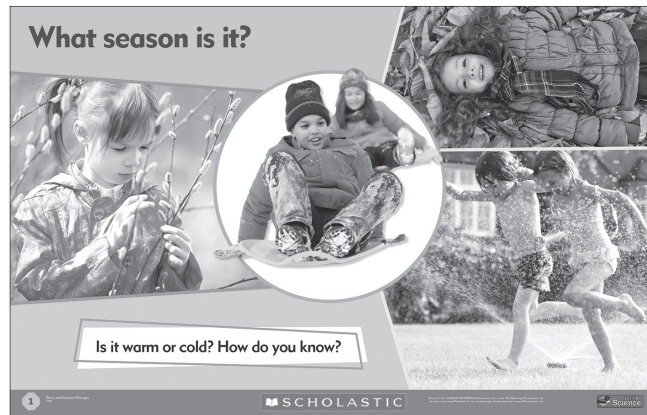


What Are the Seasons?



Focus: Students will practise inquiry skills, and will group and sequence items related to the seasons.

Specific Curriculum Outcomes

Students will be expected to:

- 3.0 communicate using scientific terminology [GCO 2]
- 9.0 sequence or group materials and objects [GCO 2]

Performance Indicators

Students who achieve these outcomes will be able to:

- name and sequence the seasons and months
- group objects by season
- work with others in exploring and investigating

NOTES:

Attitude Outcome Statements

Encourage students to:

- willingly observe, question, and explore [GCO 4]
- show interest in and curiosity about objects and events within the immediate environment [GCO 4]

Cross-Curricular Connections

Math

It is expected that students will:

- demonstrate an understanding of repeating patterns [1PR1]

English Language Arts

Students will be expected to:

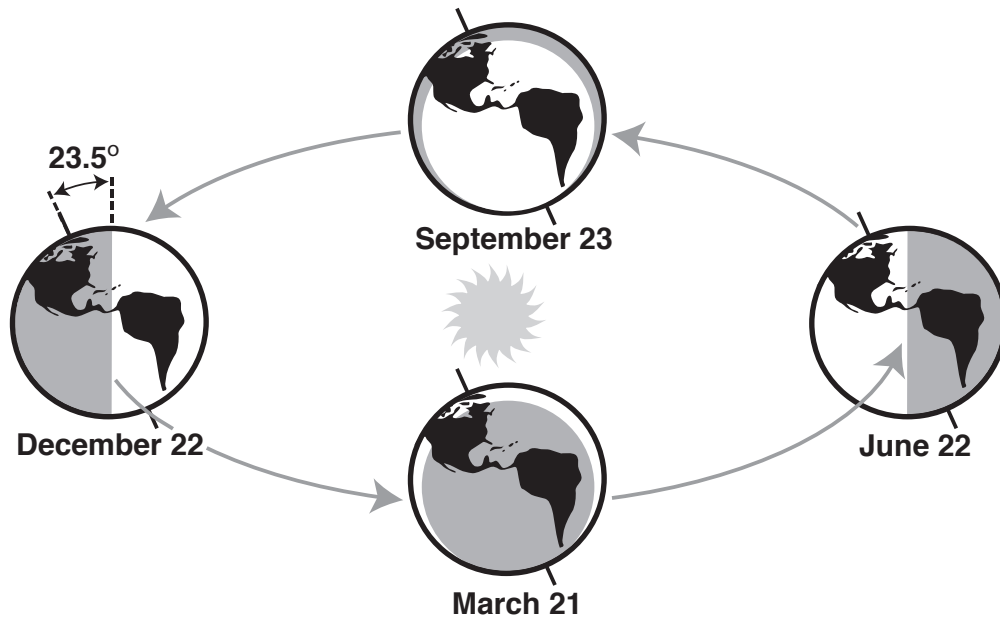
- speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences [GCO 1]
- communicate information and ideas effectively and clearly, and to respond personally and critically [GCO 2]
- interpret, select, and combine information using a variety of strategies, resources, and technologies [GCO 5]

Getting Organized

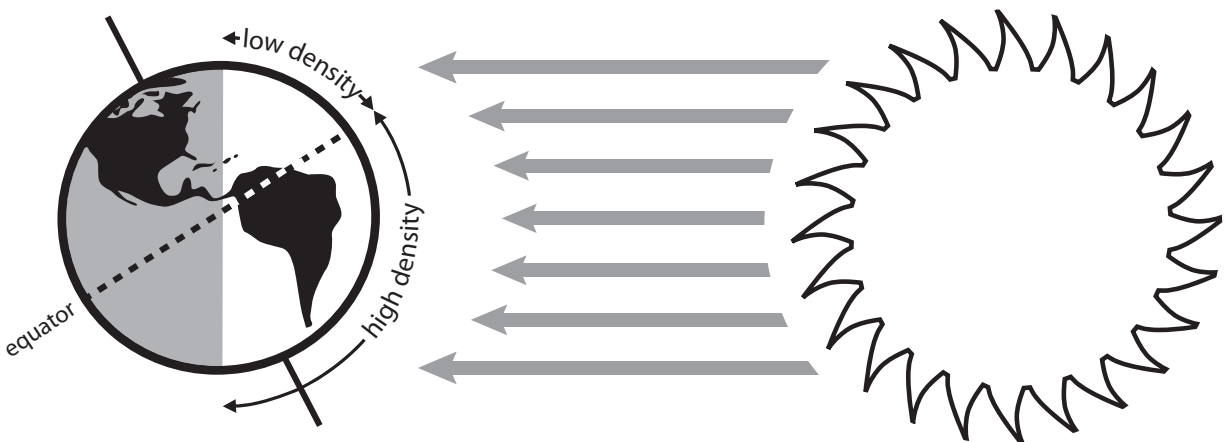
Program Components	Materials	Before You Begin	Vocabulary
• Anchor Video: <i>Daily and Seasonal Changes</i> • Science Card 1 • IWB Activity 1 • IWB Activity 2 • BLM <i>What Should I Wear? 1 and 2</i> • BLM <i>The Four Seasons</i> Literacy Place: • <i>What Do You See? A Book About the Seasons</i> (Guided Reading, Level D) • <i>Spring Is Here!</i> (Guided Reading, Level C) • <i>What Do I Need?</i> (Guided Reading, Level D)	• silly summer and winter hats • variety of seasonal items (such as those at the Curiosity Centre) • dolls or stuffed animals and season-specific doll clothes or pictures of season-specific clothes • index cards • digital camera (optional) • reference materials related to seasons in NL, Canada, or elsewhere in the world • students' Science Folders • hula hoop • globe or ball	• Post the <i>What Is the Inquiry Process?</i> poster. • Display a KWHL chart. • If you choose, invite a meteorologist or other expert to speak to the class about how the sun causes the seasons (or locate a suitable video).	• cycle • days of the week • group • months of the year • seasons • sequence • today • tomorrow • yesterday

Science Background

- Earth's seasons are caused by Earth's tilt and its orbit around the sun, which results in yearly changes in the amount of sunlight received by Earth's surface.
- Earth rotates once every 24 hours on an axis that runs between the poles. Earth also orbits the sun once every 365 days. Relative to the path of Earth's orbit, Earth's axis is tilted by 23.5° —globes are tilted to model this. As Earth orbits the sun each year, the axis is tilted either toward or away from the sun.



- The Northern Hemisphere of Earth is tilted away from the sun in the winter and toward the sun in the summer. As a result, the Northern Hemisphere receives a lower density of solar rays in the winter than in the summer. This difference in the amount of incoming heat and light from the solar rays causes the seasons. The seasons in the Southern Hemisphere are the reverse of those of the Northern Hemisphere.



Relative density of solar rays on December 21

Possible Misconceptions

At this stage, students tend to believe that all other people have lives and experiences very similar to their own, unless they have direct experiences of other places or cultures. These ideas can be challenged through discussion and research about the weather and seasons in other provinces and countries.

ACTIVATE

If the Hat Fits

Put on a silly summer hat. Invite or wait for students to comment on the hat or ask about it. Prompt thinking about seasonal conditions by asking:

- **Should I wear this outside today? Why or why not?**
- **When should I wear it?**

Students may suggest a season, a month, or specific weather. Then put on a silly winter hat. Ask:

- **Is this one okay to wear outside today? Why or why not?**

Encourage all suggestions and guide consideration of weather and seasons by using prompts such as:

- **Why?**
- **How do you know that?**
- **Have you ever worn a hat like this? When?**

Anchor Video

Play the Anchor Video: *Daily and Seasonal Changes* which is located on the Teacher's Website. Set a focus for viewing by asking students to think about what they like best about each season. You may choose to pause the video to allow students to answer questions or to discuss any questions which students may have.



What Season Is It?

Ask questions such as:

- **Can anyone name the seasons?**
- **What season are we in today?**
- **What is your favourite season?**
- **What do you like about this season? What don't you like about it?**

Have students look at the four seasonal images on Science Card 1. Ask students to describe the differences they see. Prompt thinking by asking questions such as:





- Is it warm or cold? How do you know?
- How do you know it's colder in this picture?
- You said that there was snow in this picture. How does snow feel?
- How do you feel when you play in the snow?

Using students' answers and questions, start a KWLH chart about the seasons. Model asking questions, for example:

- I wonder why it doesn't snow in summer? How might I find out?

CONNECT



What Season?

Have students name the seasons shown on Science Card 1, then add the names to the Word Wall. Add them in such a way that you can indicate a cycle by motioning with your hand (e.g., place "seasons" at the top, then place the names below so that each is the corner of a box). Have students put them in sequence by asking questions such as:

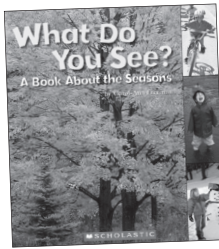
- How many seasons are there?
- What comes after fall? after winter?
- What happens the next year? Do they go in the same order?

Point out that the seasons make a cycle by motioning in a circle around the names of the seasons on the Word Wall. Explain that things happen in a cycle when they go around and around in the same sequence or order. Put "sequence" and "cycle" on the Word Wall. Invite students to communicate their understanding by asking:

- Do you know anything else that goes around and around in the same sequence?

Guide students to considering the days of the week and the months of the year as cycles. Add any other terms that come up in the discussion (e.g., "month," "day," "week") to the Word Wall. Relate these to the seasons by asking questions such as:

- What season is May in? What month comes before May?
- What month comes after May? What season is that?



Literacy Place Connection:

What Do You See? A Book About the Seasons (Guided Reading, Level D) illustrates how a tree changes in each season and provides images of what can be seen in different seasons. The seasons are also illustrated to show a cycle.

Seasonal Items

Allow students to explore and play freely with a variety of seasonal items (such as those at the Curiosity Centre). As they explore, invite students to tell you what season the items are for. Encourage students to communicate their thinking by asking questions such as:

- How do you know?
- Why did you pick that season?

Model asking questions that can lead to exploration and investigation such as:

- I wonder if people in other countries need mittens? Does anyone know how I could find out?
- I'd like to know why we plant seeds in the spring.
- What do you wonder about?



Use the KWLH chart or the I Wonder Wall to record students' comments and questions. Invite students to suggest and bring in other items for the Curiosity Centre.



Literacy Place Connection:

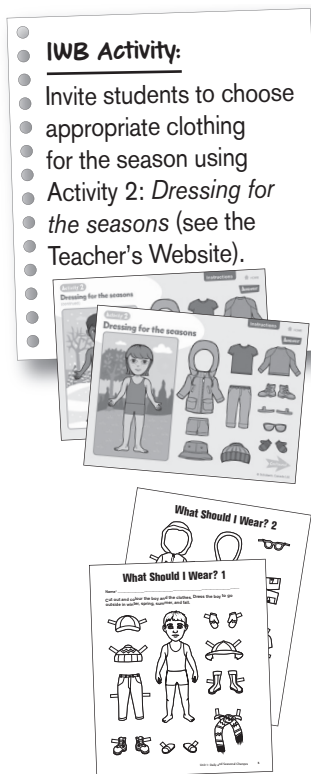
The media text *Spring Is Here!* (Guided Reading, Level C) illustrates several different signs of spring's arrival. Discuss with students how each image is a sign of spring. Invite students to suggest images that could be included for other seasons.

What Should I Wear?

Have students work in small groups. Provide each group with a doll or stuffed animal and some season-specific clothes (actual doll clothes or pictures). Challenge the students to dress the doll/animal appropriately to go outside today. Guide exploration by asking:

- Why should we put that on today?
- What would we have put on yesterday?
- Do you think we would put the same clothes on tomorrow?





Then, say something such as, “He/she is going on a trip to a different country. In that country, it is like this outside.” (Point to a different season on Science Card 1.) Ask:

- **Can he/she still wear this? Why?**
- **What should we change?**

Let students change the clothing to suit the seasonal change. As they work, ask students to explain their choices. Encourage students to consider safety in their choices and explanations. Prompt thinking by asking questions such as:

- **Why do we need to put on boots? How do boots help us?**
- **We didn't put a coat on this time. Why is that?**
- **Why do we need a coat now?**
- **What might happen if he/she didn't wear a coat?**
- **Why do we put on sunglasses? How does that keep us safe?**

Students could also use the paper doll and clothes found on BLM *What Should I Wear? 1* and *2* for this activity. Invite students to colour the clothes. Then have an adult or older buddy help students to cut them out (being careful not to cut off the tabs). Students can dress the boy to go outside in various seasons.

CONSOLIDATE

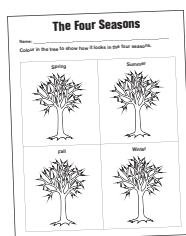
The Four Seasons

Divide students into small groups. Place index cards with the names of the seasons on the floor or on containers close to the Curiosity Centre for each group. Have each student pick one seasonal item or photo from the Curiosity Centre. Challenge students to place items in the season they think is correct. Record any questions or concerns that arise as students work. For example, items like umbrellas or sunglasses may be used in more than one season. Open up the discussion by asking questions such as:

- **Why do we wear sunglasses?**
- **Is it sunny in every season?**
- **When do we not need sunglasses?**

When sorting is completed, invite students to compare their choices with those of other groups. Encourage group members to explain any choices that differ among groups. Alternatively, have students take digital photographs of their work and compare the photographs on the Interactive Whiteboard.

Give students a copy of BLM *The Four Seasons*. Provide them with coloured pencils or crayons and ask them to draw details on the tree to show how it





will look in each season. Introduce students to their Science Folders; have students store their completed BLMs in their Science Folders.

**Literacy Place Connection:**

What Do I Need? (Guided Reading, Level D) shows what we need to go outside in different kinds of weather. Discuss with the students in which seasons these types of weather conditions occur.

EXPLORE MORE

What Season Is It There?

Invite students to explore what the seasons are like in another part of the province (e.g., Labrador versus Newfoundland or different regions within either), Canada, or the world. Individually or in small groups, allow students to decide what area they want to explore further. Provide reference materials such as books or websites. If possible, connect with a class in another part of the world so students can communicate directly about their experiences with the seasons. Have students create a presentation on a bulletin board in the class to communicate their findings.

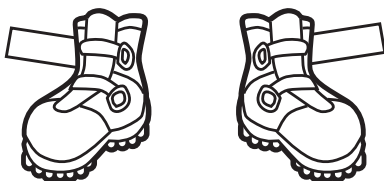
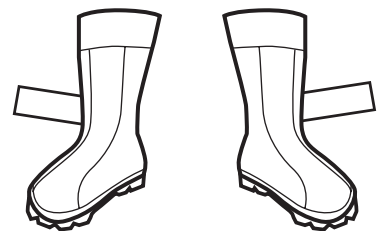
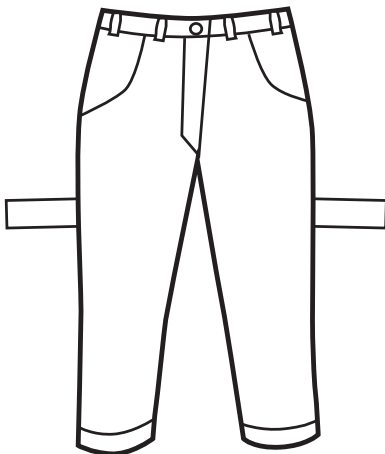
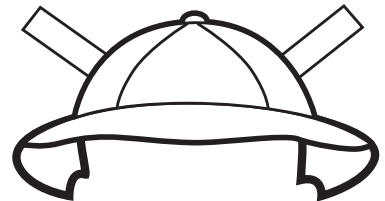
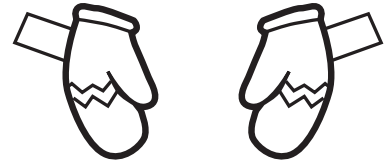
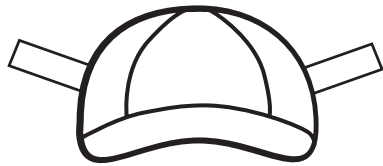
The Reason for the Seasons

Share a video or invite an expert to speak to the class about how the sun causes the seasons. (See Additional Resources on pages 74–75). After viewing the video or presentation, place a hula hoop in the centre of the classroom to represent the sun. Invite a volunteer to hold a globe or a ball marked with “poles” at an approximately 23.5° tilt, to model the tilt of the Earth. Add a sticky note or a piece of modelling clay to the globe to model the province. Have the student “orbit” around the sun so that they are always facing the same wall, while holding the tilted globe or ball. Stop the student at every half turn (summer and winter) or every quarter turn (summer, fall, winter, spring) and discuss the position of their province relative to the sun.

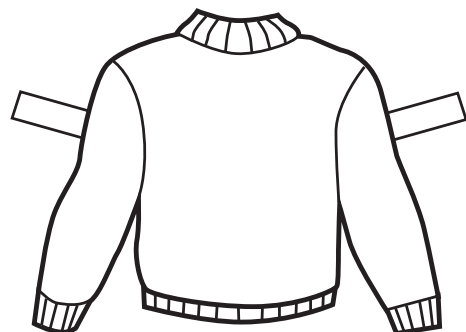
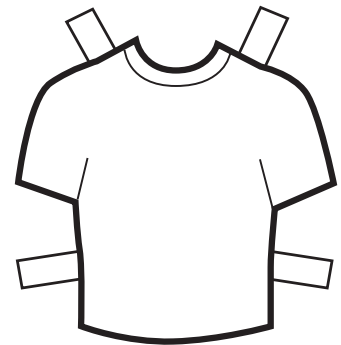
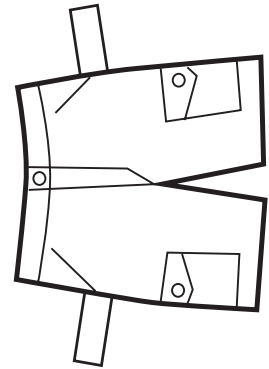
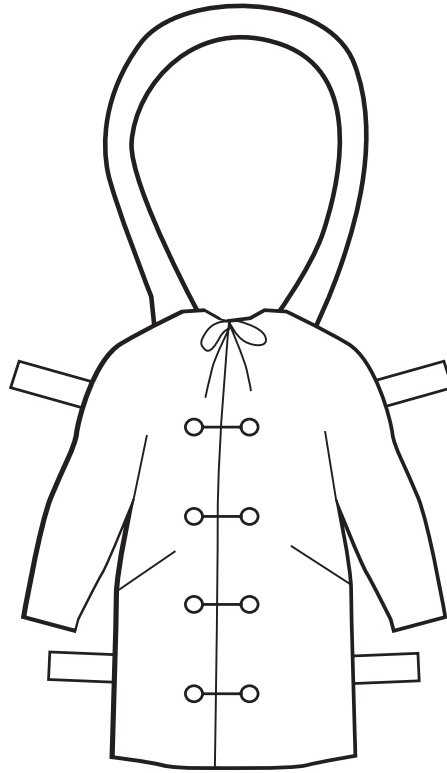
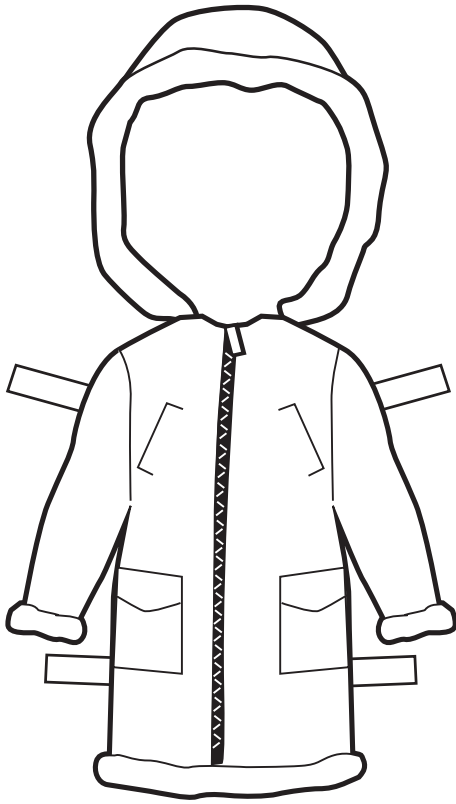
What Should I Wear? 1

Name: _____

Cut out and colour the boy and the clothes. Dress the boy to go outside in winter, spring, summer, and fall.



What Should I Wear? 2

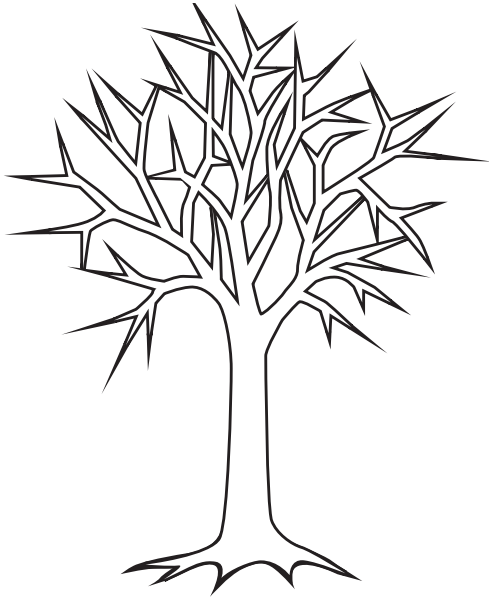


The Four Seasons

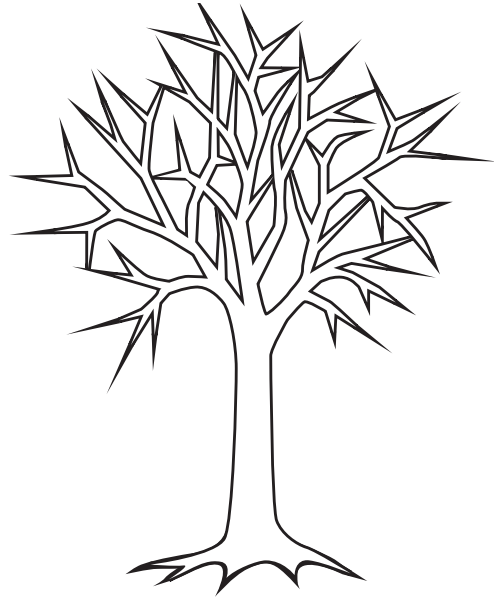
Name: _____

Colour in the tree to show how it looks in the four seasons.

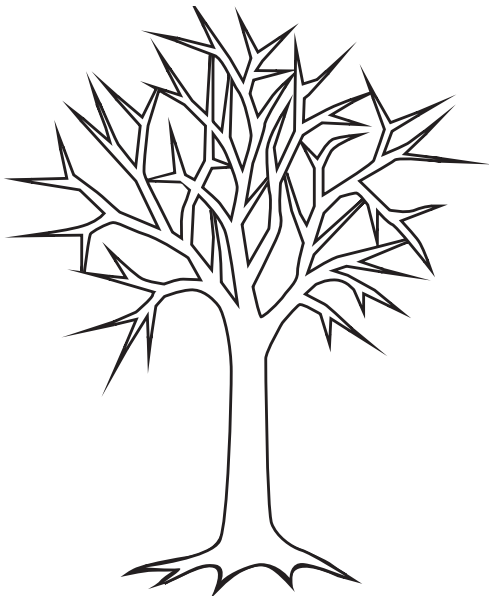
Spring



Summer



Fall



Winter

