

# THE PLASTIC WE EAT



## Time

75 minutes

## Grade level

3-9 (Can be adapted for all grades)

## Learning Objectives

- Students will discuss plastic pollution and connect it to the food we eat.
- Students will explore the 10,000 Changes infographic and video to learn about the role microplastics play in the food we eat.

## Materials

- *The plastic we eat* video and infographic (accessible at [10000changes.ca](http://10000changes.ca))
- The plastic we eat handout (attached)
- Grocery store flyers (not included)
- World map (optional)

## Focus Questions

How is it possible that the food we eat contains plastic? How do microplastics impact our health? What can we do to decrease our use of products containing microplastics and make a difference in preserving the environment?

## Lesson Description

### Minds on

Students will discuss what they eat, where their food comes from, and how that food is transported from the source to their homes.

### Action

Students will watch the 10,000 Changes video and explore the infographic to learn more about how plastics and microplastics affect the food that we eat.

### Conclusion

Students will discuss ways to take action on plastics and select one action item for their classroom, school, or community.

## Lesson Implementation

### Minds on

In pairs or individually, ask students to make a list of all the things they have eaten in the past week. Students can organize their thoughts in calendar form or list form. Remind students to think about all the ingredients that go into a meal. For example, if students write pizza, they should also list the ingredients that go into making the pizza, such as cheese, tomatoes, wheat, etc.

When students are finished brainstorming, ask them to consider where these ingredients came from. Using old grocery flyers, have students find some items from their list and determine where these food items came from. Project onto a screen, or hang on a wall, a world map somewhere in your classroom. Have students cut out one of their items from the flyer and, using yarn or string, map where this food travelled from. All strings should lead back to your hometown.

Now that your students have mapped where their food items came from, ask them how they think plastics play a role in the transportation of these food items. How are these items sold at the grocery store (i.e., packaging)? What role does plastic play with fast food? Have a class discussion about all the ways plastics and food are connected in our society.

*Created in partnership by Canadian Geographic and the Recycling Council of Ontario, with funding provided by Environment and Climate Change Canada*



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## Action

Once students have discussed a variety of ways plastics are connected to the food that we eat, inform them that they are going to focus on the association between microplastics and food. Divide students into pairs or small groups and distribute a student handout (included) and infographic to each group. Before students begin to complete the handout, play the Plastic we eat video. Afterwards, allow time for students to explore the infographic and complete the handout based on what they learned in the video and infographic.

Take up the handout as a class and have a class discussion about what students learned.

Discussion questions to consider:

- What are microplastics and how do they impact your life?
- What did you learn that surprised you?
- How is the food chain impacted by microplastics?
- Which plastic item mentioned in the video/infographic do you think your school/ community uses the most?

## Conclusion and Consolidation

Arrange a walk around your school for students to map and highlight areas in the school where plastics are used in connection with food. Next, discuss as a class your findings and brainstorm how your school can cut down on plastic. To assist with student brainstorming, bring attention to the “6 ways to cut down the plastic in your diet” section on the infographic. Ask students to think of one more idea to add to this list that can be connected to their school.

Create a list of these ideas on the board and ask students to select one idea they would like to take action on. Have students create an action plan and timeline. Next, have students prepare a short presentation for the school principal, vice principal, or custodian to discuss their action plan and how they can turn it into a reality.

## Extend Your Geographical Thinking

The plastics used in food packaging is a growing problem in our society today. Either on a class trip or individually with their parents, have students visit a local grocery store to examine the use of plastic packaging. If possible, have them take pictures of what they saw.

Back in class, discuss simple solutions your students and their families can take to reduce the plastic packaging used in their lives and have them make a commitment on the [10000changes.ca](http://10000changes.ca) website.

## Connection to the Canadian Geography Framework

### Concepts of Geographic Thinking

- ▷ Patterns and trends
- ▷ Interrelationships

### Inquiry Process

- ▷ Formulate questions
- ▷ Interpret and analyze
- ▷ Communicate

### Geospatial Skills

- ▷ Foundational elements
- ▷ Technology

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## Modifications

- For the Minds on activity, rather than having students think back on what they ate, students can instead keep track of their meals in their notebooks for one week and use this list for their food mapping activity. Math can be incorporated into this activity by having students calculate the distance in kilometers and determine their food's carbon footprint.
- For the Conclusion and Consolidation activity, students can expand their action plan to include their home and involve their parents or guardians.

## Assessment Opportunities

- Students will be assessed on their participation in the food mapping activity.
- Students will be assessed by their group peers on how they contribute to the discussion and fill out the handout.
- Students can be assessed on how they present their action plan to a member of the school. Peer assessment or a marked grade by the teacher can be used.

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## The plastic we eat handout

1. What is a microplastic particle?

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2. Describe the microplastic cycle.

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3. a) Which type of environment are microplastics most commonly found in?

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b) Describe how microplastics in this environment impact the food chain. Use the space below to draw or sketch your ideas.

4. What impact do microplastics have on people who drink bottled water?

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5. How do microplastics impact our health?

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6. a) Which plastics mentioned in the video and infographic do you use?

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b) What can you do to cut down on your plastic use?

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