

Instructional Recipe

What Changes During the Seasons?

Kindergarten, 1st Grade
Science

Step 1 – Ask

Objectives: Students will describe the changes in weather that occur during each season. Students will compare how plants, animals, and people are affected by seasonal changes.

Introduction: Read a story about seasons, such as:

- ★ DePaola, Tomie. Four Stories for Four Seasons. New York: Aladdin, 1994.
- ★ Cash, Megan. What Makes the Seasons? New York: Viking Juvenile, 2003.

Discuss what students know about the four seasons. Divide a piece of chart paper into 4 sections and record the students' responses. Include the names of the seasons and how the weather changes during the seasons. Ask students what other changes happen during the seasons?



"Snow sits on top of all autumn colored leaves after an early season snowstorm October 26, 2006 in Denver, Colorado. Online Photograph. EBSCO Image Collection. 13 Oct. 2008 <<http://search.ebscohost.com/login.aspx?direct=true&db=imh&AN=imh347196&site=srck5-live>>

Ask: Students will work in groups to answer the following questions:

- ★ How do some *plants* or *trees* change during the seasons?
- ★ How do some *animals* behave differently during the seasons?
- ★ How are *people* affected by the seasonal changes?

Vocabulary:

- ★ season - one of the four equal natural divisions of the year. The seasons are spring, summer, autumn, and winter.

Science TEKS:

(K.7) **Science concepts.** The student knows that many types of change occur. (C) observe and record weather changes from day to day and over seasons; and (D) observe and record stages in the life cycle of organisms in their natural environment.

(1.7) **Science concepts.** The student knows that many types of change occur. (C) observe and record changes in weather from day to day and over seasons; and (D) observe and record changes in the life cycle of organisms.

Technology Application TEKS:

(5) **Information acquisition.** The student acquires electronic information in a variety of formats, with appropriate supervision. (A) acquire information including text, audio, video, and graphics.

(7) **Solving problems.** The student uses appropriate computer-based productivity tools to create and modify solutions to problems. (A) use software programs with audio, video, and graphics to enhance learning experiences; and (B) use appropriate software, including the use of word processing and multimedia, to express ideas and solve problems.

(11) **Communication.** The student delivers the product electronically in a variety of media, with appropriate supervision. (A) publish information in a variety of media including, but not limited to, printed copy or monitor display.

Step 2 – Investigate

Divide students into groups. One group may examine how a tree or plant changes, another group can explore how certain animals behave differently (hibernation of bears or groundhogs), and a final group may look at how people are affected during the seasons. You may want to work with only one group at a time while the other students are working at classroom centers.

K-12 Database Resources:

- ★ [Some Trees Change Each Season](#). *Science Spin* - Early Primary, Sep2003, p2-3, 2p, 4c; (AN 10595593)
- ★ [My Family's Apple Farm](#). *Scholastic News* -- Edition 2, Sep2003, Vol. 60 Issue 1, p1-4, 4p, 1 graph, 3c; Reading Level (Lexile): 300; (AN 10598438)
- ★ [Four Seasons With a Groundhog](#). *Weekly Reader* - Edition K, Feb/Mar2005, p2-3, 2p, 4c; (AN 16371298)
- ★ [What Are the Four Seasons?](#) *Weekly Reader* - Pre K, Jan2006, Vol. 26, p2-3, 2p, 4c; (AN 19114810)
- ★ [Look at the Four Seasons](#). *Weekly Reader* - Edition K, Feb/Mar2005, p4-4, 1p, 1c; (AN 15539839)

Additional Website:

<http://www.kizclub.com/seasonstory/season1.html> - Online storybook about the seasons.

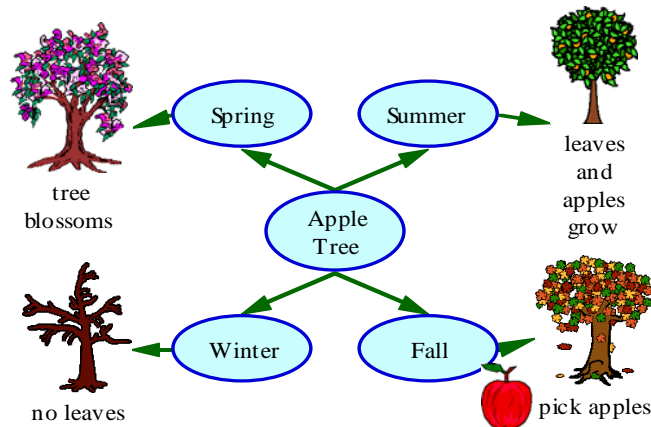
Books:

- ★ Gibbons, Gail. [The Seasons of Arnold's Apple Tree](#). Hong Kong: South China Printing Company, 1984.
- ★ Fuchs, Diane. [A Bear for All Seasons](#). New York: Henry Holt & Co, 1995.



Step 3 – Create

Students should write or draw notes about the changes that happen during each season. They will write about plants, animals, or people, depending on their group assignment.



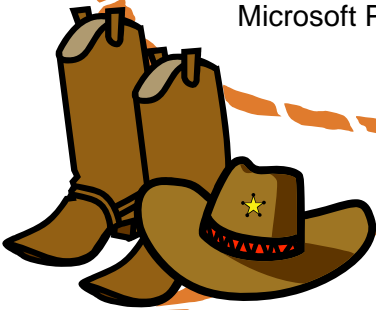
🔗 [Technology Link](#) – Students can use a graphic organizer program, such as Kidspiration, to record their ideas.

Step 4 – Discuss

Allow groups of students to share their information with the rest of the class. First, review how the weather changes during each season. Then allow the students who read about trees or plants to share their diagrams. How does the weather in each season cause the plants to change? Next, allow the students who researched animals to present their information. How does the lack of plants and cold weather affect some animals? Finally, allow the group who read about people to share the ways we are affected by the seasons. Allow students to discuss any similarities or differences they observe between the way people and animals behave during the seasons.

- ★ As a final project, students will create a book that shows the changes that occur during the seasons. Students should have one page for each season. They should give their book a title and include as many details as possible in their writing or illustrations. They can also tell which season is their favorite and why.

🔗 Technology Link – Students can use a drawing program, such as Microsoft Paint or Kid Pix, to create their book.



Step 5 – Reflect

Use the following suggested rubric to assess the students' books.

🔗 Technology Link: You can also create your own rubric with your students at <http://rubistar.4teachers.org/index.php>.

Extensions:

- ★ Throughout the school year, keep track of seasonal changes students observe outside. Students could photograph a tree in the playground to record how it changes during the year. The photographs could be assembled into a classroom book similar to The Seasons of Arnold's Apple Tree. Students may write a caption to describe each picture.
- ★ Students could write and illustrate a story to tell what special things their family does during each season.

Rubric

| CATEGORY | 4 | 3 | 2 | 1 |
|--|---|--|--|--|
| Content - Autumn | Includes at least 4 changes that occur during Autumn. | Includes 3 changes that occur during Autumn. | Includes only 2 changes that occur during Autumn. | Includes only 1 change that occurs during Autumn. |
| Content - Winter | Includes at least 4 changes that occur during Winter. | Includes 3 changes that occur during Winter. | Includes only 2 changes that occur during Winter. | Includes only 1 change that occurs during Winter. |
| Content - Spring | Includes at least 4 changes that occur during Spring. | Includes 3 changes that occur during Spring. | Includes only 2 changes that occur during Spring. | Includes only 1 change that occurs during Spring. |
| Content - Summer | Includes at least 4 changes that occur during Summer. | Includes 3 changes that occur during Summer. | Includes only 2 changes that occur during Summer. | Includes only 1 change that occurs during Summer. |
| Attractiveness of Illustrations | All illustrations are neat, colorful, and relate to the correct season. | Illustrations are somewhat neat, and colorful. All illustrations relate to the correct season. | Illustrations may be sloppy or difficult to interpret. | Illustrations are not included for each season. |
| Writing Requirements: 1. <i>label the 4 seasons</i> 2. <i>attempt to write about each season (Invented spelling is okay)</i> 3. <i>title for book</i> 4. <i>student name</i> | All 4 writing requirements are included. | Student is lacking only one writing requirement. | Student is lacking 2 writing requirements. | Student is lacking 3 or more writing requirements. |