



Vortex: To Plastic or Not To Plastic

This lesson explores Vortex, a radical art installation by Douglas Coupland at the Vancouver Aquarium. Vortex is in an imaginative journey to the Great Pacific Garbage Patch and immerses visitors in the ocean plastic pollution crisis. Coupland's exhibit invites students to think about plastic in a relevant, contemplative and transformative way. In this lesson students will examine how plastic has impacted humans around the globe, and what consequences we are experiencing as a result (or have yet to experience).

Students will be able to:

- [1] Think critically about what plastic means, has meant, and will mean to humans
- [2] Consider how plastic has influenced their own lives
- [3] Determine what it means to be a global citizen (including the rights and responsibilities that come along with it)
- [4] Challenge themselves and peers to increase their environmental stewardship
- [5] Use creative writing as an outlet for concern for our environment and to write a story of cause and consequence

LEARNING ENVIRONMENT
<ul style="list-style-type: none"> • Individual / Pairs
MATERIALS
<ul style="list-style-type: none"> • Pencils/Pens • Quick write sheet (see below) • Brainstorm sheet (see below)
TIME
<ul style="list-style-type: none"> • 60-90 minutes

Steps

Notes:

- This activity may be completed before or after participating in a guided tour of the Vortex exhibit
- Before coming to the aquarium, teachers should introduce and practice quick writes in the classroom. Students should have a sense of what a quick write entails, such as:
 - Brainstorming **all** they know in the time given
 - Being able to quickly decide what to write
 - Being able to write continuously during the time given
 - Not worrying about perfect spelling/grammar /flow of ideas – quick writes are **quick**, and play off instinct
- Timing for quick writes (20sec/4mins) may be adjusted as needed, but be firm with time
- Steps 3-7 may be repeated as many times as desired, accumulating several quick writes on several objects from the Treasure Wall

Activity

Part 1: What strikes you?

1. Direct students to examine the Treasure Wall silently by themselves, using the “Brainstorm Page” as a space to sketch/write anything they notice or anything that strikes them **(5 mins)**
2. Collect the students and have them discuss as a group what they saw, their inferences, connections, and/or questions they may have **(10 mins)**
3. Have students choose **one** object from the wall and sketch it in the box on the “Quick Write Page” **(5 mins)**

Part 2: Quick Write

4. Give students **20 seconds** to think individually of ideas for a quick write on their chosen object
5. Give students **4 minutes** to continuously write using the “Quick Write Page”
6. After writing, have students go through and note the number of words they wrote, as well as highlight any **gems** (words/phrases/sentences that they think are particularly meaningful or powerful)
 - This step allows students to reflect on their thinking and will be used to compare to future quick writes (growth in writing, vocabulary, depth of understanding, etc.)
7. In pairs, have students share their quick writes and gems
 - Partners should comment on “what works” (i.e. what they think their partner did particularly well, why their quick write might have been engaging, etc.) **(5 mins)**
 - After talking to a partner, ideas can be shared amongst the class as a whole
8. Repeat steps 3-7 **at least 1 more time**

Part 3: Write the Story

9. Have students review their quick writes and decide which they wish to expand and provide more depth for
10. Students must now “write the story” in which their object lives, providing more details and more complex, varying sentences **(15 mins – this may be done at the Aquarium or back in the classroom)**
Some guiding questions:
 - What is the object?
 - How did it get here (B.C. coasts)?
 - Who did it belong to?
 - What are some consequences of this surviving/reaching B.C.?
 - What’s in store for the future of this object?
11. Stories can be used in any way desired (shared, assessed for literacy, assessed for understanding, turned into art, etc.)

Helpful Information

Aquarium Meeting Spot: The Vancouver Aquarium can be a busy place so locating a pre-arranged meeting space for your class is essential to reinforce learning during your visit. Some spots to consider include the Underwater Dolphin and Arctic Galleries, the Exploration Gallery, and outdoors, weather permitting.

Using Cameras at the Aquarium: If using a camera, please ensure you are doing so carefully around animal habitats. Use camera straps to avoid dropping devices into the water/habitats. When photographing in dark galleries, avoid use of the camera flash to avoid reflection and ensure good quality results. Consider taking photos on an angle (as opposed to directly facing glass habitats) even in well-lit galleries.

Teacher Resources: On the Ocean Wise Education Self-Directed visits page you will find additional resources and links that can help deepen or continue the conversation with students.

(<https://education.ocean.org/selfdirected/resources/>).

Extension Activities

Resources to view and/or discuss prior to visit (optional):

- <http://www.vanaqua.org/experience/feature/vortex>
- <https://www.coupland.com/>
- <https://www.theoceancleanup.com/great-pacific-garbage-patch/>
- <https://www.shorelinecleanup.ca/>

Reflection: A visit to this exhibit could be followed by a written reflection upon return to school. Students could reflect upon the perspectives of the four characters in the boat, shared during their visit, or they could be asked to consider alternate perspectives, such as those of animals living in the ocean. For example, “What does an oceanic trash vortex look like to aquatic life? What would it feel like to be in one?”

Shoreline Cleanup: Provide the students with a leadership opportunity and citizen science experience by registering for a Shoreline Cleanup in your local area. Have the students take charge in organizing, communicating and facilitating the cleanup for the community, either a whole class or in smaller teams. Data collected from Shoreline Cleanups goes directly to the International Coastal Cleanup database (ICC). <https://www.vanaqua.org/learn/educational-resources>

Dive Deeper: have the students partake in a research project to further investigate single use plastics and the microplastics that they produce in the ocean. Students may communicate their research through their choice of media or method, to align with the theme of Douglas Coupland’s exhibit that art is a powerful medium to communicate science.

Map it Out: Learn more about the Great Pacific Garbage Patch: it’s size, the fact that garbage travels via ocean currents from all over the world to become a part of it, etc. Students might even think about mapping the origins of garbage, for example, the boat featured in Vortex which travelled from Japan to Haida Gwaii after the tsunami in 2011. We all share the same ocean and our choices therefore have global impacts.

Curricular Competencies | British Columbia

Grade 6

Social Studies

- Determine which causes most influenced particular decisions, actions, or events, and assess their short- and long-term consequences
- Ask questions, corroborate inference and draw conclusions about the content and origins of a variety of sources
- Develop a plan of action to address a selected problem or issue

Science

- Make observations aimed at identifying their own questions about the natural world
- Express and reflect on a variety of experiences and perspectives of place
- Experience and interpret the local environment
- Communicate ideas, explanations and processes in a variety of ways

English

- Use writing and design processes to plan, develop, and create engaging and meaningful texts
- Think critically, creatively and reflectively to explore ideas within, between and beyond texts
- Synthesize ideas from a variety of sources to building understanding
- Construct meaningful personal connections between self, text and world
- Transform ideas and information to create original texts

Grade 7

Social Studies

- Determine which causes most influenced particular decisions, actions, or events, and assess their short- and long-term consequences
- Identify what the creators of accounts, narratives, maps or texts have determined is significant

Sciences

- Experience and interpret the local environment
- Make observations aimed at identifying their own questions about the natural world
- Demonstrate an understanding and appreciation of evidence (qualitative and quantitative)
- Consider social, ethical and environmental implications of the findings from their own and others' investigations
- Express and reflect on a variety of experiences and perspectives of place

English

- Use writing and design processes to plan, develop, and create engaging and meaningful texts
- Think critically, creatively and reflectively to explore ideas within, between and beyond texts
- Synthesize ideas from a variety of sources to building understanding
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Brainstorm Page

TREASURE WALL

Write/sketch your observations, connections, inferences, questions