



## BIG ISSUES TO FILL

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**Timing:** 90 minutes (1 class)

**Activity Type:** Group quiz and essay

**Description:** An introduction to the issue of world water conservation by way of a quiz and an essay. Students will identify the issues arising from water management, as well as the issue most likely to be a catalyst for change. They will base their judgements on a careful analysis of the facts provided by reputable sources, as well as their own opinions. The ultimate goal of the lesson is to try to defuse the sense of helplessness (which the monumental nature of the situation could cause) by using a methodical approach.

**Expectations:**

### Science

**Grade 10 (Academic):**

- D1.1 analyse current and/or potential effects, both positive and negative, of climate change on human activity and natural systems
- D3.8 identify and describe indicators of global climate change

**Grade 10 (Applied):**

- D3.7 identify indicators of global climate change
- D1.1 analyse, on the basis of research, various ways in which living things and natural systems have been affected by climate change and communicate their findings

### English

**Grade 10, Writing (Academic):**

- 1.3 locate and select information to appropriately support ideas for writing, using a variety of strategies and print, electronic, and other resources, as appropriate
- 1.4 identify, sort, and order main ideas and supporting details for writing tasks, using a variety of strategies and organizational patterns suited to the content and the purpose for writing

## Grade 10 Learning Activities



- 2.4 write complete sentences that communicate their meaning clearly and accurately, varying sentence type, structure, and length to suit different purposes and making smooth and logical transitions between ideas

### Grade 10 (Applied):

- 2.5 explain how their own beliefs, values, and experiences are revealed in their writing

### Teaching strategies

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1. Ask the class if they're aware of the world-wide water crisis. Explain that there is a lot of information surrounding this issue - most of it not encouraging - and that we will look at ways of managing this information.
2. Before the lesson, print two copies of the water facts sheet (see handout). Keep one intact for reference; with the second sheet, cut off the numbers from the facts to make a separate set of number cards and fact cards. Hand out the fact cards while placing the numbers up where the whole group can see them (this can be done by fastening magnetic strips to the number cards or by using a pocket chart). In pairs or groups, the students attempt to guess which numbers match their 'water facts' before placing them beside (or under) the corresponding numbers. Next, invite the class to challenge some of the guesses (while avoiding personal criticism of each group's guesswork). Finally, reveal the actual facts and figures. Which ones are the most and least surprising?
3. Ask the students how this information makes them feel (Powerless? Depressed?) Remind them of the goal of this lesson, which is to manage the information. Distribute the handout of 'big issues' which put the facts into context. They are:
  - Water as a natural resource (science and engineering)
  - Water as a human right (legal and development issues)
  - Water and pollution (health sciences)
  - Water and privatization/globalization (economics)
  - Water and global warming (environmental science)

## Grade 10 Learning Activities



Briefly discuss these categories. Why would pollution be listed as a health concern, rather than an environmental concern? Does all data on climate change have a "crossover" aspect, in that it concerns other disciplines? For the rest of the class, the students return to group work in order to match the newly found water facts to their categories. Review each group's answers, taking note of the "crossover" facts which belong in the realm of two or more categories.

4. As an extension of the lesson, the students will individually write a short essay explaining which of these five "issues" they believe is the most pressing. They should consider the following questions:
- Which one should the world take on first?
  - Which one would most likely motivate people to take individual action, which one would affect them personally?
  - Will a change in the earth's climate make the changes harder, or easier?
  - Which domain (health, law...) would have the greatest interest, economic or otherwise, in taking the lead to solve the global water crisis (how would this domain benefit)?

Each essay should include why they think this issue is the most important, who the "players" are in each domain (corporations, governments, scientists...) and the student's opinion of how likely they think this change will come in the next few years.

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