

## Chapter 1: What is Climate Change and Why Care?

### Inquiry 2: Understanding Climate

- < **Provocations** – *Neighbourhood Walk*
- < **Question Generation** – *Neighbourhood Walk*
- < **Knowledge Building**– *Umbrella Questions, Knowledge Building Circle*
- < **Determining Understanding** – *KWL*
- < **Pursuing Learning** – *Sorting Activity, Story Writing, Video*
- < **Consolidation** – *Illustrate, Visual Processing Cards (\$)*
- < **Assessment** – *Graffiti Wall*
- < **Take Action**



#### A. Provocation

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To hook student interest, introduce the provocation idea to initiate student thinking.

#### Neighbourhood Walk

Neighbourhood walks and learning can be done all year in all seasons.

Take your class outside on a [Neighbourhood Walk](#) to look for things in their neighbourhood that depend on the weather/climate. Focus on the natural, human and built systems that are in place to help all species that depend on the weather/climate (e.g., rain gardens, umbrellas, energy sources, trees, etc.). Look for features that might have been altered because of the weather/climate (e.g., erosion on the schoolyard).

While you are out in your community, think of potential community partners that are focusing on weather systems and climate change (e.g., local conservation authorities, local businesses, transportation companies).

Ask students to document their observations through photos or sketches.

Some other examples of features to note on the walk:

- Bike paths
- Parks (natural areas)
- Cars/trucks/buses
- Rivers/Ponds (Storm Drains)
- Solar Panels/Wind Turbines



## B. Question Generation

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At this point in the inquiry, we want to harness students' curiosity and build off the provocation that has captured their interest by generating meaningful questions to continue to drive the learning process.

### Neighbourhood Walk Follow-up

1. After the walk, display the photos or sketches that students documented throughout the walk.
2. Give students a chance to observe one another's drawings/notes. After observing, ask the students to sort the pictures into groups based on themes/similarities.
3. Ask students to explain their sorting and use the groupings to narrow down one "Big Idea" as a class.
4. Based on the big idea, generate a key question about climate.



## C. Knowledge Building

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At this stage, students may be ready to engage in a group knowledge building activity. It will encourage students to open their minds to many alternative ways of thinking about the provocations and ideas that have been generated thus far in the inquiry process.

Engage in a class [Knowledge Building Circle](#) (outside is recommended if possible) using one of the questions that you generated after the Neighbourhood Walk provocation or the example below.

Possible [Umbrella Question](#): "What is the difference between weather and climate?"



## D. Determining Understanding

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Use responses to inform and guide the learning process. They can provide insight into which concepts need clarity, what many students are already well informed about, and a general direction that many students want to pursue.

Based on students' questions or the [Umbrella Question](#), "What is the difference between weather and climate?", work together with your class to fill out the "Know" and "Want" columns of a [KWL \(Know-Want-Learned\) Chart](#).

### Sample KWL Chart:

TOPIC:		
K – What I Already Know	W – What I Want to Know	L – What I Learned



### E. Pursuing Learning

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At this stage, students may begin research to pursue the umbrella question, or the following activities could be integrated into the process to ensure that students have an understanding of foundational climate science. The activities listed below will enrich the understanding of climate change.

#### Sorting Activity (Weather vs Climate)

*Adapted from [15 Meaningful and Hands-On Climate Change Activities For Kids](#)*

Explain to students that you will read cards with clues and they will try to identify which is referring to weather and which is referring to climate. Discuss as a class which card belongs in each category.

**OR**

#### **Story Writing**

Create a story with the class explaining the weather on a particular day.

For example:

Today is a sunny day and there are no clouds in the sky. Everyone is wearing shorts because it is hot. We have to wear sunscreen and hats so that we don't get sunstroke. We are sweating so we also need to remember to drink a lot of water to stay hydrated.

Then create a story with class explaining the climate of the region that the students live in.

For example:

In the winter it often snows and the temperature drops. It is more difficult for animals to find food and water. Some animals hibernate and some birds begin to migrate south. At home we close the windows and turn the heat on.

**Extension:**

[What's the Difference Between Weather and Climate?](#)

This video explains the difference between weather and climate and how change can impact our world.

**Extension:**

**Video Follow up Questions**

- What did you hear that surprised you?
- Did you learn anything new?
- Do you have any questions about weather or climate?



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## F. Consolidation

This step is designed to encourage students to integrate and synthesize key ideas. When students make connections and see relationships within and across lessons, this helps them to solidify knowledge and deepen understanding.

**Illustrate**

Have the students show their learning about climate with playdough, illustrations or movement in groups.

AND/OR

**Visual processing cards** (needs to be purchased)

Using a deck of [Visual Processing Cards](#) ([Chiji](#) or [Climer Cards](#)), spread these out on the floor or on a table. Ask students to pick a card that reflects something that they have learned today. This is ideally facilitated in a circle.

## Assessment Idea

Teachers will assess learning at different points throughout the inquiry using multiple methods. The following assessment provides an alternative evaluation method to standard quizzes and tests, that can be used after consolidation or at any point in the lesson to check for understanding.

Tell the students they are **school artists** and have been invited to explain to the **school community** about **climate**. They have been given a space on a wall called a **graffiti wall**.

Divide the wall into 3 and ask students to visually represent their ideas and opinions about **weather** in the first third. The other two thirds will be filled over the course of the next two inquiries (climate and climate change).

Spend some time learning about the history of graffiti: [Graffiti Facts for Kids](#).



### Take Action:

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Once the students have a good understanding of weather, climate and climate change, allow time for students to take action. This is an essential part of the learning process on climate change, as it empowers students and eases their eco-anxiety. Remind students that even when things get hard and seem so big they can always do something by taking action. Their actions will create an impact

These ideas for action can be utilized at any point in the learning process, whether it's now or after completing more guided inquiries. Please note the suggestions are consistent in each chapter.

**Ask the students** what they want to do to positively impact climate change. List their ideas and come up with a plan to put their action in place.

#### *Ideas for Taking Action:*

- Organize an assembly to present information learned in an engaging manner
- Plant trees
- Collect data as a citizen scientist (e.g., bird counts)
- Encourage families to use eco-friendly options in place of single-use items (e.g., plastic water bottles, paper coffee cups, etc.)
- Take a class pledge to make changes:
  - Use both sides of paper
  - Turn off the lights when leaving the room
  - Unplug things that aren't being used
  - Or check out these ideas: [50 Classroom Climate Actions - Resources and Descriptions](#)

### Action Project Examples

How could you use these great examples to come up with action projects with your K-2 students?

- Watch this video titled [‘Change the World’ in 5 minutes](#). It is about a Primary class who have decided that they would spend the first 5 minutes of school each day of the week implementing sustainable change to the world. It's more of a movement that gives the youth the power to make a difference.
- Watch these [kindergartens share what they learned about “Fast Fashion”](#) in order to educate and create change.
- Informative Article about using Dr. Seuss' book “The Lorax”: [How Dr Seuss Wrote The Ultimate Takedown Of Fast Fashion](#)

- **Please note:** LSF supports the removal of other Dr. Seuss materials that have been discontinued because of anti-Black and anti-Asian racism.

**“TEACHER” –Gladys Speers PS-Oakville, ON (2019) K-6**

- The vision of this project was to educate the youth and the community on making choices in order to live in a sustainable and healthy way. Environment issues addressed: Convenience vs. sustainability, pace of life vs. nature appreciation, consumer choices vs. rights to a clean environment, and ignorance of important life skills which help sustain a healthy environment. [See their project here.](#)

**Ten Canadian Schools’ Stories of Climate Action**

- [Climate Action project](#) K-12
- [Our Earth: How Kids are Saving the Planet - JANET WILSON](#)