



Weather Who Am I?

LESSON

GRADE LEVEL 2-8

CATEGORY Energy,
Atmosphere & Climate

TOPIC Weather

TIME

15-20 minutes

MATERIALS

Class set of cards with pictures of weather events

SETTING

Outdoors or Indoors

GROUP SIZE

Any

SUBJECTS

Science

SKILLS

Observing, reading,
hypothesizing, predicting,
and interpreting

KEYWORDS

Climate, weather, storms,
drought, flooding, wind, and
meteorology

Overview

Using only yes/no questions, students determine the identity of the weather event picture they are wearing on their back. Students then classify the weather events identified.

Objectives

Students will be able to:

- Analyse the impacts of weather on living and non-living things
- Describe potential environmental impacts of using BC's living and non-living resources
- Explain obstacles unique to exploration of a specific extreme environment
- Explain how the earth's surface changes over time
- Describe how water and ice shape the landscape

Making Connections

Changing global temperatures are expected to bring changes to traditional weather patterns. More extreme weather events, changes to precipitation levels or cloud cover, increased drought – each area will experience different effects. Recognizing regular weather patterns and how they are changing will help students understand some of the potential impacts, both positive and negative, of our changing climate.

Background

Meteorology is the scientific study of the atmosphere that focuses on weather events and forecasting. Climate is the average and variation in weather events over long periods of time. The difference between climate and weather can be understood through the saying, "Climate is what you expect, weather is what you get". We expect summers to be warm and dry in British Columbia due to long term weather patterns (climate), but will get days of rain in the short term (weather). Climate change is a shift in long-term weather patterns. The international scientific community agrees that there has been significant change in global climate patterns in recent years due largely to the burning of fossil fuels.

In Canada, observed changes due to climate change include rising temperatures and thawing of the permafrost. Even greater changes are expected in the future including continued temperature rise, shifts in rainfall patterns, and increases in extreme weather events such as flooding and drought. As a cold northern country, Canada will be one of the most greatly affected countries in the world.

British Columbians are concerned about the effects of climate change on their communities and natural resources. Recent extreme weather events have included very damaging droughts, floods and forest fires. Scientists predict that in the coming decades there may be more hot days in the summer, fewer cold days in the winter, drier summers in some areas and changes in rain, snow and stream flow patterns. Weather and climate are important to community and provincial economies. Agriculture, fisheries, oil and gas, tourism, recreation and the forest sector are all sensitive to variability in climate patterns.

Historical data indicates that changes in freshwater, marine and terrestrial ecosystems are also linked to climate. Ice melts earlier in spring, glaciers are retreating more quickly, stream flow patterns are changing which in turn affects fish and other species dependent on the freshwater system. Sea levels are rising and sea surface temperatures are increasing. Plants and insects are able to take advantage of increased heat energy.

For the most part, when we observe the weather we look only at whether it is cloudy, sunny, raining, etc. It is important to learn to differentiate between different types of cloud cover, to measure the severity of storm or other severe weather events, to recognize the changes in climate that are occurring on a slow but steady daily basis. It will be the work of future meteorologists to observe and record changing weather patterns and to analyze their impacts on communities, resources and ecosystems. Learning the vocabulary and classification of meteorology will allow students to develop and interest in climate patterns and changes.

Procedure

Warm Up

Preparation for this activity will depend on the grade level. For all grades, explain to the students that each one of them will become a different weather event. They will not be able to see which weather event they will represent, but will be able to ask yes/no questions to figure out what it is. For older students, discussions and diagrams can be used to establish

different ways to classify weather events. For younger students, brainstorm types of yes/no questions that could be asked in order to determine which weather event they represent. Give examples such as “am I wet?”, “can I blow down a tree?”, “do I make waves?”, “am I dry?”, “can I melt?” etc.

The Activity

1. Place a weather card on the back of each student. Ensure that they do not see the picture and that other students do not call out the name of what they represent. Instruct the students that they have now become the weather event that is on their back. Their job is to find out what they are. They may only ask “yes” or “no” questions. They may only ask one or two questions per person and then must move on to someone else. This will help keep the activity moving.
2. Once a student has guessed which weather event they are, they can bring their weather card forward to their chest. It may be necessary to circulate through the group providing assistance in asking yes/no questions or giving hints to the last few students who haven’t guessed. Note: for younger students you can use general identification where appropriate such as cloud or measuring equipment.
3. When everyone has their card on their chest, debrief by taking about what kinds of questions they used to figure out what they were. Then ask students to decide if their weather event is one they see regularly. Discuss if their weather event would cause problems, would be all right, or would be beneficial.

Wrap Up

When students are clear on what their weather event is they can then divide themselves into groups of different types

of classifications. These classifications could include:

- Local weather vs. non-local weather
- Extreme weather event vs. regular weather event
- Types of weather event. E.g. hot/cold, wet/dry
- Good vacation weather/ bad vacation weather

Assessment

Provide students with names and/or pictures of different weather events. Have students sort and classify them into groups based on criteria you provide. Alternately, have students sort and classify the weather events based on their own criteria that they provide to you.



Extensions

1. Students research their weather event and create a poster or report about it.
2. Students research daily weather from a variety of countries/regions and compare over a oneweek period.
3. Students research historical weather records from their region and compare them with current weather patterns.
4. Play Weather Bingo to reinforce student learning of meteorological vocabulary.

References

- **Government of British Columbia Environmental Protection Division Website:** www.env.gov.bc.ca/air/climate
- **Environment Canada Website:** www.ec.gc.ca

