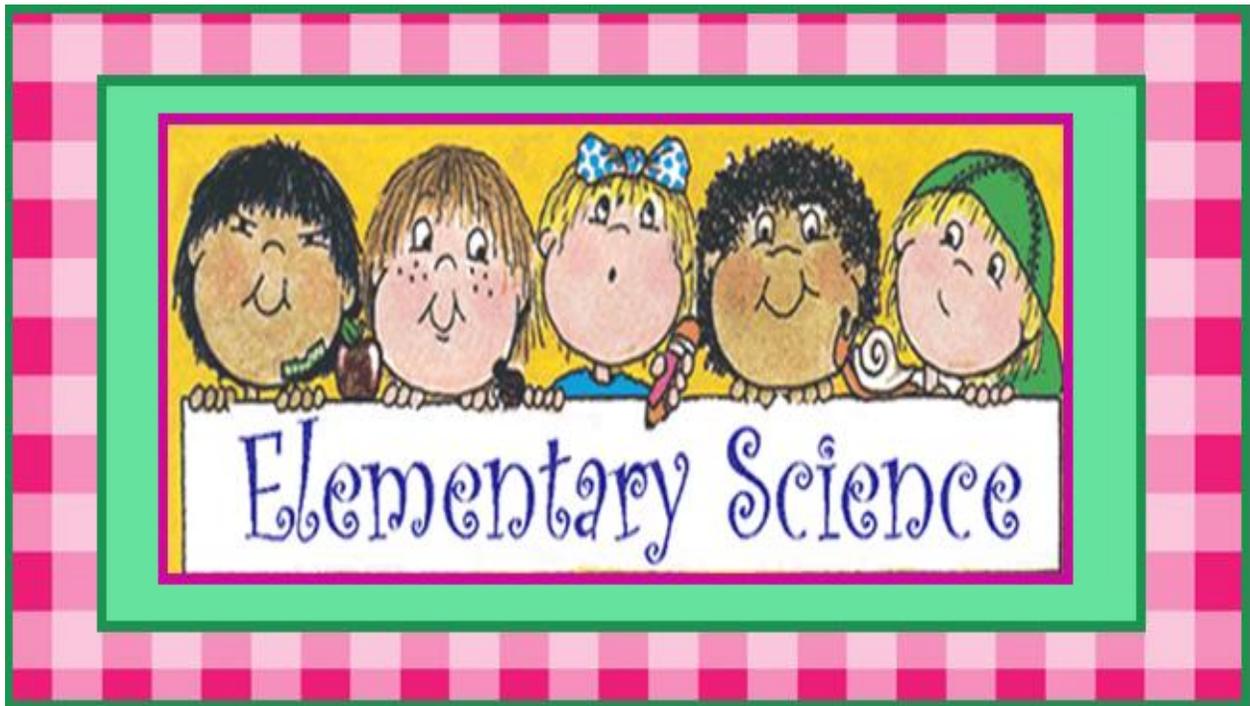


First Grade

Science Lessons



Next Generation Science Standard- First Grade Lessons

18 Weeks of Science Lessons that incorporate all of the NGSS standard for First Grade

**go to <http://firstgradenextgenerationscience.weebly.com> to click the hyperlinks as you teach

Week 1

Supplies: Handouts; glue; paper plates; yellow and orange tissue paper squares; yellow or orange yarn; yellow strips of construction paper; yellow and orange crayon; tape or stapler; hole puncher; compass or compass app

Student Objectives: Students observe, describe, and predict patterns of the sun.

Standard(s): 1.ESS1.1 Use observations of the sun, to describe patterns that can be predicted.

Essential Question: What patterns do the sun make each day?

Monday- Tell class to watch the videos and afterwards you will take guesses on what we are learning this week. Play [video 1](#) and [video 2](#). (Encourage sing-along-good for fluency); read two stories about the sun. (use your favorite classroom stories or choose from "suggested book list". Discuss with a focus on day and night. Students will do the handout. (2 pages)

Tuesday- Sing along to [video 1](#), [video 2](#), and [video 3](#). (Encourage sing-along-good for fluency); Do the sun mobile craft.

Wednesday- Do the "Sun Position Inquiry". It starts in the morning. Sing along to [video 1](#), [video 2](#), and [video 3](#). (Encourage sing-along-good for fluency); Play [video 4](#). Students will fill out the observation log.

Thursday- Do the "Sun Position Inquiry". It starts in the morning. Sing along to [video 1](#), [video 2](#), and [video 3](#). (Encourage sing-along-good for fluency); Play [video 4](#). Students will fill out the observation log.

Friday- Sing along to [video 1](#), [video 2](#), and [video 3](#). Do sun position inquiry debrief. Write a statement together about the patterns of the sun. Students will do performance assessment.

Week 2

Supplies: Handouts; 2 bags of flour; food dye; cooking oil; plastic bins; scoops; sandwich bags (optional); lg. mixing bowls (optional); measuring cups; plastic forks; 8 Oreo Cookies per group of students (51 Oreos in a 20 oz. pkg.); plastic spoons

Student Objectives: Students observe, describe, and predict patterns of the moon.

Standard(s): 1.ESS1.1 Use observations of the moon to describe patterns that can be predicted.

Essential Question: What patterns do the moon make?

Monday- Play [video 1](#) and [video 2](#). Discuss with class. Tell class to watch the next 2 videos and afterwards you will take guesses on what we are learning this week. Play [video 3](#) and [video 4](#). (Encourage sing-along); read two stories about the moon. (use your favorite classroom stories or choose from "suggested book list". Discuss with a focus why the moon looks different throughout the month. Read some short poems together. [Moon Poems](#). Write a classroom acronym poem. Brainstorm using chart paper. Students will write it into their poem booklet. (in handout)

Tuesday- Sing along to [video 1](#), [video 2](#), and [video 3](#). (Encourage sing-along); Brainstorm and add to the chart. Write a class Haiku together. Make moon sand together.

Wednesday- Sing along to [video 1](#), [video 2](#), and [video 3](#). (Encourage sing-along); Brainstorm and add to the chart. Write a class poem together. Play [video 4](#). Do Oreo Moon Lab.

Thursday- Sing along to [video 1](#), [video 2](#), and [video 3](#). (Encourage sing-along); Brainstorm and add to the chart. Write a cinquain poem together. Play online games [phases of the moon 1](#), [phases of the moon 2](#), [cinquain poem activity](#).

Friday- Sing along to [video 1](#), [video 2](#), and [video 3](#). Students will write a poem of their choice, while other students do a performance assessment. If time, play online games [phases of the moon 1](#), [phases of the moon 2](#), [cinquain poem activity](#).

Week 3

Supplies: Handouts; kite paper (8 colors); clear drying glue; toothpicks; crayons; cardstock; pushpins; flashlight(s); gold star stickers (lots); black construction paper; white chalk or white crayons

Student Objectives: Students observe, describe, and predict patterns of the stars.

Standard(s): 1.ESS1.1 Use observations of the stars to describe patterns that can be predicted

Essential Question: What patterns do the stars make?

Monday- Tell class to guess what we will be learning about this week. After each video, take guesses. Play [video 1](#), [video 2](#), and [video 3](#). (The first video includes fitness. Students will stand up, sing, and move along.); read two stories about the stars. (use your favorite classroom stories or choose from "suggested book list".) Discuss with a focus on patterns of the stars.

Make kite stars. If time, play [magical shape hunt](#).

Tuesday- Play [video 1](#), [video 2](#), and [video 3](#). Play [Magic School Bus Sees Stars](#). Discuss what students noticed about stars and patterns. Students do handout. If time, play [Shapes Construction](#).

Wednesday- Play [video 1](#), [video 2](#), and [video 3](#). Play [video 4](#). Discuss. Create constellation cards.

Let students take turns investigating with flashlights. Students will do handout. If time, let students create [Constellations online](#).

Thursday- Play [video 1](#), [video 2](#), and [video 3](#). Play [video 4](#). Discuss. Create constellation cards. Let students take turns investigating with flashlights. Students will do handout. If time, let students find the constellation with partners. [Mindy's Constellation Exploration](#).

Friday- Play [video 1](#), [video 2](#), and [video 3](#). Students are given a performance assessment on the constellations. As the finish, they can explore and investigate any of the online games/ activities this week. [Magical Shape Hunt](#), [Shapes Construction](#), [Constellations Online](#), or [Mindy's Constellation Exploration](#).

List of Formative and Summative Assessments

Week 1- Patterns of the Sun, Moon, and Stars

| | |
|---|------------------------|
| Sun Position Inquiry Student Observation Log Night and Day Assessment | Formative Summative |
|---|------------------------|

Week 2- Phases of the Moon

| | |
|---|-------------------------------------|
| Moon Poetry Booklets Oreo Moon Lab-Phases of the moon Oreo Moon Assessment Phases of the Moon | Formative Formative Summative |
|---|-------------------------------------|

Week 3-Star Patterns

| | |
|---|-------------------------------------|
| My Favorite Constellation Constellation Model Performance Assessment: Constellation Model | Formative Formative Summative |
|---|-------------------------------------|

Week 4 & 5-Sunlight and Seasons

| | |
|--|------------------------|
| My Season Inquiry Booklet Spring, Summer, Fall, Winter Assessment | Formative Summative |
|--|------------------------|

Week 6 –Engineer and Design

| | |
|--|---|
| Oh, The Things You Can Think pgs. 1-2 Investigation Journal Self-Evaluation Performance Assessment | Formative Formative Formative Formative Summative |
|--|---|

Week 7 –Engineer and Design

| | |
|--|-------------------------------------|
| Investigation Journal Self-Evaluation p. 10 Performance Assessment p. 11 | Formative Formative Summative |
|--|-------------------------------------|

Week 8-Engineer and Design

| | |
|--|-------------------------------------|
| Investigation Journal Self-Evaluation Presentation | Formative Formative Summative |
|--|-------------------------------------|

Week 9-Engineer and Design

| | |
|--|-------------------------------------|
| Investigation Journal Self-Evaluation Presentation | Formative Formative Summative |
|--|-------------------------------------|

List of Formative and Summative Assessments

| | |
|---|-------------------------------------|
| Week 10—Sounds | |
| Good Vibrations Investigation Booklet Test | Formative Summative |
| Week 11- Sound | |
| Let's Talk Investigation Booklet Evaluation | Formative Summative |
| Week 12- Light | |
| I See the Light Investigation Booklet Test | Formative Summative |
| Week 13 -Light | |
| What Can You See? Investigation Booklet Performance Assessment | Formative Summative |
| Week 14- | |
| Magic School Bus Rainbow p. 1 Lighthouse Model p. 2 Lights, Camera Action! Performance Assessment | Formative Formative Summative |
| Week 15-Animal Adaptation | |
| I'm Adapted Investigational Booklet Hide and Seek Performance Assessment | Formative Summative |
| Week 16-Plant Adaptations | |
| Growing Bean Data Sheet "Leave" Me Alone Investigational Booklet Root Beer Float Performance Assessment | Formative Formative Summative |
| Week 17-Heredity | |
| Baby, Love Investigational Booklet Assessment | Formative Summative |
| Week 18 -Heredity | |
| Copycat Investigational Booklet Assessment | Formative Summative |

About Ordering Supplies

I have broken the list down into categories. My suggestion would be to get a tub and have all of your science supplies in one spot to simplify your life. I have broken the supplies down into three ways. 1. Week by week; 2. One Page at a Glance; 3) Checklist.

It is difficult for me to say the quantity when building your tub supplies. I don't know how many students your class has. I also always get extra. (just in case)

There is a checklist to make notes on. This can help you plan for the second year. You can make notes about quantity or highlight things that need replaced each year.

Many of the items will need replaced year to year. Some items will need replaced, but they might last several years. Any good science tub needs refilled each year.

There is a parent note to ask for students to bring in items. I would send it out at the beginning of the year. Most parents will try to quickly get the items in. Some students will bring in "extra" if you tell the students to. This helps for the students that won't bring in anything.

Supplies Needed

A Week by Week Breakdown

Supplies at a Glance

Week 1

Handouts; glue; paper plates; yellow and orange tissue paper squares; yellow or orange yarn; yellow strips of construction paper; yellow and orange crayon; tape or stapler; hole puncher; compass or compass app

Week 2

Handouts; 2 bags of flour; food dye; cooking oil; plastic bins; scoops; sandwich bags (optional); lg. mixing bowls (optional); measuring cups; plastic forks; 8 Oreo Cookies per group of students (51 Oreos in a 20-oz. pkg.); plastic spoons

Week 3

Handouts; kite paper (8 colors); clear drying glue; toothpicks; crayons; cardstock; pushpins; flashlight(s); gold star stickers (lots); black construction paper; white chalk or white crayons

Week 4

Handouts-Seasons Inquiry
Booklet; construction paper (variety of colors); scissors; Elmer's glue; feathers; small pieces of brown yarn, wiggly eyes; templates (included-prepare ahead of time.); washable paint; pie tins; scissors; Elmer's glue; colored straws; foam flowers and/or sports balls

Week 5

Handouts-Seasons Inquiry Booklet

Week 6

Handouts; playdoh; paper towel rolls; rulers; plastic forks; pencils; tape (enough supplies for every student to make 3 prototypes)

Week 7

Handouts; plastic cups (optional: camera to take pictures of the prototypes)

Week 8

Handouts

Week 9

Handouts; Craft supplies: construction paper (multi-colors); scissors; colored pencils; crayons; markers; stickers; lots of Popsicle sticks; Elmer's glue; pipe cleaners; pom poms; masking tape; and transparent tape.

Week 10

Handouts; can or cans with a rubber band around it [sample picture](#);

Week 11

Handouts; scarf (blindfold); 2 metal spoons; paper cups; pencils; kite string

Week 12

Handouts, (each student) vegetable oil; food coloring; flash light; 1/4 tablet Alka-Seltzer; water; pitcher for water; mini plastic water bottle empty; 1 large piece of black construction paper; 1 large piece of white construction paper; two sets of the paper dolls (included); 2 anchor charts. (included); large dark blanket or blankets that can be draped over a group of desks that will block out all the light.; 3 flashlights;

Week 13

[Great poster](#) to make for this week and keep (optional); handouts; paper plates (enough for 2 projects); plastic wrap; wax paper; construction paper (black and colored-for several projects this week); glue or tape; markers; sticky back plastic/ contact paper; flower petals or bits of tissue paper; scissors; hole puncher; yarn or string; mini water bottles; Elmer's glue; utility knife; wiggly eyes; wooden lacing beads (4 per student); paper; small pieces of pipe cleaners; glue; white crayon

Week 14

Handouts, red Solo cups (round); clear smaller cups; battery powered tea lights (or make "flame" out of orange tissue paper); white masking tape (1" wide); black construction paper; glue; scissors; plain copy paper; flashlights for Friday assessment

Week 15

Handouts

Week 16

Handouts; light blue construction paper for each student; variety of colors of construction paper (yellow, dark blue, green, brown, red, purple); scissors; glue cotton balls; water; Ziploc sandwich bags; bowl of water; 2 liters of root beer; vanilla ice cream; ice cream scoop; solo cups; straws; pipe cleaners; some Legos, sticks or branches; pencils; ruler

Week 17

Handouts; glue; scissors; penguin template (Next Page) for each student; construction paper bits. (1. multi-colored; 2. black; 3. orange)

You can do this ahead of time and keep in Ziploc bags. long piece of twine; paper plates; hole puncher; pom poms (1 large and 1 medium per student); glue; pipe cleaners (pre-cut)

Week 18

Handouts;

Tub Ordering Supply List

Supplies at a Glance

**** The week you'll need this item is in the parenthesis behind item.**

Books

To save money, use your own books with the same topic. After the supplies, there is a "Suggested Book List" if you need more books.

Typical Classroom Supplies

Chart paper
Construction paper (1), (3), (4), (9), (12), (13), (14), (16), (17)
Glue (1), (4), (9), (13), (14), (16), (17)
Crayons (1), (3), (13)
Hole punch (1), (13), (17)
Tape (1), (9), (13)
Stapler (1)
Cardstock (3)
Pushpins (3)
Gold star stickers (lots) (3)
White chalk or white crayons (3)
Scissors (4), (9), (13), (14), (16), (17)
Feathers (4)
Wiggly eyes (4), (13)
Washable paint (4)
Rulers (6), (16)
Pencils (6), (11), (16)
Craft supplies (9)
Colored pencils (9)
Markers (9), (13)
Popsicle sticks (lots!) (9)
Pipe cleaners (13), (16), (17)
Paper (13), (14)

One Time Purchases

Plastic bins (2)
Scoops (2)
Large mixing bowls (optional) (2)
Measuring cups (2)
Flashlights 8-10 different sizes (Dollar Stores) (3),(12),(14)
Pie tins (4)
2 Metal spoons (11)
Pitcher (12)
Dark blankets or sheets (12)
Ice cream scoop (16)
Scarf (blindfold) (11)

Misc.

Tissue paper (13)
Yellow tissue paper squares (1)
Orange tissue paper squares (1), (14)
Yarn orange or yellow & brown (1), (4), (13)
Compass (1) (or download free compass app)
Food dye (2), (12)
Cooking oil (2) (12)
Kite paper (8 colors) (3)
Clear drying glue (3)
Toothpicks (3)
Colored straws (4), (16)
Foam flowers and/or sports balls (optional) (4)
Playdoh (6)
Masking tape (6), (14)
Camera (optional) (7)
Rubber bands (10)
Kite string (11)
Alka-Seltzer (12)
Sticky-back plastic or contact paper (13)
Utility knife (13)
Wooden lacing beads (4 per student) (13)
Battery powered tea lights (optional) (14)
Cotton balls (16)
Twine (17)
Pom-poms (1 medium & 1 lg. per student) (17)
Sticks or branches (16)
Vanilla ice cream (16)

Parent Donations

Paper towel rolls (6)
Cans (10)
Empty water bottles (mini) (12), (13)
Flower petals
8 Oreo Cookies per group of students (51 Oreos in a 20 oz. package) (2)
Paper plates (1), (13), (17)
2 Bags of Flour (2)
Ziploc Sandwich bags (2), (16), (17)
Red Solo Cups/round (7) (14), (16)
Clear smaller cups (14)
Stickers (9)
Plastic wrap (13)
Wax paper (13)
Plastic forks (2), (6)
Plastic spoons (2)
Paper Cups (11)

Supply List Checklist

Keep track of Supplies for ordering/Room for Notes

****The week you'll need this item is in the parenthesis behind the item.**

Books: Can substitute with same content from classroom library

Typical Classroom Supplies

- _____ Chart paper
- _____ Construction paper (1), (3), (4), (9), (12), (13), (14), (16), (17)
- _____ Glue (1), (4), (9), (13), (14), (16), (17)
- _____ Crayons (1), (3), (13)
- _____ Hole punch (1), (13), (17)
- _____ Tape (1), (9), (13)
- _____ Stapler (1)
- _____ Cardstock (3)
- _____ Pushpins (3)
- _____ Gold star stickers (lots) (3)
- _____ White chalk or white crayons (3)
- _____ Scissors (4), (9), (13), (14), (16), (17)
- _____ Feathers (4)
- _____ Wiggly eyes (4), (13)
- _____ Washable paint (4)
- _____ Rulers (6), (16)
- _____ Pencils (6), (11), (16)
- _____ Craft supplies (9)
- _____ Colored pencils (9)
- _____ Markers (9), (13)
- _____ Popsicle sticks (lots!) (9)
- _____ Pipe cleaners (13), (16), (17)
- _____ Paper (13), (14)

One Time Purchases

- _____ Plastic bins (2)
- _____ Scoops (2)
- _____ Large mixing bowls (optional) (2)
- _____ Measuring cups (2)
- _____ Flashlights 8-10 different sizes (Dollar Stores) (3),(12),(14)
- _____ Pie tins (4)
- _____ 2 Metal spoons (11)
- _____ Pitcher (12)
- _____ Dark blankets or sheets (12)
- _____ Ice cream scoop (16)
- _____ Scarf (blindfold) (11)

Checklist for Supplies page 2

Miscellaneous

- _____ Tissue paper (13)
- _____ Yellow tissue paper squares (1)
- _____ Orange tissue paper squares (1), (14)
- _____ Yarn orange or yellow & brown (1), (4), (13)
- _____ Compass (1) (or download free compass app)
- _____ Food dye (2), (12)
- _____ Cooking oil (2) (12)
- _____ Kite paper (8 colors) (3)
- _____ Clear drying glue (3)
- _____ Toothpicks (3)
- _____ Colored straws (4), (16)
- _____ Foam flowers and/or sports balls (optional) (4)
- _____ Playdoh (6)
- _____ Masking tape (6), (14)
- _____ Camera (optional) (7)
- _____ Rubber bands (10)
- _____ Kite string (11)
- _____ Alka-Seltzer (12)
- _____ Sticky-back plastic or contact paper (13)
- _____ Utility knife (13)
- _____ Wooden lacing beads (4 per student) (13)
- _____ Battery powered tea lights (optional) (14)
- _____ Cotton balls (16)
- _____ Twine (17)
- _____ Pom-poms (1 medium & 1 lg. per student) (17)
- _____ Sticks or branches (16)
- _____ Vanilla ice cream (16)

Parent Donations

(send out letter-included)

- _____ Paper towel rolls (6)
- _____ Cans (10)
- _____ Empty water bottles (mini) (12), (13)
- _____ Flower petals
- _____ 8 Oreo Cookies per group of students (51 Oreos in a 20 oz. package) (2)
- _____ Paper plates (1), (13), (17)
- _____ 2 Bags of Flour (2)
- _____ Ziploc Sandwich bags (2), (16), (17)
- _____ Red Solo Cups/round (7) (14), (16)
- _____ Clear smaller cups (14)
- _____ Stickers (9)
- _____ Plastic wrap (13)
- _____ Wax paper (13)
- _____ Plastic forks (2), (6)
- _____ Plastic spoons (2)
- _____ Paper Cups (11)

Dear Parents,

I have planned so many different fun and exciting science experiments, activities, projects, and investigations this year.

For science classes, I'm only asking your child to bring in 1) **a paper towel roll.**

I often get parents that offer to pick up some items for our class to pitch in. I put together a list. If you would like to pick up one of these items and send it in, it would be greatly appreciated. Our Class Wish List for Science Investigations and activities are:

| | |
|--------------------------------|--------------------|
| Empty Can | Clear smaller cups |
| Empty water bottles | Stickers |
| Empty mini water bottles | Plastic wrap |
| Flower petals | Wax paper |
| Oreo Cookies | Paper Cups |
| Paper plates (thin paper ones) | Plastic forks |
| Bag of Flour | Plastic spoons |
| Ziploc Sandwich bags | |
| Red Solo Cups/round | |

I'm looking forward to having a great school year!

Dear Parents,

I have planned so many different fun and exciting science experiments, activities, projects, and investigations this year.

For science classes, I'm only asking your child to bring in 1) **a paper towel roll.**

I often get parents that offer to pick up some items for our class to pitch in. I put together a list. If you would like to pick up one of these items and send it in, it would be greatly appreciated. Our Class Wish List for Science Investigations and activities are:

| | |
|--------------------------------|--------------------|
| Empty Can | Clear smaller cups |
| Empty water bottles | Stickers |
| Empty mini water bottles | Plastic wrap |
| Flower petals | Wax paper |
| Oreo Cookies | Paper Cups |
| Paper plates (thin paper ones) | Plastic forks |
| Bag of Flour | Plastic spoons |
| Ziploc Sandwich bags | |
| Red Solo Cups/round | |

I'm looking forward to having a great school year!

Suggested Book List

Week 1

- Sun Up, Sun Down by Gail Gibbons
- Sun, Sun: The Joy of a Summer Day at the Beach by Brad Gray and Alexandra Tillard
- Under Alaska's Midnight Sun by Deb Vanasse

Week 2

- I'll Follow the Moon by Stephanie Lisa Tara & Lee Edward Fodi
- Goodnight Moon by Margaret Wise Brown _
- Phases of the Moon by Gillia M. Olson

Week 3

- Twink & Little Squirrel (A Story About Helping) by Christina Johnson
- The Littlest Star by Diane Moore
- How the Stars Fell into the Sky: A Navajo Legend by Jerrie Oughton and Lisa Desimini

Week 4

- The Reasons for Seasons by Gail Gibbons _
- The Seasons of Arnold's Apple Tree Paperback by Gail Gibbons
- Spring is Here (Bear and Mole Story) by Will Hillenbrand _
- Welcome Back Spring! by Flitzzy Books
- Summer by Alice Low Roy McKie _
- Just Grandma and Me (Little Critter) by Mercer Mayer _

Week 5

- The Fall Leaf Dance by Dee Smith
- The Busy Little Squirrel by Nancy Tafuri _
- Sleep, Big Bear, Sleep! by Maureen Wright _
- The Mitten by Jan Brett

Week 6

- Oh, the Things You Can Think by Dr. Seuss (optional-Video of read-aloud link included in lesson)

Week 7

- The Lorax by Dr. Seuss (optional-Video of read-aloud link included in lesson)

Week 8

(all optional-Video of read-aloud links included in lesson)

- There's a Wocket in My Pocket by Dr. Seuss_
- What Kind of Pet Should I Get? by Dr. Seuss_
- Green Eggs and Ham by Dr. Seuss_

Week 9

- None

Week 10

- Mice Squeak, We Speak by Tomie dePaolo (not about how sound is made, but cute and can connect to differentiating sounds)
- All about Sound (Rookie Read-About Science by Lisa Trumbauer

Week 11

- Stellaluna by Janell Cannon
- Scholastic Discover More: Dolphins Hardcover by Penelope Arlon

Week 12

- Day Light, Night Light: Where Light Comes From by Franklyn M. Branley
- Can't You Sleep, Little Bear? by Martin Waddell

****I strongly recommend this one. It goes well with the investigation on Thursday with the "cave".**

Week 15

- Yertle the Turtle and other stories by Dr. Seuss
- Franklin in the Dark by Paulette Bourgeois and Brenda Clark

Week 16

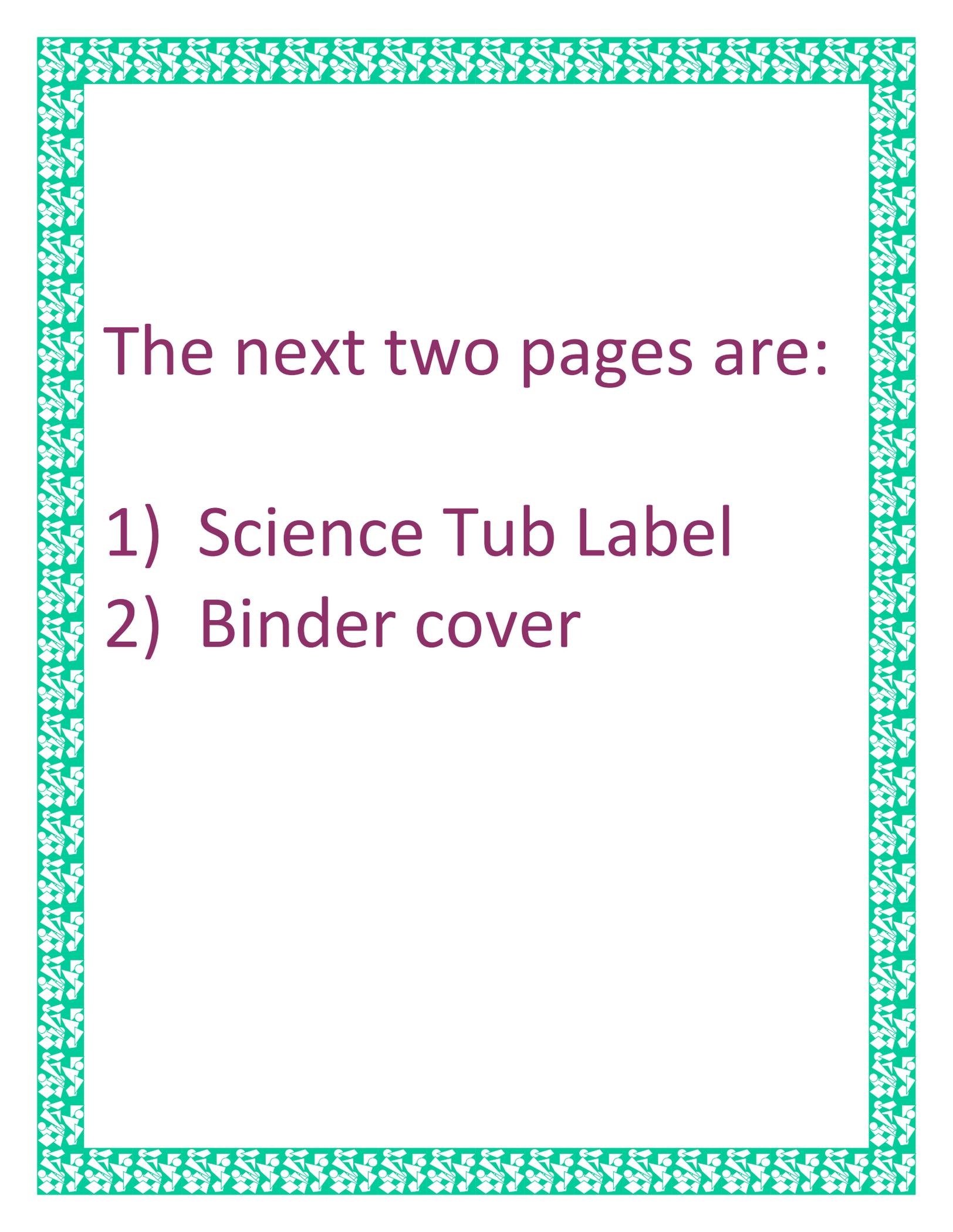
- Jack and the Beanstalk by Steven Kellogg
- The Giving Tree by Shel Silverstein

Week 17

- The Little Polar Bear by Hans de Beer
- National Geographic Readers: Polar Bears by Laura Marsh

Week 18

- You Are Unique: An Introduction to Genetics - Biology for Kids by Baby Professor
- You Are Unique by Suzanne Tonner Okerfelt and Bradford M Tonner



The next two pages are:

- 1) Science Tub Label
- 2) Binder cover

First Grade

Science

Lessons

Making Science Fun

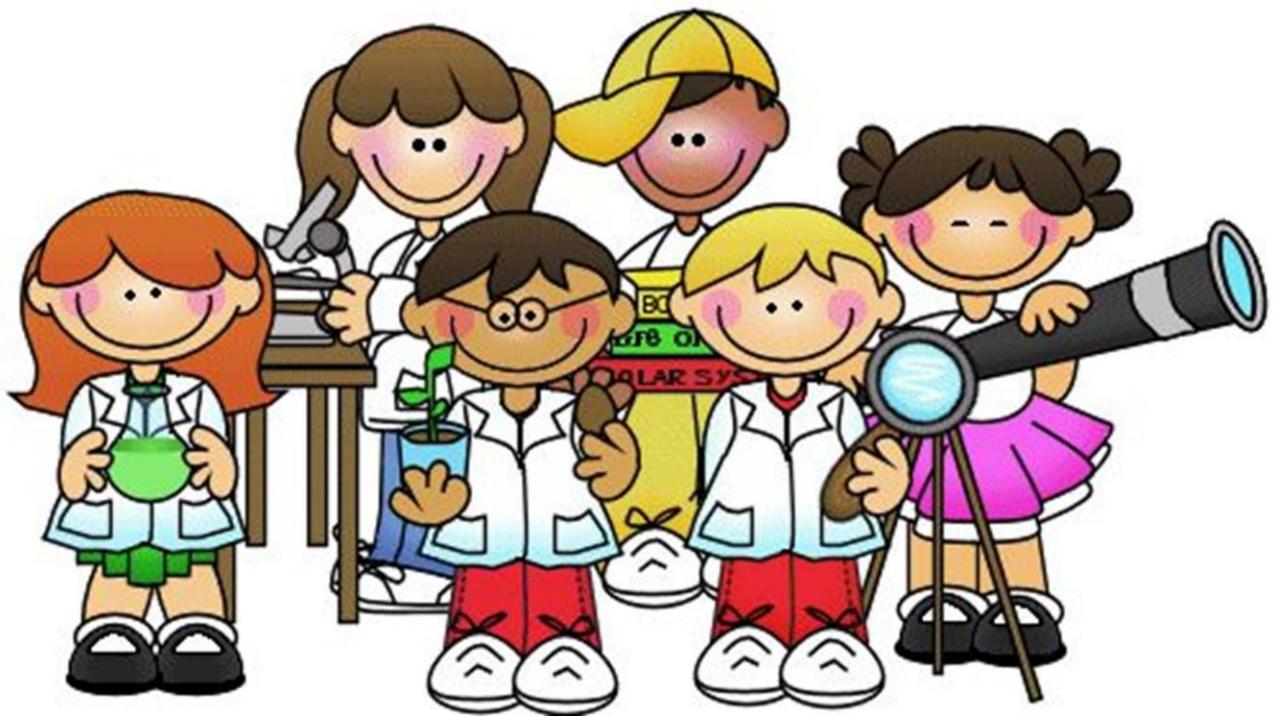
18 Weeks of Interactive, Hands-On, Easy to Implement Lessons

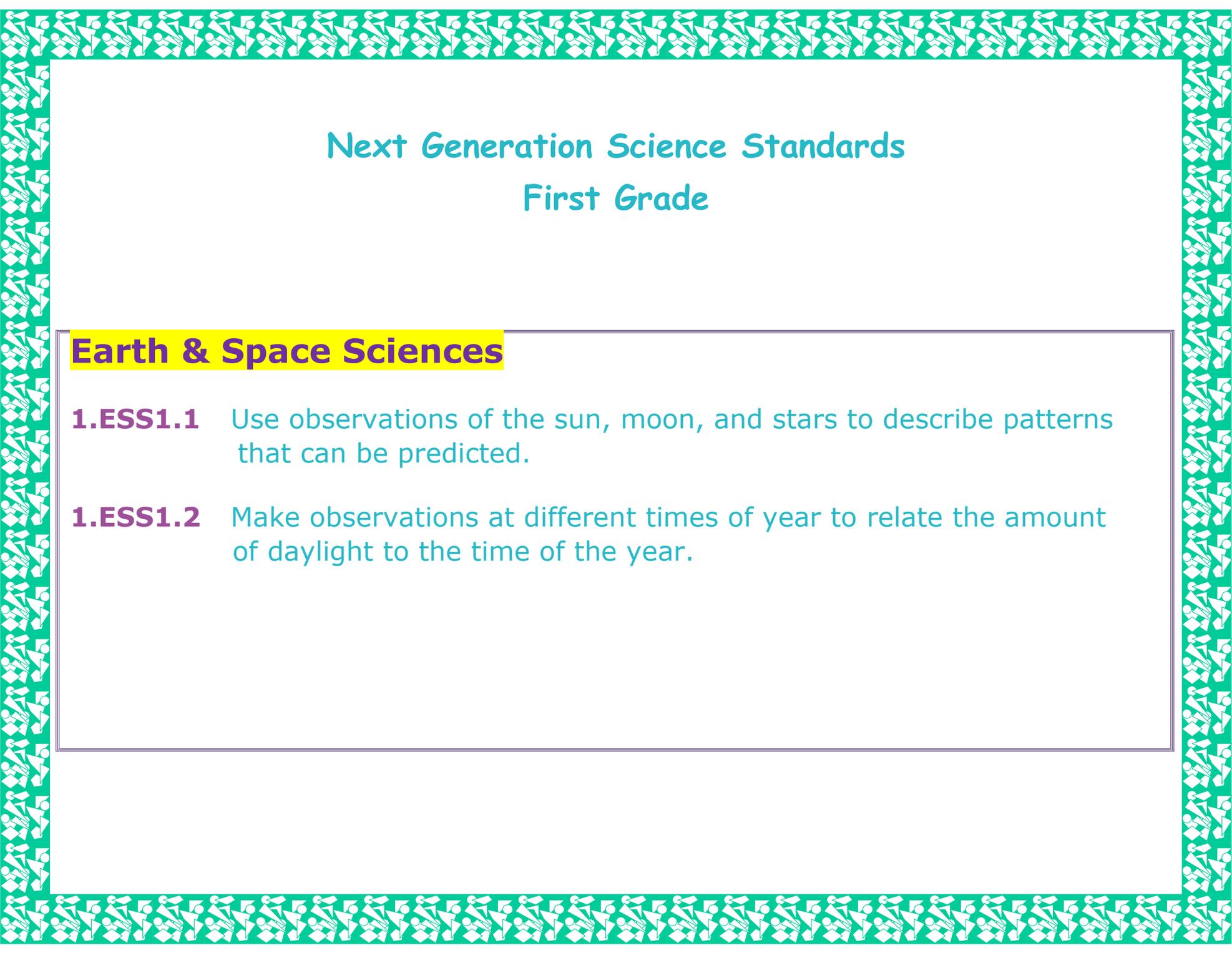


First Grade Science Lessons

Making Science Fun

18 Weeks of Interactive, Hands-On, Easy to Implement Lessons





Next Generation Science Standards First Grade

Earth & Space Sciences

- 1.ESS1.1** Use observations of the sun, moon, and stars to describe patterns that can be predicted.
- 1.ESS1.2** Make observations at different times of year to relate the amount of daylight to the time of the year.

Next Generation Science Standards

First Grade

Engineering Design

- 1.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.
- 1.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.
- 1.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.

Next Generation Science Standards

First Grade

Life Sciences

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

Heredity: Inheritance and Variation of Traits

- 1.LS3.1** Make observations to construct an evidence-based account that

Next Generation Science Standards

First Grade

Physical Sciences

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.
- 1.PS4.2** Make observations to construct an evidence-based account that objects can be seen only when illuminated.
- 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.
- 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.

For the Teacher

Week 1

Student Objectives: Students observe, describe, and predict patterns of the sun.

Standard(s): 1.ESS1.1 Use observations of the sun to describe patterns that can be predicted.

Essential Question: What patterns do the sun make each day?

Follow the lessons and pop up links at:

<http://firstgradenextgenerationscience.weebly.com/weeks-1-9.html>

Procedure:

Monday

1) Play videos 1 & 2- Encourage students to sing along and guess what we are learning about this week. Then, ask if anybody has a guess.

2) Read two of your favorite stories about the sun. They can be from your classroom library or from the "Suggested Book List". Discuss story. Focus should be on the sun during the day or night.

3) Students will do the handout. (formative assessment) You are assessing to see if students understand that the Earth rotates and the side facing the sun has daylight. The side facing the moon has darkness because there is no sunlight.

Tuesday- Sing along to [video 1](#), [video 2](#), and [video 3](#). Encourage sing-along-good for fluency and vocabulary usage; Do the sun mobile craft.

Wednesday- Take the students outside to do the sun position inquiry in the morning, at noon, and at the end of the day. Sing along to [video 1](#), [video 2](#), and [video 3](#). (Encourage sing-along-good for fluency); Play [video 4](#). Ask the students to describe what they noticed. Formative assessment check: see if the students are making connections between the information from the videos and the sun position inquiry.

Thursday- Repeat Wednesday. Sing along to [video 1](#), [video 2](#), and [video 3](#). (Encourage sing-along-good for fluency); Play [video 4](#). Ask the students to describe what they noticed. Formative assessment check: see if the students are making connections between the information from the videos and the sun position inquiry. Students will continue to do their observation logs.

Friday- Sing along to [video 1](#), [video 2](#), and [video 3](#). Do sun position inquiry debrief. Put students in partners pass out their completed observation logs. Let them go over each page for 2-3 minutes to discuss patterns with the shadows. After each page, take one volunteer to share. After all three pages have been discussed, open up a discussion about patterns that they noticed. Guide the discussion to conclude that the sun follows the same pattern each day, that the sun rises in the east and sets in the west, or any other pattern that the class finds interesting. Write a statement together about the patterns of the sun. Examples:

The sun rises in the east and sets in the west.

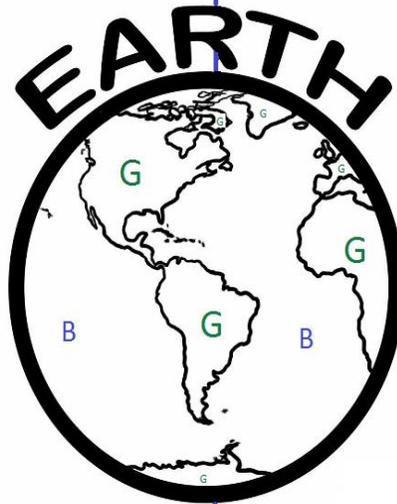
The sun makes the same pattern across the sky each day.

My name is _____.

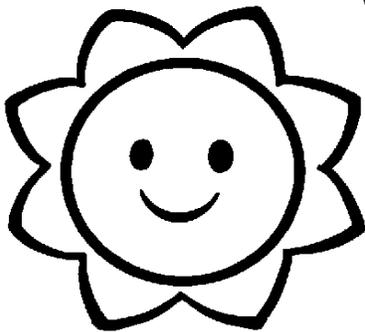
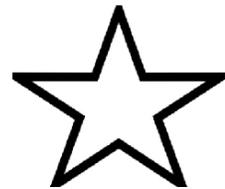
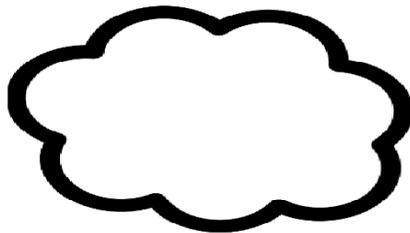
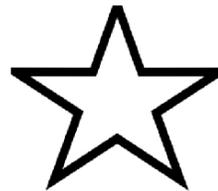
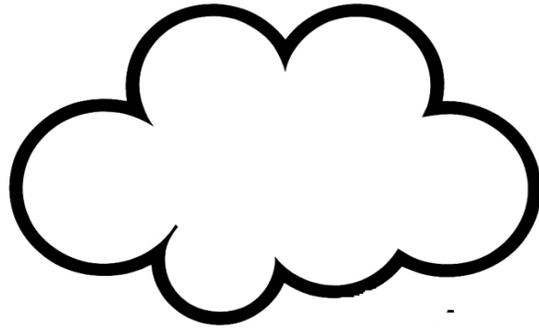
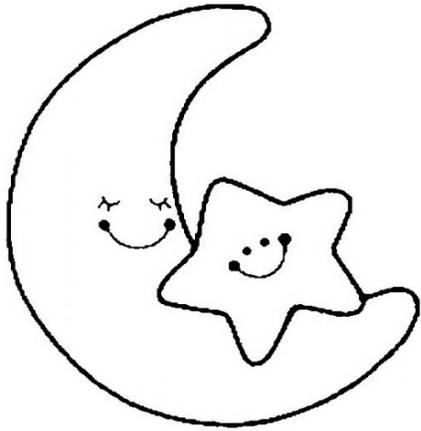
1. Color the planet Earth.

Night

Day



2. Color and cut out the stars, clouds, moon, and sun and glue them on the correct side.



Sun Mobile Craft

Supplies: glue, paper plates, yellow and orange tissue paper squares, yellow or orange yarn, yellow strips of construction paper, yellow and orange crayon, tape or stapler, hole puncher.

Procedure:

1. Put the supplies out.
2. Color the back with yellow and/or orange crayons.
3. Fold the yellow strips of construction paper to create 3D rays. Tape or staple onto plates.
4. Glue tissue paper on the front of the paper plate.
5. Punch hole at the top of the paper plate.
6. Add yarn.
7. Hang up to display.

Sample





Sun Position Inquiry

Supplies: compass or compass app; student observation logs

Procedure:

1. Take the class outside in the morning. Select a spot and tell the students that this will be the spot that we will do our sun observations from. Discuss how to mark the spot (i.e. by the tree) or leave an object to mark the spot.
2. Have students locate the sun. Discuss how to mark where the sun is. (i.e. It's over by the swing set.)
3. Have students turn their back to the sun and describe their shadow.
4. Show the students that the compass is in the East.
5. Students will come back to class and draw their observations.
6. Bring the class back at noon. Make sure you select the same area to do your observations from. Discuss how the sun is now overhead. Ask if the sun moved. (No...the Earth is moving, but it seems like it's the sun moving, because we can't feel the Earth moving)
7. Students will turn their back to the sun and describe their shadow. (It will be much shorter)
8. Show the students that the compass is showing north or south.
9. Students will come back to class and draw their observations.
10. Bring the class back at the end of the day. Make sure you select the same area to do your observations from. Discuss how the sun is now overhead. Ask again if the sun moved. (No...the Earth is moving, but it seems like it's the sun moving, because we can't feel the Earth moving)
11. Students will turn their back to the sun and describe their shadow.
12. Show the students that the compass is showing more west.
13. Students will come back to class and draw their observations.

Repeat on Thursday, so students can determine the same pattern.

Debrief on Friday.

My name is _____.

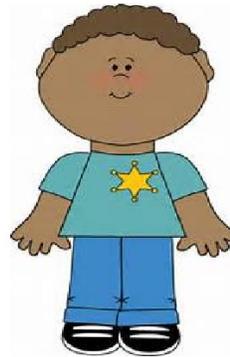
Sun Position Inquiry
Student Observation Log

Using your pencil, draw in the shadow.

Day 1
Morning - _____ a.m.



Day 2
Morning - _____ a.m.



My name is _____.

Sun Position Inquiry
Student Observation Log

Using your pencil, draw in the shadow.

Day 1

Noon – 12 p.m.



Day 2

Noon – 12 p.m.



My name is _____.

Sun Position Inquiry
Student Observation Log

Using your pencil, draw in the shadow.

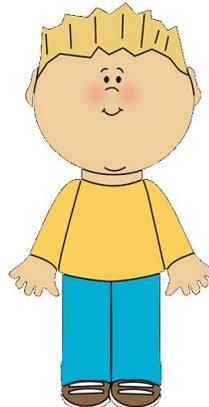
Day 1

Afternoon ____ p.m.



Day 2

Afternoon ____ p.m.



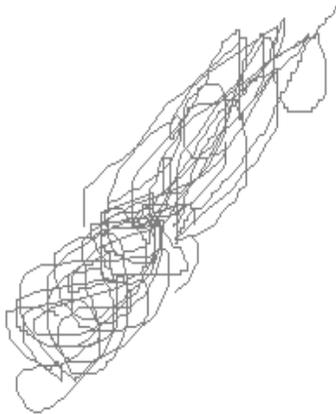
My name is Key.

Sun Position Inquiry
Student Observation Log

Using your pencil, draw in the shadow.

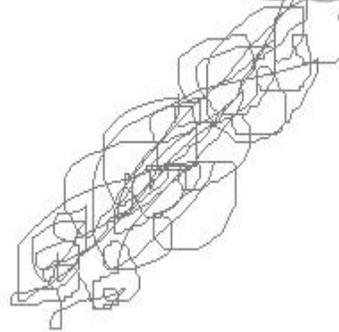
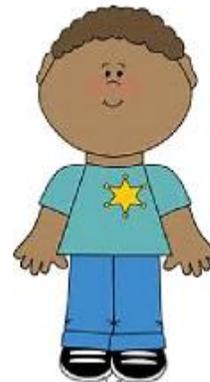
Day 1

Morning - _____ a.m.



Day 2

Morning - _____
a.m.



My name is Key.

Sun Position Inquiry
Student Observation Log

Using your pencil, draw in the shadow.

Day 1
Noon – 12 p.m.



Day 2
Noon – 12 p.m.

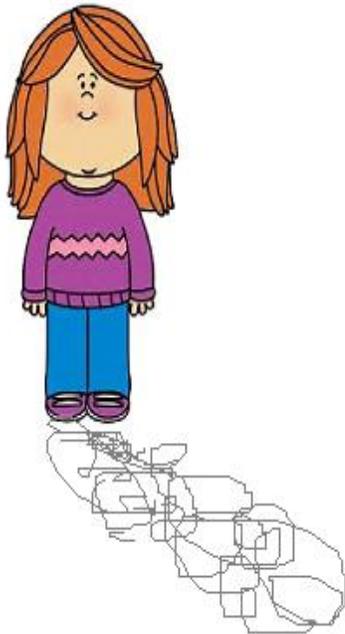


My name is Key.

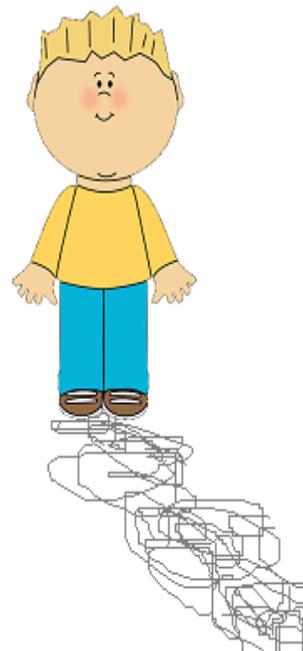
Sun Position Inquiry
Student Observation Log

Using your pencil, draw in the shadow.

Day 1
Afternoon ____ p.m.



Day 2
Afternoon ____ p.m.



My name is _____.

Student Assessment

Color and show where the sun, moon, stars, and clouds go.

Night

Day



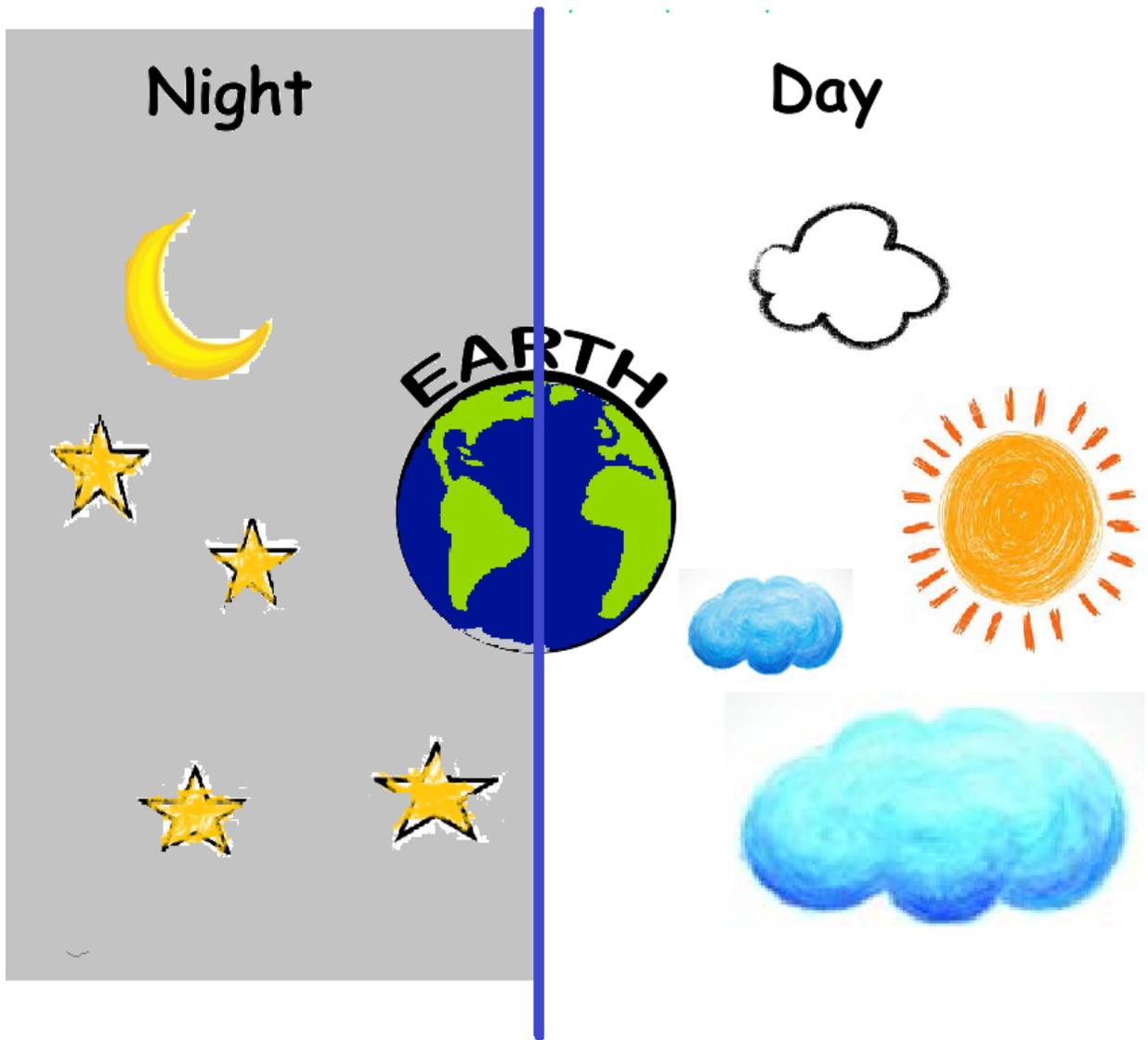
Checklist

- sun
- clouds
- moon
- stars

My name is Key.

Student Assessment

Color and show where the sun, moon, stars, and clouds go.



Checklist

- sun
- clouds
- moon
- stars

For the Teacher

Week 2

Student Objectives: Students observe, describe, and predict patterns of the moon.

Standard(s): 1.ESS1.1 Use observations of the moon to describe patterns that can be predicted.

Essential Question: What patterns does the moon make?

Follow the lessons and pop up links at:

<http://firstgradenextgenerationsscience.weebly.com/weeks-1-9.html>

Procedure:

Monday-

1. Play [video 1](#). Talk about things that you do in the day vs. evening.
2. Play [video 2](#). Review concepts from last week. Open by asking what the students noticed. Direct them to review by asking if there was anything new from the videos that helps them understand the patterns with the sun. Ask students if there was anything from the video that they think will help will patterns with the moon.
3. Tell class to watch the next 2 videos and afterwards you will take guesses on what we are learning this week. Play [video 3](#) and [video 4](#). (Encourage sing-along); read two stories about the moon. (use your favorite classroom stories or choose from "suggested book list". Discuss with a focus why the moon looks different throughout the month. Read some short poems together. [Moon Poems](#). Write a classroom acronym poem. Brainstorm words that relate to the moon using chart paper. Ask for volunteers to do each line. Must start with the first letters of the lines. Students will write it into their poem booklet. (in handout) Collect. Moon Poetry Books-Opportunities to teach RL.1.4, L.1.5, & RF.1.2.

Tuesday- Sing along to [video 1](#), [video 2](#), and [video 3](#). Encourage sing-along-good for vocabulary usage. Brainstorm and add new ideas to the brainstorm chart. This is a good chance to do a formative check. Write a Haiku together. Ask students for suggestions and clap out rhythm together to check before adding it to the poem. Call on others to help shape the line when they are incorrect. (5-7-5) Students will write it down in their poetry booklets. Do the Moon Sand Activity.

Wednesday- Sing along to [video 1](#), [video 2](#), and [video 3](#). Encourage sing-along. Brainstorm and add new ideas to the brainstorm chart. This is a good chance to do a formative check. Write a poem together exploring adjectives and sensory words. Write together with the students. Students will write it down in their poetry booklets. Oreo Moon Lab.

Thursday- Sing along to [video 1](#), [video 2](#), and [video 3](#). Encourage sing-along. Brainstorm and add new ideas to the brainstorm chart. This is a good chance to do a formative check. Write a Cinquain poem together exploring adjectives and sensory words. Write together with the students. Students will write it down in their poetry booklets.

Friday- Set up: Need extra copies of each of the poems from the poem booklets. Need to set up 3-4 private places to do the performance assessments. Cut out the Oreos ahead of time. Use the checklist to mark scores. Sing along to [video 1](#), [video 2](#), and [video 3](#). Encourage sing-along. Students will write a moon poem of their choice as extra credit or for fun practice while students are writing their poems, call up students to take the performance assessment. Use the checklist to track student performance.



My Moon Poetry Booklet

My name is _____.

The Moon



M

Handwriting practice lines for the letter M, consisting of a solid purple top line, a dotted black middle line, and a solid green bottom line.

O

Handwriting practice lines for the letter O, consisting of a solid purple top line, a dotted black middle line, and a solid green bottom line.

O

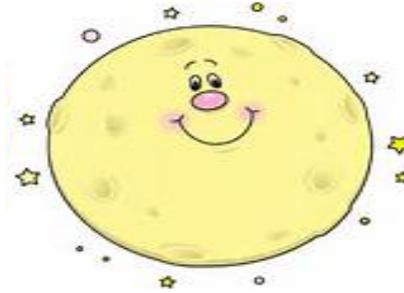
Handwriting practice lines for the letter O, consisting of a solid purple top line, a dotted black middle line, and a solid green bottom line.

N

Handwriting practice lines for the letter N, consisting of a solid purple top line, a dotted black middle line, and a solid green bottom line.

This is an Acronym Poem.

Moon



This is a Haiku Poem.
A Haiku Poem follows a pattern of syllables.
The pattern of syllables is 5-7-5.

A MOON



is as yellow as a

_____ ,
.....

is as white as a

_____ ,
.....

is as crescent as a

_____ ,
.....

is as round as a

_____ ,
.....

is as far as a

_____ ,
.....

is as light as a

_____ ●
.....

Writing poetry while practicing using descriptive and sensory words.

The Moon



This is a cinquain poem.

| | | |
|--------|---------|-----------------------------|
| Line 1 | 1 word | Title |
| Line 2 | 2 words | Description of the Title |
| Line 3 | 3 words | Some Action About the Title |
| Line 4 | 4 words | Feeling About the Title |
| Line 5 | 1 word | Synonym for title |

Moon Sand

Supplies: flour, food dye, cooking oil, plastic bins, scoops, sandwich bags (optional), lg. mixing bowls, measuring cups, plastic forks

Procedure:

1. Use a ratio of 1 cup of oil per 8 cups of flour. 1:8
or ¼ cup of oil per 2 cups of flour per color ¼:2
2. Measure oil into different bowls
3. Add different colors of dye into each mixing bowl
4. Mix the dye and oil.... when the dye beads, add the flour and mix with a fork.
5. Use in a sensory area, or outside. Put the sand into bins and let the students time to play and explore with the scoops.

Ideas: Let the students take some home in the sandwich bags or donate the sand to a class with students with autism or sensory needs, add to your sensory area, if you have one.

When mixing, you can prepare in advance to let the whole class mix at the same time, you can mix directly into plastic bins instead of mixing bowls. You can mix one color at a time and call up small groups as a center.

Sample



Oreo Moon Lab

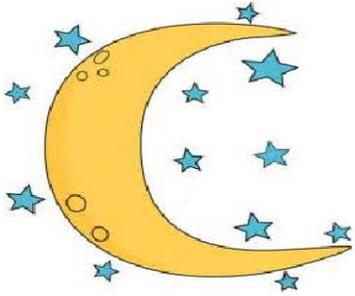
Note: If the Oreos are refrigerated beforehand, the icing stays on better when the Oreos are separated. You can do this per student, in pairs, or small groups.

Supplies: 8 Oreo Cookies per group of students; plastic spoons; handout

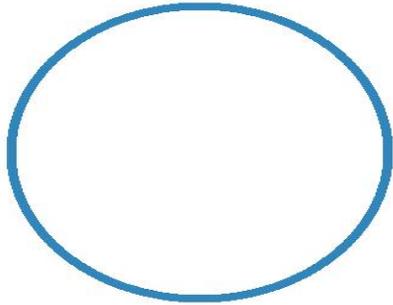
Procedure:

1. Pass out the supplies.
2. Demonstrate how to slowly twist the Oreo to maximize the frosting on one side. Congratulate students that do it right. You will have some cookie losses.
3. Hang up the “Phases of the Moon” anchor chart. (included)
4. Students will use the spoons to create the phases of the moon out of the frosting.
5. Arrange on the “Phases of the Moon” handout.

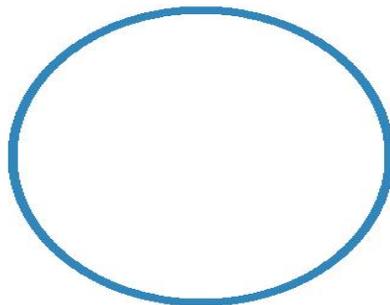
My name is _____.



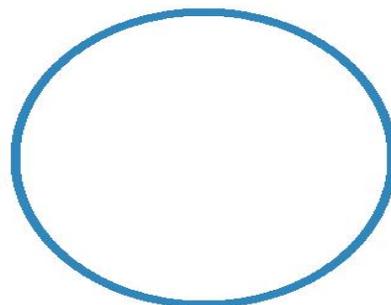
Phases of the Moon with Oreo cookies



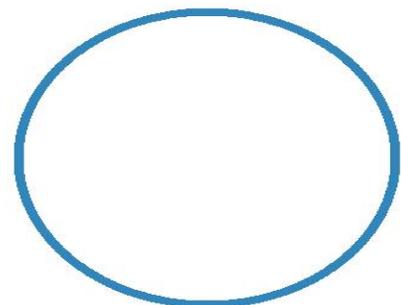
new
moon



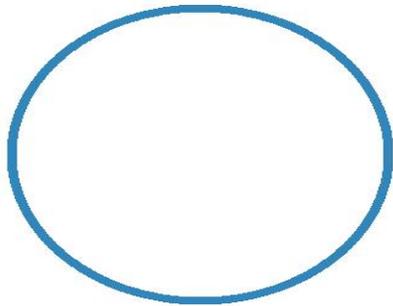
waxing
crescent



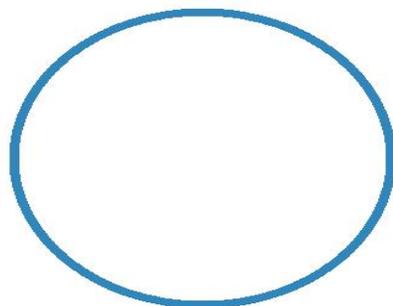
first
quarter



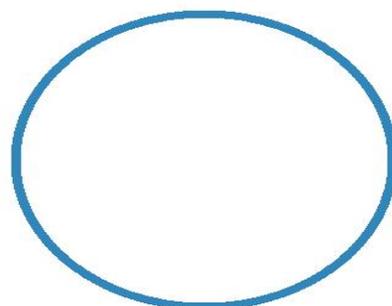
waxing
gibbous



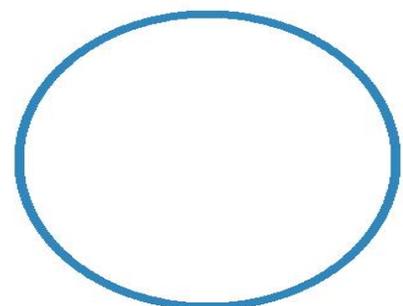
full
moon



waning
gibbous



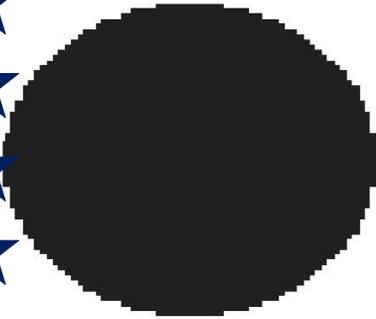
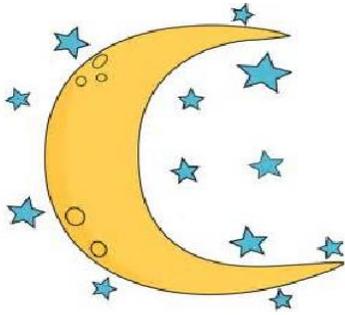
last
quarter



waning
crescent

Phases of the Moon

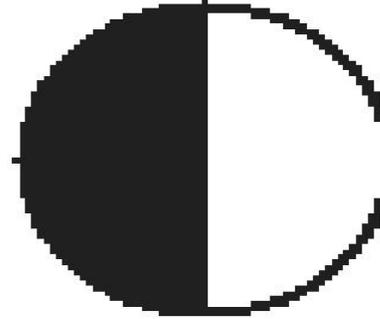
with Oreo cookies



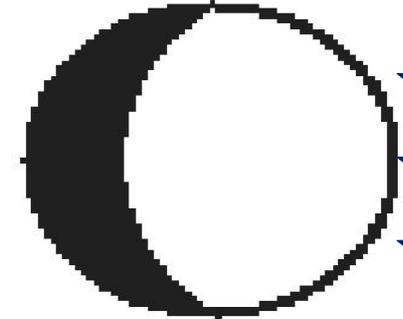
new moon



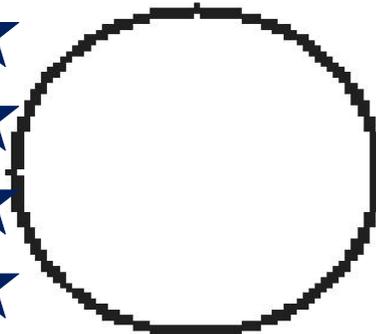
waxing crescent



first quarter



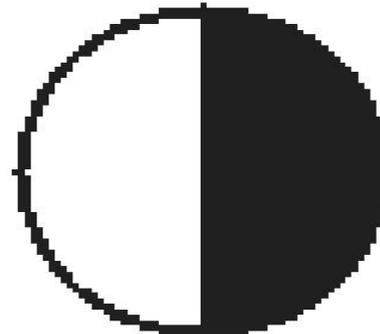
waxing gibbons



full moon



waning gibbons



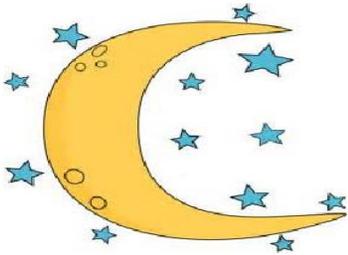
last quarter



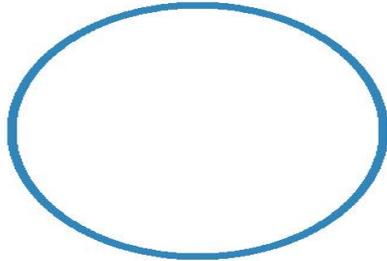
waning crescent

My name is _____.

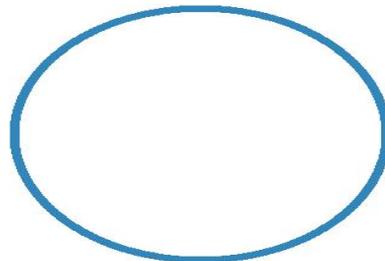
Performance Assessment: Place the Oreo into the matching circle.



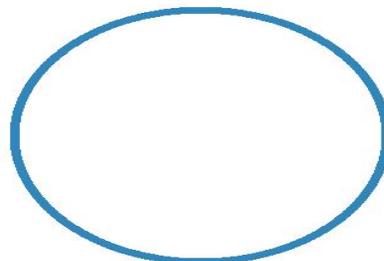
Phases of the Moon with Oreo cookies



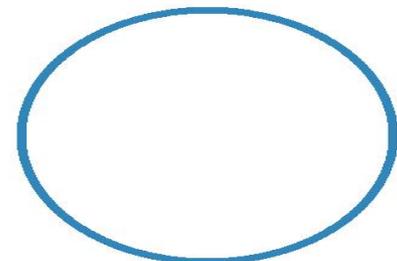
new
moon



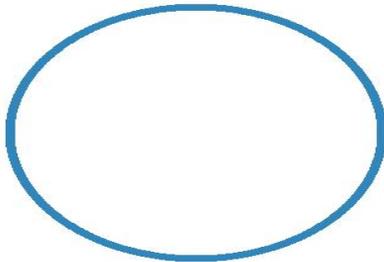
waxing
crescent



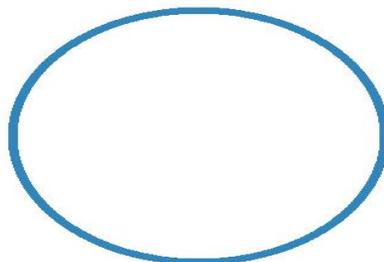
first
quarter



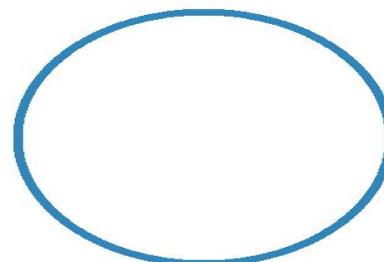
waxing
gibbons



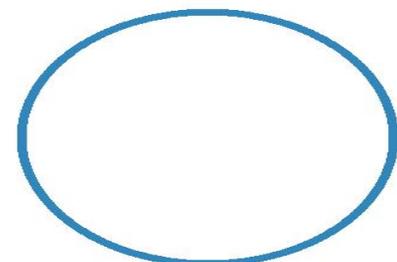
full
moon



waning
gibbons



last
quarter



waning
crescent

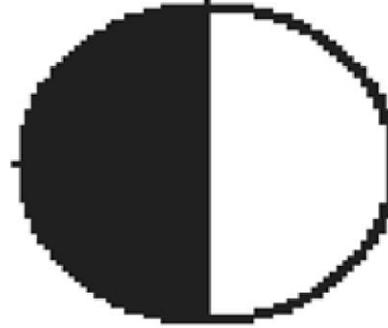
Cut Oreos out and have students match into the correct moon phase.



new moon



waxing crescent



first quarter



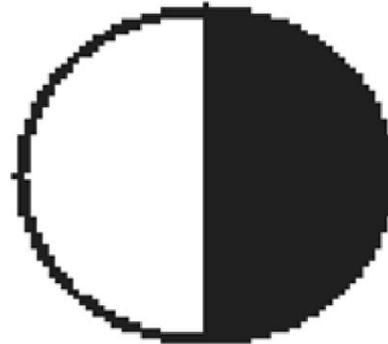
waxing gibbous



full moon



waning gibbous



last quarter



waning crescent

