

Unit 3—Weather and Seasons (FOSS® Air and Weather) Earth Science**Essential Question: What are some of the changes we notice between seasons?****Major Understandings:** *Quoted from New York State Performance Indicators*

(Note: Correlation is provided at the level of FOSS “Investigation & Part.” All “Steps” of an investigation must be completed to meet the standard.)

PS 1.1 Describe patterns of daily, monthly, and seasonal changes in the environment

1.1a Natural cycles and patterns include:

- Earth spinning around once every 24 hours (rotation), resulting in day and night.
- Earth moving in a path around the Sun (revolution), resulting in one Earth year.
- the length of daylight and darkness varying with the seasons.
- weather changing from day to day and through the seasons.
- the appearance of the Moon changing as it moves in a path around Earth to complete a single cycle.

1.1b Humans organize time into units based on natural motions of Earth:

- second, minute, hour
- week, month

1.1c The Sun and other stars appear to move in a recognizable pattern both daily and seasonally.

PS 2.1 Describe the relationship between air, water and land on Earth.

2.1a Weather is the condition of the outside air at a particular moment.

2.1b Weather can be described and measured by:

- temperature.
- wind speed and direction.
- form and amount of precipitation.
- general sky conditions (cloudy, sunny, partly cloudy).

PS 3.1 Observe and describe properties of materials using appropriate tools.

3.1g Some properties of an object are dependent on the conditions of the present surroundings in which an object exists. For example:

- temperature – hot or cold
- lighting – shadows, color
- moisture – wet or dry

Grade 1

PS 4.2 Observe the way one form of energy can be transferred into another form of energy present in common situations (e.g., mechanical to heat energy, mechanical to electrical energy, chemical to heat energy).

4.2a Everyday events involve one form of energy being changed to another.

- animals convert food to heat and motion
- the Sun's energy warms the air and water

The following NYS Performance Indicators are also addressed in **FOSS[®] Air and Weather**:

PS 3.1 Observe and describe properties of materials using appropriate tools.

3.1b Matter has properties (color, hardness, odor, sound, taste, etc.) that can be observed through the senses.

PS 3.2 Describe chemical and physical changes, including changes in states of matter.

3.2a Matter exists in three states: solid, liquid, gas.

- solids have a definite shape and volume
- liquids do not have a definite shape but have a definite volume
- gases do not hold their shape or volume

In order to fully address the theme of the NYC Scope and Sequence and the NYS Performance Indicators for seasonal patterns of change, the recommended sequence of the FOSS units for Grade 1 is:

Unit 1 – Air and Weather

Unit 2 – Solids and Liquids

Unit 3 – Insects

This will allow the collection of seasonal weather data in Fall, Winter and Spring. Weather graphs are created and compared in Investigation 4, Part 2.

In addition, this will ensure that the class has more than one opportunity to make night sky observations to create a Moon Calendar. (Moon observations are subject to daily weather variations and may be obscured by cloudy and rainy Spring weather.)

Please review the notes preceding the lessons for timing:

- Lessons 25 and 26 through 31: Seasonal Weather Calendars
- Lessons 32 through 34: The Night Sky

Grade 1

Consult the FOSS[®] Air and Weather Guide:**Overview**

Science Background, pp. 3-6. Air (gas) as matter and weather (the description of what is happening in the air around us on Earth) are explored in Unit 3: Weather and Seasons, FOSS[®] Air and Weather. By exploring the physical properties of air and wind, observing weather and examining weather data, students will become meteorologists, using tools to observe and collect weather data. The sequence of the activities provides opportunities for free exploration that will enhance and deepen understanding of student experiences involving more “formal” data collection and analysis. This perspective is addressed in the Overview: Science for Young Children, and Organizing the Classroom sections. Note also that this module uses both whole class and center activities. A FOSS “Center” investigation is supervised experience under the direction of an adult.

Materials

There are 2 boxes for this kit. Boxes 1 & 2 contain Permanent and Consumable materials and equipment. Refer to the notes on p.3 for information on storing the kit equipment.

“Materials Supplied by the Teacher” (items not included in your kit), pp. 4-5;

“Preparing a New Kit,” pp. 6-7;

“Preparing the Kit for Your Classroom,” pp. 8-9.

- **View the FOSS Air and Weather Module Introduction and Before You Begin segments of the FOSS Teacher Preparation Video / DVD (also available online at <http://www.fossweb.com/modulesK-2/AirandWeather/index.html> .)**
- **Collect the “Materials Supplied by the Teacher” needed to prepare a new kit.** Many items are art supplies that will be gathered from your classroom. A few grocery items are needed for Investigations 1 and 3.

Investigation 1: Exploring Air

- Paper napkins: 6 inch square (SINGLE PLY works best)

Investigation 3: Wind Explorations

- Liquid dishwashing detergent (for example *Dawn* or *Joy*) for making bubble solution.
- Light corn syrup (grocery store) or glycerine (pharmacy) for making bubble surface stronger.

Also:

- Fan or Hair dryer (with variable speeds) for indoor “wind.”

Grade 1

- **Follow the link: http://www.delta-education.com/science/foss/foss_msdms.aspx to check for Material Safety Data Sheets for Grade 1 kits.**
Obtain the MSDS sheets for the Green Food Coloring used in Investigation 1 and the Triethyl Phosphate (the red liquid) in the working thermometer.
- **A list of items used in FOSS kits that contain latex can be downloaded at http://www.delta-education.com/science/foss/foss_msdms.aspx .**

Prepare for Moon observations and night weather recordings.

Refer to Getting Ready, p. 20, Step 1 of **Investigation 4: Looking for Change, Part 3: The Night Sky**. Schedule the start of this Investigation on the day of the third quarter Moon. **On the third day after the third-quarter Moon, the Moon will rise about 3:00 a.m. and set about 3:00 p.m. The Moon will be a waning crescent and should be clearly visible in the southwest sky on a clear day.** Consult a newspaper or visit The Time Services Department of the U.S. Naval Observatory for **local sunrise/sunset and moonrise/moonset data**:

<http://www.usno.navy.mil/USNO/astronomical-applications/data-services/rs-one-day-us>

(This website has been updated since it's original URL was published in the FOSS Air and Weather Teacher Guide.)

You may need to interrupt your schedule of Investigation 3: Wind Explorations to introduce observations of the night sky.

For 2010, there is a FULL moon on April 28, 2010; the Third Quarter Moon is May 6, 2010; Moonrise is 1:59 AM on May 6 (this is Eastern Daylight time NOT Daylight Savings time!); Moonset will be 12:50 PM on May 6. The Moonrise on the following days is approximately 30 min later EACH DAY.

The next full Moon is May 27, 2010 – This lunar cycle is too late in the school year to observe, record and analyze Moon data before year's end.

Consider Recording Observations:

Download the Science Notebook Folio on the Teacher Resources page at www.fossweb.com/NYC for more information. Focus/Inquiry questions are found in the “At A Glance” Chart for each Investigation. Use of a student notebook will reinforce the standards addressed in Unit 3 which ask students to “observe,” “describe,” “illustrate,” “record,” and “compare” the properties of air and weather data.

Consider “Interdisciplinary Extensions” in Language Arts, Math, Art and Science to accompany this module:

See Investigation 2: Observing Weather, p. 28: Interdisciplinary Extensions, Language Extensions: “Create Meteorologist Tool Kits.”

Grade 1

Review suggestions for fiction and nonfiction student reading in the Resources section of the Solids and Liquids Teacher Guide including:

Can You See the Wind? by Allan Fowler. Children's Press. Danbury, CT. 1999.

The Cloud Book by Tomie DePaola. Holiday House. New York. 1998.

Cloudy With a Chance of Meatballs by Judi Barrett. Aladdin Books, Macmillan. New York. 1992.

Grade 1

	<p>Lesson 1 (45 min) Objective(s):</p> <ul style="list-style-type: none"> • Pre-assessment (p.12, Step 6 of the Student Investigation). • Air is something real and is called matter. • Air takes up space. • Air interacts with objects. 	<p>Alignment with NYS Core Curriculum: PS 3.1b; PS 3.2a</p>	
WEEK 1	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Note: A Pre-assessment is included in this Investigation. See Inv.1 Exploring Air, Part 1: Air is There, p. 9, Step 3 and p. 12, Step 6. – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 1: Air is There, Materials and Getting Ready, pp. 8-10. – Teacher Guide, Assessment Folio, pp. 1-12 – Kit preparation: see Teacher Guide, Materials, pp. 1-10 and Teacher Preparation Video or DVD (or view at www.fossweb.com/nyc) – Note: see Teacher Guide, Materials, p. 4-5 for Materials Supplied by the Teacher – Gather materials as noted above for Investigations 1, 3, and 4. – Review the Overview folio of the Teacher Guide taking special note of pp. 3-6: Science Background; pp. 8-9: Science for Young Children pp. 10-11: Organizing the Classroom; p. 17: Safety in the Classroom; p.18: Air and Weather Module Matrix – Consider Science Notebooks: Download the FOSS Science Notebooks folio at www.fossweb.com/nyc . – Make copies for student notebooks. – www.fossweb.com/NYC – Check website for interactive simulations, Audio Stories, to write questions to a scientist, for teaching tips, and other websites to support teaching Air and Weather. 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 1: Air is There, pp. 11-12, Steps 1-5 – Investigation Duplication Master: Teacher Sheet No. 1 (Letter to Parents) – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Notebook Options:</p> <ol style="list-style-type: none"> 1. Investigation Duplication Masters: Student Sheets No. 2-7; or 2. Investigation Duplication Masters copied from sample consumable Student Notebook included in the NYC Enhancement Package; or 3. “Black Marble” or other student notebook. Have students record independently or glue in Investigation Duplication Masters sheets as desired. <p>Note: The Focus Question: “How does air interact with objects?” may be used for student notebook entries.</p> <p>Note: The Letter to Parents in your Teacher Guide informs parents and caregivers about upcoming experiences for students. Two resources found on fossweb.com will help you connect parents and caregivers to student learning.</p> <p><i>Log on to www.fossweb.com/nyc: Go to Grade 1, click on Air and Weather. Click on “Teacher/Parent Info”:</i></p> <ol style="list-style-type: none"> 1. Download the “FOSS® at Home” Folio. 2. Download the “Home School Connection” PDF file. 	<p style="text-align: center;">Homework/ Extra Practice</p> <p>Send home Letter to Parents.</p>

Grade 1

WEEK 1 (continued)	Lesson 2 (45 min) Objective(s): <ul style="list-style-type: none"> • Air is something real and is called matter. • Air takes up space. • Air interacts with objects. 		Alignment with NYS Core Curriculum: PS 3.1b; PS 3.2a
	Advanced Planning/ Notes to Teacher <ul style="list-style-type: none"> – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 1: Air is There, Materials and Getting Ready pp. 8-10 	Investigation/Activity <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 1: Air is There, pp. 11-12, Steps 6-9 – Investigation Duplication Master: Teacher Sheet No. 1 (Letter to Parents) – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question: “How does air interact with objects?” may be used for student notebook entries.</p>	Homework/ Extra Practice

Grade 1

WEEK 1 (continued)	Lesson 3 (45 min) Objective(s): <ul style="list-style-type: none"> • Air is matter. • Air takes up space. • Air can be captured. 		Alignment with NYS Core Curriculum: PS 3.1b; PS 3.2a
	Advanced Planning/ Notes to Teachers <ul style="list-style-type: none"> – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 2: Air Under Water, Materials and Getting Ready, pp. 13-14 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 2: Air Under Water, pp. 15-16, Steps 1-9 – Investigation Duplication Master: Teacher Sheet No. 8 – Investigation Duplication Master: Air and Weather Journal, pp. 1-3 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question: “How can I keep a paper towel dry underwater?” may be used for student notebook entries.</p> <p>Rotate half the class through the center.</p>	<p style="text-align: center;">Homework/ Extra Practice</p>

Grade 1

	<p>Lesson 4 (45 min) Objective(s):</p> <ul style="list-style-type: none"> • Air is matter. • Air takes up space. • Air can be captured. 	<p>Alignment with NYS Core Curriculum: PS 3.1b; PS 3.2a</p>	
<p>WEEK 2</p>	<p>Advanced Planning/ Notes to Teacher</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 2: Air Under Water, Materials and Getting Ready, pp. 13-14 – www.fossweb.com/NYC – Check website for interactive simulations, Audio Stories, to write questions to a scientist, for teaching tips, and other websites to support teaching Air and Weather. 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 2: Air Under Water, pp. 15-16, Steps 1-9 and 10, 11 – Investigation Duplication Master: Teacher Sheet No. 8 – Investigation Duplication Master: Air and Weather Journal, pp. 1-3 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question: “How can I keep a paper towel dry underwater?” may be used for student notebook entries.</p> <p>Rotate the remainder of the class through the center. Conduct the Wrap-Up.</p>	<p style="text-align: center;">Homework/Extra Practice</p>

Grade 1

WEEK 2 (continued)	Lesson 5 (45 min) Objective(s): <ul style="list-style-type: none"> • Air is all around objects. • Air resistance affects how things move. 		Alignment with NYS Core Curriculum: PS 3.1b; PS 3.2a
	Advanced Planning/ Notes to Teachers <ul style="list-style-type: none"> – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 3: Parachutes, Materials and Getting Ready, pp. 17-18 	Investigation/Activity <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 3: Parachutes, pp. 19-20, Steps 1-9 – Investigation Duplication Master: Air and Weather Journal, pp. 4 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How does a parachute work?” “How does air affect how a parachute floats to the ground?” may be used for student notebook entries.</p>	Homework/Extra Practice Home/School Connection, Student Sheet No. 41

Grade 1

WEEK 2 (continued)	Lesson 6 (45 min) Objective(s): <ul style="list-style-type: none"> • Air is matter and takes up space. • Air can be compressed. • The pressure from compressed air can move things. 		Alignment with NYS Core Curriculum: PS 3.1b; PS 3.2a
	Advanced Planning/ Notes to Teachers <ul style="list-style-type: none"> – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 4: Pushing on Air, Materials and Getting Ready, pp. 21-22 	Investigation/Activity <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 4: Pushing on Air, pp. 23-26, Steps 1-15 – Investigation Duplication Master: Air and Weather Journal, pp. 5-6 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question: “What happens when I push air into a smaller space?” may be used for student notebook entries.</p>	Homework/Extra Practice

Grade 1

	<p>Lesson 7 (45 min) Objective(s):</p> <ul style="list-style-type: none"> • Air is matter and takes up space. • Air pressure can move water. 	<p>Alignment with NYS Core Curriculum: PS 3.1b; PS 3.2a</p>	
WEEK 3	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 5: Air and Water Fountain, Materials and Getting Ready, pp. 27-29 – www.fossweb.com/NYC – Check website for interactive simulations, Audio Stories, to write questions to a scientist, for teaching tips, and other websites to support teaching Air and Weather. 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 5: Air and Water Fountain, pp. 30-33, Steps 1-16 – Investigation Duplication Master: Air and Weather Journal <i>There is no journal page for this investigation. You may wish to create your own, or make a class poster.</i> – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can I use air to push water around a system?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/Extra Practice</p>

Grade 1

WEEK 3 (continued)	Lesson 8 (45 min) Objective(s): <ul style="list-style-type: none"> • Air can be compressed. • The pressure from compressed air can move things. 		Alignment with NYS Core Curriculum: PS 3.1b; PS 3.2a
	Advanced Planning/ Notes to Teachers <ul style="list-style-type: none"> – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 6: Balloon Rockets, Materials and Getting Ready, pp. 34-35 – Teacher Guide Science Stories folio, pp. 1-3 	Investigation/Activity <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 6: Balloon Rockets, pp. 36-38, Steps 1-10 – Investigation Duplication Master: Air and Weather Journal <i>There is no journal page for this investigation. You may wish to create your own, or make a class poster.</i> – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question: “How can I use air to push water around a system?” may be used for student notebook entries.</p>	Homework/Extra Practice

Grade 1

WEEK 3 (continued)	<p>Lesson 9 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Air can be compressed. • The pressure from compressed air can move things. 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 3.1b; PS 3.2a</p>	
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 1: Exploring Air, pp. 1-7 – Teacher Guide Inv. 1: Exploring Air, Part 6: Balloon Rockets, Materials and Getting Ready, pp. 34-35 – Teacher Guide Science Stories folio, pp. 1-3 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 1: Exploring Air: Part 6: Balloon Rockets, pp. 36-38, Steps 1-10 – Investigation Duplication Master: Air and Weather Journal <i>There is no journal page for this investigation. You may wish to create your own, or make a class poster.</i> – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question: “How can I use air to push water around a system?” may be used for student notebook entries.</p> <p>Read Science Stories: pp. 3-6, <i>What is All around Us?</i></p> <p>For link to the Air and Weather Science Stories Audio Stories, log on to www.fossweb.com/nyc: Go to Grade 1, click on Air and Weather. Click on “Media”; click on Audio Stories.</p>	<p style="text-align: center;">Homework/Extra Practice</p> <p>Math Extension A Student Sheet No. 33</p>
<p>Prepare to “Create Meteorologist Tool Kits.” See Investigation 2: Observing Weather, p. 28: Interdisciplinary Extensions, Language Extensions:</p> <ul style="list-style-type: none"> • Prepare book cover and pocket pages • Copy Investigation Duplication Masters Nos. 12, 14, 15, 16, 17, 23 			

Grade 1

	<p>Lesson 10 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Weather describes conditions of the air outside. • Meteorologists are scientists who study the weather. • Scientific journals record what is observable. 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 1.1a, b; PS 2.1a, b</p>	
WEEK 4	<p>Advanced Planning/Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 2: Observing Weather, pp. 1-7 – Teacher Guide Inv. 2: Observing Weather, Part 1: Weather Calendars, Materials and Getting Ready, pp. 8-10 – www.fossweb.com/NYC – Check website for interactive simulations, Audio Stories, to write questions to a scientist, for teaching tips, and other websites to support teaching Air and Weather. 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 2: Observing Weather: Part 1: Weather Calendars, pp. 11-13, Steps 1-7 – Investigation Duplication Master: Teacher Sheet No. 9 – Investigation Duplication Master: Air and Weather Journal, p. 7 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we keep a record of daily weather conditions?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/Extra Practice</p>

Grade 1

WEEK 4 (continued)	Lesson 11 (45 min) Objective(s): <ul style="list-style-type: none"> • Weather describes conditions of the air outside. • Meteorologists are scientists who study the weather. • Scientific journals record what is observable. 		Alignment with NYS Core Curriculum: PS 1.1a, b; PS 2.1a, b
	Advanced Planning/ Notes to Teachers <ul style="list-style-type: none"> – Teacher Guide Inv. 2: Observing Weather, pp. 1-7 – Teacher Guide Inv. 2: Observing Weather, Part 1: Weather Calendars, Materials and Getting Ready, pp. 8-10 	Investigation/Activity <ul style="list-style-type: none"> – Investigation 2: Observing Weather: Part 1: Weather Calendars, pp. 11-13, Steps 8-13 – Investigation Duplication Master: Teacher Sheet No. 9 – Investigation Duplication Master: Air and Weather Journal, p. 7 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we keep a record of daily weather conditions?” may be used for student notebook entries.</p>	Homework/ Extra Practice

Grade 1

WEEK 4 (continued)	<p>Lesson 12 (45 min) Objective(s):</p> <ul style="list-style-type: none"> • Temperature describes how hot or cold the air is. • Temperature is measured with a thermometer. • The unit used to measure temperature is degrees Celsius (°C) or degrees Fahrenheit (°F). 	<p>Alignment with NYS Core Curriculum: PS 2.1a, b; PS 3.1g</p>	
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 2: Observing Weather, pp. 1-7 – Teacher Guide Inv. 2: Observing Weather, Part 2: Measuring Temperature, Materials and Getting Ready, pp. 14-16 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 2: Observing Weather: Part 2: Measuring Temperature, pp. 17-19, Steps 1-12 – Investigation Duplication Master: Student Sheet No. 10 or 11 – Investigation Duplication Master: Student Sheet No. 14 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How does a thermometer work to measure the temperature?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/ Extra Practice</p> <p>Math Extension A – Student Sheet No. 35</p>

When conducting this Unit in the Fall, Lesson 25 should be placed here.

Grade 1

	<p>Lesson 13 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • There are three main types of clouds: cirrus, cumulus, and stratus. • Clouds are made of water drops. • Wind moves clouds in the sky. 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 2.1b</p>	
WEEK 5	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 2: Observing Weather, pp. 1-7 – Teacher Guide Inv. 2: Observing Weather, Part 3: Watching Clouds, Materials and Getting Ready, pp. 20-21. – Teacher Guide Science Stories folio, pp. 4-5 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 2: Observing Weather: Part 3: Watching Clouds, pp. 22-23, Steps 1-6 – Investigation Duplication Master: Student Sheet No. 12 – Investigation Duplication Master: Student Sheet No. 14 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How does a thermometer work to measure the temperature?” may be used for student notebook entries.</p> <p>Read Science Stories: pp. 7-13, <i>What’s the Weather Today?</i></p> <p>For link to the Air and Weather Science Stories Audio Stories log on to www.fossweb.com/nyc: Go to Grade 1, click on Air and Weather. Click on “Media”; click on Audio Stories.</p>	<p style="text-align: center;">Homework/ Extra Practice</p>

Grade 1

WEEK 5 (continued)	<p>Lesson 14 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • There are three main types of clouds: cirrus, cumulus, and stratus. • Clouds are made of water drops. • Wind moves clouds in the sky. 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 2.1b</p>	
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 2: Observing Weather, pp. 1-7 – Teacher Guide Inv. 2: Observing Weather, Part 3: Watching Clouds, Materials and Getting Ready, pp. 20-21. – Teacher Guide Science Stories folio, pp. 4-5 	<p>Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 2: Observing Weather: Part 3: Watching Clouds, pp. 22-23, Steps 7-8 – Investigation Duplication Master: Student Sheet No. 12 – Investigation Duplication Master: Student Sheet No. 14 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How does a thermometer work to measure the temperature?” may be used for student notebook entries.</p> <p>Read Science Stories: pp. 7-13, <i>What’s the Weather Today?</i></p> <p>For link to the Air and Weather Science Stories Audio Stories log on to www.fossweb.com/nyc: Go to Grade 1, click on Air and Weather. Click on “Media”; click on Audio Stories.</p>	<p>Homework/ Extra Practice</p> <p>Home/School Connection, Student Sheet No. 42</p>

Grade 1

WEEK 5 (continued)	<p>Lesson 15 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Meteorologists use rain gauges to measure how much rain or snow has fallen. • Natural resources of water include streams, rivers, lakes (fresh water), and the oceans (salt water). 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 2.1b; PS 3.1g</p>	
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 2: Observing Weather, pp. 1-7 – Teacher Guide Inv. 2: Observing Weather, Part 4: Measuring Rain, Materials and Getting Ready, pp. 24-25 	<p>Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 2: Observing Weather: Part 4: Measuring Rain, pp. 26-27, Steps 1-4 – Investigation Duplication Master: Teacher Sheet No. 13 – Investigation Duplication Master: Air and Weather Journal, p. 8 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How does a thermometer work to measure the temperature?” may be used for student notebook entries.</p>	<p>Homework/ Extra Practice</p>

Grade 1

	<p>Lesson 16 (45 min) (After a measurable rainfall.)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Meteorologists use rain gauges to measure how much rain or snow has fallen. • Natural resources of water include streams, rivers, lakes (fresh water), and the oceans (salt water). 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 2.1b; PS 3.1g</p>	
WEEK 6	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 2: Observing Weather, pp. 1-7 – Teacher Guide Inv. 2: Observing Weather, Part 4: Measuring Rain, Materials and Getting Ready, pp. 24-25 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 2: Observing Weather: Part 4: Measuring Rain, pp. 26-27, Steps 5-10 – Investigation Duplication Master: Teacher Sheet No. 13 – Investigation Duplication Master: Student Sheet No. 14 – Investigation Duplication Master: Air and Weather Journal, p. 8 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question: “How does a thermometer work to measure the temperature?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/Extra Practice</p> <p>Teacher Sheet No. 13 “Make a Rain Gauge” can be sent home if you think students would like to make one of their own.</p>

Grade 1

WEEK 6 (continued)	<p>Lesson 17 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Bubbles are filled with air. • Wind is moving air. • Bubbles can show the changing direction and speed of the wind. 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 4.2a</p>	
	<p>Advanced Planning/Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 3: Observing Weather, pp. 1-7 – Teacher Guide Inv. 3: Wind Explorations, Part 1: Bubbles in the Wind, Materials and Getting Ready, pp. 8-9 – Consider Science Notebooks: Download the FOSS Science Notebooks folio at www.fossweb.com/nyc. – www.fossweb.com/NYC – Check website for interactive simulations, Audio Stories, to write questions to a scientist, for teaching tips, and other websites to support teaching Air and Weather. 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 3: Observing Weather: Part 1: Bubbles in the Wind, pp. 10-11, Steps 1-8 – Investigation Duplication Master: Air and Weather Journal <i>There is no journal page for this investigation. You may wish to create your own or take photos for students to put in their notebooks.</i> – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can bubbles be used to find out about wind speed and direction?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/Extra Practice</p> <p>Home School Connection, Student Sheet No. 43</p>

Grade 1

WEEK 6 (continued)	Lesson 18 (45 min) Objective(s): <ul style="list-style-type: none"> • Meteorologists use a wind scale to describe the strength of the wind. • Meteorologists use anemometers to measure the speed of the wind. 		Alignment with NYS Core Curriculum: PS 2.1b; PS 3.1g	
	Advanced Planning/ Notes to Teachers <ul style="list-style-type: none"> – Teacher Guide Inv. 3: Observing Weather, pp. 1-7 – Teacher Guide Inv. 3: Wind Explorations, Part 2: Wind Speed, Materials and Getting Ready, pp. 12-13 – Teacher Guide Science Stories folio 	Investigation/Activity <ul style="list-style-type: none"> – Investigation 3: Observing Weather: Part 2: Wind Speed, pp. 14-15, Steps 1-8 – Investigation Duplication Master: Teacher Sheet No. 18 – Investigation Duplication Master: Student Sheet No. 14 – Investigation Duplication Master: Student Sheets Nos. 17, 23 – Investigation Duplication Master: Air and Weather Journal, p. 9 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How do people describe the strength of the wind?” may be used for student notebook entries.</p>		Homework/ Extra Practice
Look ahead to Lesson 22 to prepare copies and cut materials for student kites.				

Grade 1

	<p>Lesson 19 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Meteorologists use anemometers to measure the speed of the wind. • A pinwheel provides evidence about how fast the wind is blowing. 	<p>Alignment with NYS Core Curriculum: PS 3.1g; PS 4.2a</p>	
WEEK 7	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 3: Observing Weather, pp. 1-7 – Teacher Guide Inv. 3: Wind Explorations, Part 3: Pinwheels, Materials and Getting Ready, pp. 17-18 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 3: Observing Weather: Part 3: Pinwheels, pp. 19-21, Steps 1-10 – Investigation Duplication Master: Student Sheet No. 19 – Investigation Duplication Master: Air and Weather Journal <i>There is no journal page for this investigation. You may wish to create your own or take photos for students to put in their notebooks.</i> – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we use pinwheels to observe wind speed?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/ Extra Practice</p> <p>Math Extension A – Student Sheet No. 37</p>

Grade 1

<p>Lesson 20 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Meteorologists use wind vanes to observe the direction of the wind. • A wind vane points in the direction the wind is coming from. 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 2.1b; PS 3.1g</p>	
<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 3: Observing Weather, pp. 1-7 – Teacher Guide Inv. 3: Wind Explorations, Part 4: Wind Vanes, Materials and Getting Ready, pp. 22-24 – Teacher Guide Science Stories folio, pp. 6-7 	<p>Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 3: Observing Weather: Part 4: Wind Vanes, pp. 25-27, Steps 1-7 – Investigation Duplication Master: Teacher Sheet No. 20 – Investigation Duplication Master: Student Sheet No. 14 – Investigation Duplication Master: Air and Weather Journal, p. 10 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we use a wind vane to observe the direction of the wind?” may be used for student notebook entries.</p>	<p>Homework/ Extra Practice</p>

Grade 1

	<p>Lesson 21 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Meteorologists use wind vanes to observe the direction of the wind. • A wind vane points in the direction the wind is coming from. 	<p>Alignment with NYS Core Curriculum: PS 2.1b; PS 3.1g</p>	
WEEK 7 (continued)	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 3: Observing Weather, pp. 1-7 – Teacher Guide Inv. 3: Wind Explorations, Part 4: Wind Vanes, Materials and Getting Ready, pp. 22-24 – Teacher Guide Science Stories folio, pp. 6-7 	<p>Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 3: Observing Weather: Part 4: Wind Vanes, pp. 25-27, Steps 8-11 – Investigation Duplication Master: Teacher Sheet No. 20 – Investigation Duplication Master: Student Sheet No. 14 – Investigation Duplication Master: Air and Weather Journal, p. 10 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we use a wind vane to observe the direction of the wind?” may be used for student notebook entries.</p> <p>Read Science Stories: pp. 14-17, <i>Understanding the Weather</i></p> <p>For link to the Air and Weather Science Stories Audio Stories log on to www.fossweb.com/nyc: Go to Grade 1, click on Air and Weather. Click on “Media”; click on Audio Stories.</p>	<p>Homework/ Extra Practice</p>
<p>Science Extension, p. 35: Consider a Kite Festival</p>			

Grade 1

Prepare the Weather Record for Lesson 23, See Inv. 4, Part 1, Getting Ready, Steps 3 and 4 (p. 9)

	<p>Lesson 22 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Wind pushes kites up into the sky. • An anemometer can give evidence that there is a good wind for kite flying. • A wind vane can be used to determine the direction that kites will fly. 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 3.1g; PS 4.2a</p>	
WEEK 8	<p>Advanced Planning/Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 3: Observing Weather, pp. 1-7 – Teacher Guide Inv. 3: Wind Explorations, Part 5: Kites, Materials and Getting Ready, pp. 28-29 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 3: Observing Weather: Part 5: Kites, pp. 30-33, Steps 1-12 – Investigation Duplication Master: Student Sheets Nos. 21, 22 – Investigation Duplication Master: Air and Weather Journal <i>There is no journal page for this investigation. You may wish to create your own or take photos for students to put in their notebooks.</i> – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we use weather instruments to improve kite flying?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/Extra Practice</p> <p>Math Extension B – Student Sheet No. 38</p>

Grade 1

WEEK 8 (continued)	<p>Lesson 23 (45 min) Objective(s):</p> <ul style="list-style-type: none"> • Weather conditions change over time. • Weather observations can be organized and used to make comparisons. 		<p>Alignment with NYS Core Curriculum: PS 1.1a, b; PS 2.1b</p>
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 1: Weather Graphs, Materials and Getting Ready, pp. 8-9 – www.fossweb.com/NYC – Check website for interactive simulations, Audio Stories, to write questions to a scientist, for teaching tips, and other websites to support teaching Air and Weather. 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 1: Weather Graphs, pp. 10-11, Steps 1-7 – Investigation Duplication Master: Teacher Sheet No. 24 – Investigation Duplication Master: Student Sheet No. 25 – Investigation Duplication Master: Air and Weather Journal. <i>There is no journal page for this investigation.</i> – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data collected for a month to look for change?” may be used for student notebook entries.</p>	<p>Homework/ Extra Practice</p>

Grade 1

WEEK 8 (continued)	<p>Lesson 24 (45 min)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> Weather conditions change over time. Weather observations can be organized and used to make comparisons. 	<p>Alignment with NYS Core Curriculum:</p> <p>PS 1.1a, b; PS 2.1b</p>	
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> Teacher Guide Inv. 4: Looking for Change, pp. 1-7 Teacher Guide Inv. 4: Looking for Change, Part 1: Weather Graphs, Materials and Getting Ready, pp. 8-9 www.fossweb.com/NYC – Check website for interactive simulations, Audio Stories, to write questions to a scientist, for teaching tips, and other websites to support teaching Air and Weather. 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> Investigation 4: Looking for Change: Part 1: Weather Graphs, pp. 10-11, Steps 1-7 Investigation Duplication Master: Teacher Sheet No. 24 Investigation Duplication Master: Student Sheet No. 25 Investigation Duplication Master: Air and Weather Journal. <i>There is no journal page for this investigation.</i> Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data collected for a month to look for change?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/ Extra Practice</p> <p>Math Extension B – Student Sheet No. 39</p>

When conducting this Unit in the Fall, Lesson 26 will begin Week 9.

Grade 1

	<p>Lesson 25 (45 min) 1st 4-week weather observation (October) Begin Data Collection</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Daily changes in temperature, precipitation, and weather type can be observed, compared and predicted. • Each season has a typical weather pattern that can be observed, compared and predicted. • The Sun can be seen only in the day. • The Sun heats the Earth during the day. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c; PS 2.1b; PS 4.2a</p>	
WEEK 9	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 2: Comparing the Seasons, Materials and Getting Ready, pp. 12-15 – Teacher Guide Science Stories folio, pp. 8-9 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 2: Comparing the Seasons, pp. 16-18, Steps 1-4 – Investigation Duplication Master: Teacher Sheets Nos. 26, 27, 28 – Investigation Duplication Master: Student Sheet No. 25 – Investigation Duplication Master: Air and Weather Journal, p. 11 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data taken over different seasons to look for change?” may be used for student notebook entries.</p> <p style="text-align: center;">Homework/ Extra Practice</p>	

Grade 1

<p>Lesson 26 (45 min) 1st 4-week weather observation (October) Look for Fall Weather Patterns</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Daily changes in temperature, precipitation, and weather type can be observed, compared and predicted. • Each season has a typical weather pattern that can be observed, compared and predicted. • The Sun can be seen only in the day. • The Sun heats the Earth during the day. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c; PS 2.1b; PS 4.2a</p>	
<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 2: Comparing the Seasons, Materials and Getting Ready, pp. 12-15 – Teacher Guide Science Stories folio, pp. 8-9 	<p>Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 2: Comparing the Seasons, pp. 16-18, Step 5 – Investigation Duplication Master: Teacher Sheets Nos. 26, 27, 28 – Investigation Duplication Master: Student Sheet No. 25 – Investigation Duplication Master: Air and Weather Journal, p. 11 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data taken over different seasons to look for change?” may be used for student notebook entries.</p>	<p>Homework/ Extra Practice</p>

Grade 1

When conducting this Unit in the Fall, Lesson 27 begins the first week of January.

WEEK 9 (continued)	<p>Lesson 27 (45 min) 2nd 4-week weather observation (January) Begin Data Collection</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Daily changes in temperature, precipitation, and weather type can be observed, compared and predicted. • Each season has a typical weather pattern that can be observed, compared and predicted. • The Sun can be seen only in the day. • The Sun heats the Earth during the day. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c; PS 2.1b; PS 4.2a</p>	
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 2: Comparing the Seasons, Materials and Getting Ready, pp. 12-15 – Teacher Guide Science Stories folio, pp. 8-9 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 2: Comparing the Seasons, pp. 16-18, Steps 1-4 – Investigation Duplication Master: Teacher Sheets Nos. 26, 27, 28 – Investigation Duplication Master: Student Sheet No. 25 – Investigation Duplication Master: Air and Weather Journal, p. 11 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data taken over different seasons to look for change?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/ Extra Practice</p>

Grade 1

When conducting this Unit in the Fall, Lesson 28 begins the first week of February.

	<p>Lesson 28 (45 min) 2nd 4-week weather observation (January) Look for Winter Weather Patterns</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Daily changes in temperature, precipitation, and weather type can be observed, compared and predicted. • Each season has a typical weather pattern that can be observed, compared and predicted. • The Sun can be seen only in the day. • The Sun heats the Earth during the day. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c; PS 2.1b; PS 4.2a</p>	
WEEK 10	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 2: Comparing the Seasons, Materials and Getting Ready, pp. 12-15 – Teacher Guide Science Stories folio, pp. 8-9 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 2: Comparing the Seasons, pp. 16-18, Step 5 – Investigation Duplication Master: Teacher Sheets Nos. 26, 27, 28 – Investigation Duplication Master: Student Sheet No. 25 – Investigation Duplication Master: Air and Weather Journal, p. 11 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data taken over different seasons to look for change?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/ Extra Practice</p> <p>Home/School Connection – Student Sheet No. 44</p>

Grade 1

When conducting this Unit in the Fall, Lesson 29 should be rescheduled after the Spring Recess.

	<p>Lesson 29 (45 min) 3rd 4-week weather observation (April) Begin Data Collection</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Daily changes in temperature, precipitation, and weather type can be observed, compared and predicted. • Each season has a typical weather pattern that can be observed, compared and predicted. • The Sun can be seen only in the day. • The Sun heats the Earth during the day. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c; PS 2.1b; PS 4.2a</p>	
<p>WEEK 10</p>	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 2: Comparing the Seasons, Materials and Getting Ready, pp. 12-15 – Teacher Guide Science Stories folio, pp. 8-9 	<p>Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 2: Comparing the Seasons, pp. 16-18, Steps 1-4 – Investigation Duplication Master: Teacher Sheets Nos. 26, 27, 28 – Investigation Duplication Master: Student Sheet No. 25 – Investigation Duplication Master: Air and Weather Journal, p. 11 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data taken over different seasons to look for change?” may be used for student notebook entries.</p>	<p>Homework/ Extra Practice</p>

Grade 1

When conducting this Unit in the Fall, Lesson 30 should be scheduled 4 weeks after the Spring Recess.

WEEK 10 (continued)	<p>Lesson 30 (45 min) 3rd 4-week weather observation (April) Look for Spring Weather Patterns</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Daily changes in temperature, precipitation, and weather type can be observed, compared and predicted. • Each season has a typical weather pattern that can be observed, compared and predicted. • The Sun can be seen only in the day. • The Sun heats the Earth during the day. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c; PS 2.1b; PS 4.2a</p>
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 2: Comparing the Seasons, Materials and Getting Ready, pp. 12-15 – Teacher Guide Science Stories folio, pp. 8-9 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 2: Comparing the Seasons, pp. 16-18, Step 5 – Investigation Duplication Master: Teacher Sheets Nos. 26, 27, 28 – Investigation Duplication Master: Student Sheet No. 25 – Investigation Duplication Master: Air and Weather Journal, p. 11 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data taken over different seasons to look for change?” may be used for student notebook entries.</p>

Grade 1

WEEK 10 (continued)	<p>Lesson 31 (45 min) With 2 or more completed seasonal weather charts.</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Daily changes in temperature, precipitation, and weather type can be observed, compared and predicted. • Each season has a typical weather pattern that can be observed, compared and predicted. • The Sun can be seen only in the day. • The Sun heats the Earth during the day. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c; PS 2.1b; PS 4.2a</p>
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 2: Comparing the Seasons, Materials and Getting Ready, pp. 12-15 – Teacher Guide Science Stories folio, pp. 8-9 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 2: Comparing the Seasons, pp. 16-18, Step 5 – Investigation Duplication Master: Teacher Sheets Nos. 26, 27, 28 – Investigation Duplication Master: Student Sheet No. 25 – Investigation Duplication Master: Air and Weather Journal, p. 11 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “How can we organize weather data taken over different seasons to look for change?” may be used for student notebook entries.</p> <p>Read Science Stories: pp. 18-23, <i>Seasons</i></p> <p>For link to the Air and Weather Science Stories Audio Stories log on to www.fossweb.com/nyc: Go to Grade 1, click on Air and Weather. Click on “Media”; click on Audio Stories.</p>

Grade 1

Consult the website, <http://www.usno.navy.mil/USNO/astronomical-applications/data-services/rs-one-day-us>, to determine the lunar cycle that you will observe each year.

WEEK 10 (continued)	<p>Lesson 32 (45 min) Introduce this lesson on MAY 6, 2010</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Weather occurs at night as well as during the day. • The Moon can be seen sometimes at night and sometimes during the day. It looks different every day, but looks the same again every 4 weeks. • There are more stars in the sky than anyone can easily count. • The Sun and Moon move across the sky during a day and night and appear in different locations in the sky. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c</p>	
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 3: The Night Sky, Materials and Getting Ready, pp. 19-21 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 3: The Night Sky, pp. 22-24, Steps 1-5 – Investigation Duplication Master: Teacher Sheets Nos. 29, 31, 32 – Investigation Duplication Master: Student Sheet No. 30 – Investigation Duplication Master: Air and Weather Journal, p. 12 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “What is in the night sky and how can we monitor and record our observations to look for change?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/ Extra Practice</p>

Grade 1

WEEK 10 (continued)	<p>Lesson 33 (45 min) follows Lesson 32</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Weather occurs at night as well as during the day. • The Moon can be seen sometimes at night and sometimes during the day. It looks different every day, but looks the same again every 4 weeks. • There are more stars in the sky than anyone can easily count. • The Sun and Moon move across the sky during a day and night and appear in different locations in the sky. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c</p>	
	<p>Advanced Planning/Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 3: The Night Sky, Materials and Getting Ready, pp. 19-21 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 3: The Night Sky, pp. 22-24, Steps 6-10 – Investigation Duplication Master: Teacher Sheets Nos. 29, 31, 32 – Investigation Duplication Master: Student Sheet No. 30 – Investigation Duplication Master: Air and Weather Journal, p. 12 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “What is in the night sky and how can we monitor and record our observations to look for change?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/Extra Practice</p>

Grade 1

WEEK 10 (continued)	<p>Lesson 34 (45 min) Conduct this lesson 4 weeks after Lesson 32 (the week of June 7, 2010)</p> <p>Objective(s):</p> <ul style="list-style-type: none"> • Weather occurs at night as well as during the day. • The Moon can be seen sometimes at night and sometimes during the day. It looks different every day, but looks the same again every 4 weeks. • There are more stars in the sky than anyone can easily count. • The Sun and Moon move across the sky during a day and night and appear in different locations in the sky. 	<p>Alignment with NYS Core Curriculum: PS 1.1a, b, c</p>	
	<p>Advanced Planning/ Notes to Teachers</p> <ul style="list-style-type: none"> – Teacher Guide Inv. 4: Looking for Change, pp. 1-7 – Teacher Guide Inv. 4: Looking for Change, Part 3: The Night Sky, Materials and Getting Ready, pp. 19-21 	<p style="text-align: center;">Investigation/Activity</p> <ul style="list-style-type: none"> – Investigation 4: Looking for Change: Part 3: The Night Sky, pp. 22-24, Steps 11-14 – Investigation Duplication Master: Teacher Sheets Nos. 29, 31, 32 – Investigation Duplication Master: Student Sheet No. 30 – Investigation Duplication Master: Air and Weather Journal, p. 12 – Assessment Duplication Masters Nos. 1, 2, 3: Anecdotal Notes and Assessment Checklist <p>Note: The Focus Question “What is in the night sky and how can we monitor and record our observations to look for change?” may be used for student notebook entries.</p>	<p style="text-align: center;">Homework/ Extra Practice</p>

Grade 1

WEEK 10 (continued)	Lesson 35 (45 min) Objective(s): Performance Assessment		Alignment with NYS Core Curriculum: PS 2.1a, b; PS 3.1g
	Advanced Planning/ Notes to Teachers Teacher Guide, Assessment Folio, pp. 6-11	Investigation/Activity <ul style="list-style-type: none"> – Administer the End-of-Module Assessment – Performance Assessment. – Assessment Duplication Masters Nos. 4-5 – Assessment Duplication Master No. 8, Portfolio Assessment Checklist – Anecdotal Notes and Assessment Checklist 	Homework/Extra Practice
	Lesson 36 (45 min) Objective(s): End of Module Assessment		Alignment with NYS Core Curriculum: PS 1.1a, b, c; PS 4.2a
	Advanced Planning/ Notes to Teachers Teacher Guide, Assessment Folio, pp. 6-11	Investigation/Activity <ul style="list-style-type: none"> – Administer the End-of-Module Assessment – Written Assessment. – Assessment Duplication Masters Nos. 6-7 – Assessment Duplication Master No. 8, Portfolio Assessment Checklist – Anecdotal Notes and Assessment Checklist 	Homework/Extra Practice