Seasons Through the Year

LEVEL: Grades PreK-6
SUBJECTS: Language Arts, Science, Social Studies
SKILLS: Classifying, communicating, comparing similarities and differences, constructing media, cooperating, describing, developing vocabulary, discussing, drawing, identifying, listening, matching, observing, perceiving spatial relationships, reading, sequencing, sorting, writing

MATERIALS

List of birth dates of students; calendar (12 months); four skeins of yarn, each a different color; map of North America; world map; four different color cards, with a season name printed on each: spring, summer, fall, winter; drawing materials; scissors; stapler; butcher paper; library picture books about seasons in agricultural and urban areas. **Optional**: a year's worth of magazines.

VOCABULARY

climate, cycle, depend, dormant, equinox, graze, harvest, hibernate, migration, season, solstice, weather

RELATED LESSONS

Let's Celebrate!
Gala Fiesta Jamboree

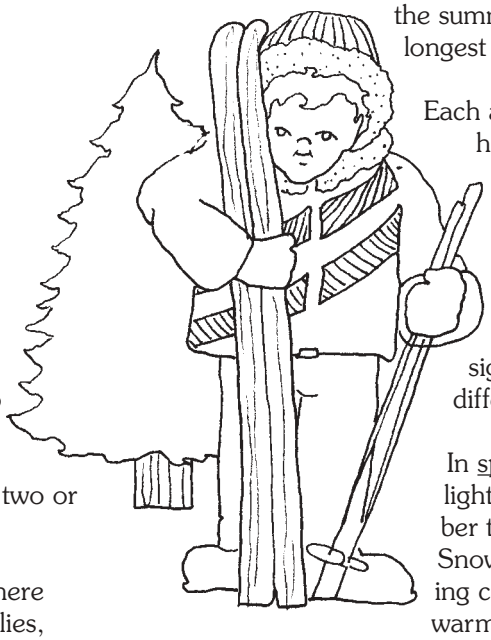
SUPPORTING INFORMATION

Each season brings changes for people, animals and plants. Officially, the beginning and end of each season is based on the tilt of Earth's axis in relation to the sun. The dates for the beginning of each season change yearly by two or three days.

In the Northern Hemisphere where the United States lies, spring begins at the spring (vernal) equinox (about March 21), summer at the summer solstice (about June 21), fall at the autumnal equinox (about September 21), and winter at the winter solstice (about December 21).

In the Southern Hemisphere, however, the seasons are reversed. In Australia, spring begins at what is our autumnal equinox (about September 21), summer at our winter solstice (about December 21), fall at our spring equinox (about March 21), and winter at our summer solstice (about June 21).

Equinoxes are the times at which the sun crosses the equator. Equinox comes from a Latin word meaning *equal night*. The hours of sunlight and darkness are equal throughout the world. Solstices are the points at which the sun is farthest from the equator. The winter solstice is the shortest day of the year, and the summer solstice is the longest day of the year.



Each area of the world has its own seasonal differences. The following information describes changes in areas of North America in which there are significant seasonal differences.

In <u>spring,</u> the hours of light begin to outnumber the hours of dark. Snow melts and flooding can occur. Days get warmer. The soil begins to warm. Soon plants begin to grow. The world is fresh and green. Migrating birds either depart or return. Hibernating animals awake. Most trees grow new leaves. Insects appear and flowers bloom. Farmers prepare the fields and plant seeds. Many animals are born in the spring. Farm animals like cows and

BRIEF DESCRIPTION

To build awareness of seasonal change, students use their own birth dates, a comparison of seasons in different settings, and self-made books.

OBJECTIVES

(Note: All three objectives are appropriate for older students; younger students may accomplish only the first two objectives.)
The student will:
- name the seasons in "cycle" order;
- identify the season in which his or her birth date occurs and describe a seasonal characteristic of the day; and
- describe at least three things that occur in each season in an agricultural area, in their own community, and in an urban area.

ESTIMATED TEACHING TIME

Session One: 45 minutes.
Sessions Two to Five: 30 to 45 minutes each. The most variable time will be when students make their books.

horses can graze outdoors. Spring brings strawberries, asparagus and leeks. Violets, tulips, daffodils, iris, and dandelions are blooming. People take off storm windows and get out their warm-weather clothes. Spring sports start.

Summer is a time of warmer temperatures and long days even though the nights are getting longer relative to the days. Crops are growing. Farmers begin to harvest some crops, such as fresh raspberries, watermelon, corn and tomatoes. Daisies, marigolds and roses are in full bloom. Farm animals graze outdoors. Young animals are growing. Animals and plants prepare for the heat of summer. As plants dry in the heat, grass and forest fires can start from lightning strikes and human carelessness. Food supplies are usually abundant for both animals and people. People dress to stay cool. They enjoy swimming, picnics, camping and other summer activities. Summer brings outdoor theater and concerts to many city parks.

Autumn is the season of warm days and cool nights. It can rain or snow. A hurricane or typhoon can occur. Gardeners plant spring bulbs, and mums bloom. Leaves change color and drop. People call this season fall because of the falling leaves. Farmers harvest apples, carrots, potatoes, pumpkins and many other foods. Some birds migrate. Some animals gather and store food for the winter months ahead. Many people harvest, can, freeze, dry, and store foods to eat during the winter. Some families cut wood to heat their homes during the cold months ahead. People put on storm windows and pull out sweaters, coats and hats. In cold climates, people get their vehicles ready for winter. Farm and wild animals grow heavy coats. The end of autumn is usually marked by the freezing of lakes and streams and prewinter storms.

In winter the daylight hours begin to get longer, but do not yet outnumber the hours of dark. It is the slowest, or "resting," season in the growing world. Snow covers the ground in some areas. Many plants die or lie dormant (rest) through the cold months. Winter squash, nuts, and turnips, as well as poinsettias and carnations, remind us of winter. Some wild animals hibernate. Farmers use stored hay, silage (chopped corn or hay), and ration (ground feed) to feed farm animals. Animals may need shelter from the weather. People dress warmly, heat their houses, and enjoy winter sports. In some areas they plow and shovel snow.

Some regions of Earth do not have all four seasons. In some parts of the tropics, for example, the temperature changes very little. The amount of rainfall varies greatly giving these regions wet and dry seasons. In polar regions, the sun shines almost all of the time in the summer, creating a light season. In the winter, there is very little sun, creating a dark season.

Part of the art of staying alive through the winter is knowing how to make food that grows in summer and fall last through the winter. To solve this challenge some living beings sleep through the winter (hibernate), move to other (usually warmer) places (migrate), or figure out a way to keep and store foods to eat during winter.

GETTING STARTED

Make four cards, each with a season name. Use a differently colored card for each season, such as green for spring or brown for autumn. Gather the four skeins of yarn (a different color for each season), calendar, seasonal literature books, drawing materials, and butcher paper (select colors to represent the different seasons). In Session Five, Step 2, choose bookmaking option A or B and gather materials for students to make their books. **Optional**: Gather a year's worth of magazines.

PROCEDURE

(Note: If there are students in the group who do not celebrate birthdays, explain that this lesson uses birth dates and seasons, but is not about celebrating birthdays.)

SESSION ONE

1. Holding up one calendar month at a time as a guide, help students arrange themselves side by side in a row according to their birth dates, January through December. Explain that this shows where each person's birth date comes in the calendar year: beginning, middle, end.

2. Students "close up" the ends of the row to make a circle and sit down. Walk around the circle. As you go, explain that the calendar year is just one way to arrange our birth dates in order. We can also arrange them by season. Ask:

   - What is a season?

   - How many seasons are there in a year?

- What are the four seasons of the year? (Have students name them, then say them in order.)

- Why is sitting in a circle a good way to show seasons? *(Seasons go through a cycle every year, then repeat in the next year; the cycle is a metaphor for a circle.)*

3. Hand one skein of yarn to the student with the birth date nearest (but on or following) the first day of spring. Have the student roll the yarn to the student nearest (but before) the first day of summer. Cut the yarn. Have the student tie the end of the yarn to a new color of yarn. Then have the student with the birth date on or after the first day of summer roll the new skein of yarn to someone with the birth date nearest (but before) the first day of fall. Cut the yarn and tie a new color to the end. The student with the birth date on or after the first day of fall rolls the yarn to the student whose birth date is nearest (but before) the first day of winter. Tie the end of the yarn to a different color of yarn. The student with the birth date on or after the first day of winter rolls the yarn to the first student. Tie the ends together. The circle is now divided into four sections.

   With older students, discuss that the points where the yarn is tied together are the equinoxes and the solstices and identify them.

4. Hold up the four season signs, one at a time. Have students with birth dates in that season raise their hands. That should be one section, but some students may need clarification about the season of their birth dates. The sign is then placed in their section of the circle.

   (Note: For this lesson, use the "official" season change dates of the current year to decide where a particular student belongs - generally March 21, June 21, September 21, and December 21. Consult a current calendar or almanac.) If a student's birth date falls on the 20 through 23 of these months, explain that the birth date shares two seasons! Some years it will be in one, some years another, depending on where the sun and Earth are in the season-changing positions.

5. Discuss the four seasons, one at a time, starting with the current season. Have students tell about the weather, plants, foods, flowers, and celebrations or holidays that appear near their birth dates. (For a partial list of celebrations and holidays see ***World Calendar of Events and Holidays*** located in the Appendixes.)

   Direct the questions for each season to the students sitting in that section. Add to the information students contribute through sharing the Supporting Information and using your own community examples of seasonal change. Under the headings spring, summer, fall, and winter sketch or write key words in a visible place as students contribute ideas. Ask:

   - What season is it now?

   - What months on the calendar come in this season?

   - What are some words you could use to describe this season? *(hot, muggy, windy, grass growing)*

   - What is the weather usually like in this season? On your birth date?

   - What kinds of clothes do people wear to be comfortable in this season?

   - What colors do you think of for this season?

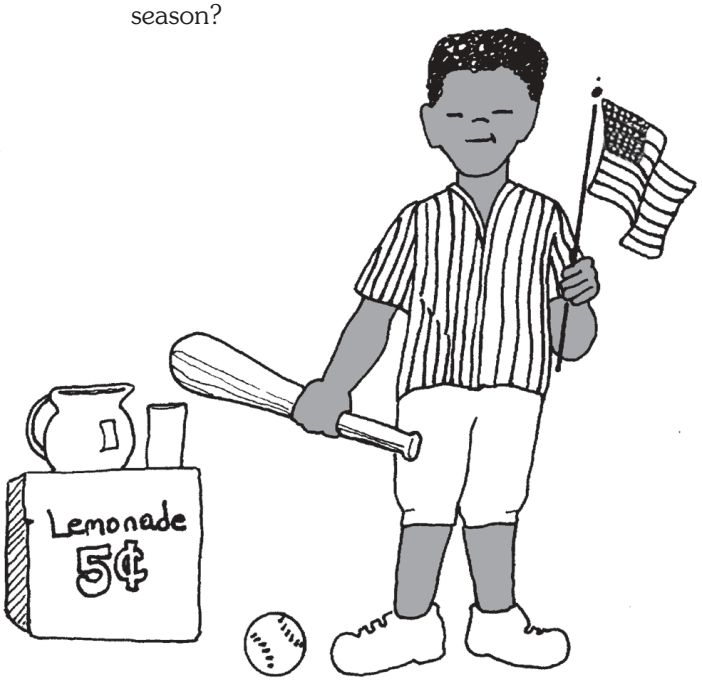
   - What are some things people do in this season that they might not do other times of the year?

   - What do you like to do in this season for fun?

   - What are animals doing in this season?

   - What is happening to plants in this season?

   - What special foods do we have during this season?

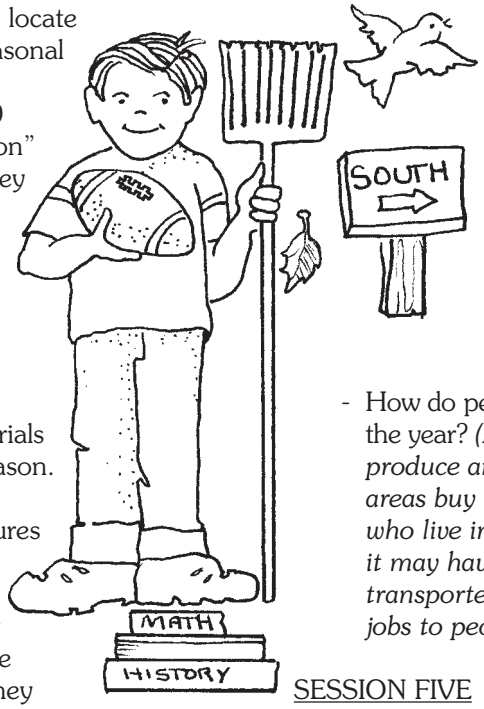


6. Proceed through the entire seasonal circle in order, asking similar questions to each group. Refer to the North America map and discuss regions that have colder and warmer climates. Bring in the vocabulary words as they fit each season. Leave the seasonal words and notes in a visible place for the next session.

SESSION TWO

1. Review the words and notes from Session One. As a group, repeat the seasons of the year in order.

2. Visit the school media center or have books available. Have students locate and check out books about seasonal changes. As they return to the classroom, give them 15 to 20 minutes to meet in their "season" groups and share the books they have discovered.



SESSION THREE

Make seasonal murals. Using their own knowledge and that gained through the class activities, each "season" group works with a large section of butcher paper and materials to create a mural showing their season.

Optional: Students could cut pictures out of the year's magazines. What colors, plants, animals, activities, or celebrations do they see in their birth date season? What clothes are people wearing? What foods are they eating? What are people doing for fun? Anything the group would like to show about their season is encouraged. When the murals are complete, display them in seasonal order. Enjoy and discuss!

SESSION FOUR

1. Read *Seasons on the Farm* or another book that traces seasons through the year in an agricultural area. Brainstorm and list seasonal changes on farms, in your community, and in urban areas. Ask:

   - How do the needs of farm animals change in the different seasons? Needs of your pets?

   - What do people living in agricultural areas need to do each season to take care of animals? Plants? Themselves?

   - Compare and contrast seasonal happenings in agricultural and urban areas. How are the things people do in agricultural areas the same as the things people do each season in urban areas? How are they different?

   - What might happen if people in agricultural or urban areas did nothing to get ready for winter? For spring? For summer? For autumn?

   - Is our neighborhood more like an agricultural or urban area to live? What are some special things we do in each season in our community?

2. People depend upon animals, animals depend on people, and people depend upon people to meet their needs. Ask:

   - How do people depend on farm animals throughout the year? *(For meat, milk, eggs, leather, wool, sometimes help with work.)*

   - How do animals and people depend on plants throughout the year? *(Animals and people depend on plants for food and more.)*

   - How do people depend on each other throughout the year? *(People who live in agricultural areas produce and sell food; people who live in urban areas buy it, bringing income to the farm. People who live in agricultural areas buy food, too, and it may have been processed, packaged, transported, and so on in urban areas, giving jobs to people in urban areas.)*

SESSION FIVE

(Note: The "blank books" created in this session will hold students' writings and drawings. The books described have eight pages. If possible, arrange to have older students help younger students create their books or make a whole class book together.)

1. Tell students they will be authors of books about seasons in agricultural and urban areas.

2. Help them create blank books according to one of the following options.

   A. Standard 5-1/2" x 8-1/2" book: Fold two 8-1/2" x 11" sheets of unlined paper in half the short way. Staple the folded edge to form eight pages.

   B. Make a simple eight-page book out of a single sheet of 12" x 18" paper.

      - Fold paper in half the long way. You have two 6" x 18" sections, a "strip" shape.

- Fold the strip in half the short way, so you have four 6" x 9" sections. Then fold in half the same way again. You now have eight 6" x 4-1/2" sections.

- Staple on the folded edge, holding all the sheets together. This is the "spine." Cut the fold opposite the spine to open the pages. You now have eight pages. They appear "double" because they are joined at one end; that's okay.

- Encourage students to make a separate cover for their books.

(Note: Another time, you may want to make a 16-page book. Now you know how: just cut open the folds connecting the pages.)

3. Students write and illustrate their books with pages representing each season's unique offerings. Two pages are available to show each season.

4. Ask students to imagine and draw in their books how they could spend their birth date in agricultural and urban areas.

EVALUATION OPTIONS

1. Use the student books for evaluation. Observe in which order the seasons are listed as well as how accurately students match ideas to the appropriate season.

2. Give students one season and have them name the following seasons in order. In what season is your birth date?

3. Have students divide a piece of paper into four sections. Label each section a different season. In each section, have them draw a person dressed in clothes appropriate for the season, list or draw three foods associated with the season, and list or draw one plant harvested in the season.

4. Have students write the four seasons and list three things they might see during each season in an agricultural area, their community, and an urban area.

EXTENSIONS AND VARIATIONS

1. Make one class season book together. The class writes the book as a group and various students illustrate the pages. Another option is to have students make posters. Start with a square, rectangle or circle divided into fourths. They use one fourth to illustrate each season.

2. Students research and describe the seasonal changes of just one crop or animal of their choice through writing or drawing. Put their work on display so everyone's knowledge can be shared.

3. Investigate the seasons, people and plants in the Southern Hemisphere. Have students contrast the seasons of the Northern and the Southern hemispheres. Use maps and globes to locate the countries and continents. If you have access to a computer, have students contact students in another country in the Southern Hemisphere.

4. Each student draws a picture that represents a season. They label each with the name of the season and show many activities and things that are appropriate to the season. To add interest by using the unexpected, the picture should also include three things that do not belong with that season. When all the pictures are finished, have students trade papers and identify what does not belong in their partners' pictures.

5. Make Venn diagrams for each season out of four colored poster papers. Label the circles "agricultural area" and "urban area." Label the overlapping part of the circles "both." Students fill in the appropriate part of the Venn diagram with events and activities for each season. (See ***Venn Diagram #1*** in the Appendixes for information and an example.)

6. Students work in their season birth date groups to create *Seasons Around the World* books. Encourage them to gather information using books and computers.

7. Students cut out pictures of farm equipment and match them with the season during which they are used. For example, planter in spring, cultivator in summer, combine in fall.

8. Listen to *The Four Seasons* by Antonio Vivaldi. Discuss the environmental events suggested by the music. Choose one movement from the piece and dramatize things that animals, plants and/or people do during this season.

9. Students research the history of daylight savings time. Have them consider such things as when and why it began in the United States, why changes were made in 1942-1945 and again in 1974 and 1975, and why some states do not have daylight savings time.

ADDITIONAL RESOURCES

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Bunting, Eve. *Moonstick: Seasons of the Sioux*. HarperCollins Juvenile Books. 2000. ISBN: 0064436195.

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MUSIC

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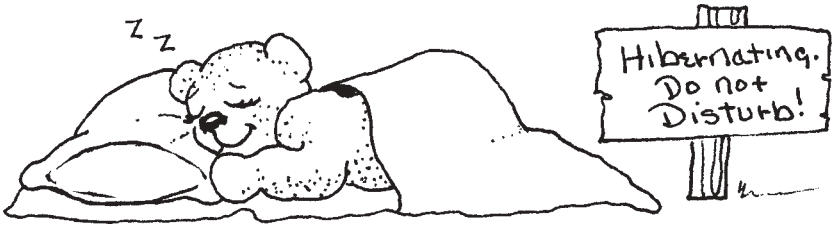
EDUCATOR'S NOTES



 Conceptual Framework Reference: I.C.2., I.C.3., I.F.1., III.A.4.

The Great Spirit is in all things;

he is in the air we breathe.

The Great Spirit is our father,

but Earth is our mother.

She nourishes us; that which we put into the

ground she returns to us…

Big Thunder (late 19th Century),
Wabanski Algonquin, Native American Wisdom.