-LITERACY.SL.1.1.C
Ask questions to clear up any confusion about the topics and texts under discussion.

- [ ] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

CCSS.ELA-LITERACY.SL.1.2
Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

- [x] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [x] Designs Inspired by Nature

Presentation of Knowledge and Ideas

CCSS.ELA-LITERACY.SL.1.4
Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

Common Core State Standards English Language Arts - First Grade

CCSS.ELA-LITERACY.SL.1.5
Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [ ] Animated Storytelling
- [x] Designs Inspired by Nature

CCSS.ELA-LITERACY.SL.1.6
Produce complete sentences when appropriate to task and situation.

- [ ] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

Common Core State Standards Mathematics - First Grade

Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

CCSS.MATH.CONTENT.1.NBT.C.4
Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Measurement and Data

Measure lengths indirectly and by iterating length units.

CCSS.MATH.CONTENT.1.MD.A.1
Order three objects by length; compare the lengths of two objects indirectly by using a third object.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Tell and write time.

CCSS.MATH.CONTENT.1.MD.B.3
Tell and write time in hours and half-hours using analog and digital clocks.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Represent and interpret data.

CCSS.MATH.CONTENT.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.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☐ Animated Storytelling
- ☐ Designs Inspired by Nature

Common Core State Standards Mathematics - First Grade

Geometry

Reason with shapes and their attributes.

CCSS.MATH.CONTENT.1.G.A.1
Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

CCSS.MATH.CONTENT.1.G.A.2
Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

- ☐ Light and Sound
- ☐ Light: Observing the Sun, Moon, and Stars
- ☐ Animal Adaptations
- ☐ Animated Storytelling
- ☑ Designs Inspired by Nature

Mathematical Practices

CCSS.MATH.PRACTICE.MP1
Make sense of problems and persevere in solving them.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

CCSS.MATH.PRACTICE.MP2
Reason abstractly and quantitatively.

- ☐ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

CCSS.MATH.PRACTICE.MP3
Construct viable arguments and critique the reasoning of others.

- ☑ Light and Sound
- ☑ Light: Observing the Sun, Moon, and Stars
- ☑ Animal Adaptations
- ☑ Animated Storytelling
- ☑ Designs Inspired by Nature

Common Core State Standards Mathematics - First Grade

CCSS.MATH.PRACTICE.MP4
Model with mathematics.

- [ ] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

CCSS.MATH.PRACTICE.MP5
Use appropriate tools strategically.

- [x] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [ ] Animated Storytelling
- [ ] Designs Inspired by Nature

CCSS.MATH.PRACTICE.MP6
Attend to precision.

- [ ] Light and Sound
- [x] Light: Observing the Sun, Moon, and Stars
- [x] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

CCSS.MATH.PRACTICE.MP7
Look for and make use of structure.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

CCSS.MATH.PRACTICE.MP8
Look for and express regularity in repeated reasoning.

- [ ] Light and Sound
- [ ] Light: Observing the Sun, Moon, and Stars
- [ ] Animal Adaptations
- [x] Animated Storytelling
- [ ] Designs Inspired by Nature

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