Lesson Plan

Multiple Meanings

Book: Detecting Floods
Series: Detecting Disasters
Level: Navigator

Objective
To help students use the context and a dictionary to clarify the meanings of words in a text, understand the relationships between words, and explore nuances in word meanings.

Supplies
- A copy of *Detecting Floods* for each group of students
- Merriam-Webster online dictionary: http://www.merriam-webster.com/
- List of questions for each group (attached)
- Paper and pencils

Before the Activity
Read through the *Detecting Floods* book, or assign it to students to read on their own. Print the lists of questions (included on a separate page below), and cut them apart.

Activity
Split students into four groups, and give each group a list of questions. Have the students work together to answer the questions, using both the *Detecting Floods* book and the Merriam-Webster online dictionary, if needed. Each group should choose one person to write the group's answers on a sheet of paper.

When all the groups have answered their questions, each group should choose one person to share their answers with the rest of the class. After each group has shared, ask the students to hand in the papers with their written answers. Remind them to write the name of each student in the group on the group's paper.

Evaluation
Use the attached answer key to score students' answers to their group's questions, for a total of up to 16 points.

Standards
This lesson may be used to address the Common Core State Standards' language standards, grade 6 (L 6.4; L 6.5).

Group 1: Levee

1. How is the word *levee* defined in the text on page 17?
2. How is the word *levee* defined in the glossary?
3. What does the glossary definition tell you that the in-text definition does not?
4. Look up the word *levee* in the Merriam-Webster online dictionary. Write down all the definitions listed for this word.
5. According to the "Origin and Etymology" section of this word's Merriam-Webster online dictionary entry, where did this word come from? Remember to check this section under all this word's definitions.
6. How do you think *levee* ended up with so many different meanings?

Group 2: Dam

1. How is the word *dam* defined in the glossary?
2. How is the word *dam* defined in the text on page 18?
3. What else can you learn about dams from the text, both on this page and throughout the rest of the book?
4. Using the "A Closer Look" feature on pp. 20–21, write definitions for the four different sub-categories of dams.
5. What do these kinds of dams all have in common? What is different about them?
6. Can you think of another word that has sub-categories like this?

Group 3: Predict

1. Where is the word *predict* used in the text? Write the sentence and page number where you find it.
2. What do you think the word *predict* means?
3. Look up the word *predict* in the Merriam-Webster online dictionary and write down the definition.
4. What part of speech is the word *predict*?
5. Under the "Full Definition" section of this word's Merriam-Webster online dictionary entry, find the six similar words and their parts of speech. (Note: Only five of these words appear in the list. You'll have to hunt for the other one.)
6. Write a sentence using each of these six words.

Group 4: Fertile

1. How is the word *fertile* defined in the glossary?
2. Look up the word *fertile* in the Merriam-Webster online dictionary and write down the definition.
3. What three synonyms for *fertile* are discussed in the "Synonym Discussion" section of the Merriam-Webster online dictionary entry?
4. How are the meanings of these words slightly different? List any differences you can find.
5. Using the "Synonyms" section of this word's Merriam-Webster online dictionary entry, find and write down seven antonyms for *fertile*.
6. How are the meanings of these words slightly different? List any differences you can think of, looking up any unfamiliar words in the dictionary.

ANSWER KEY

Group 1: Levee

1. p. 17: "Levees are barriers built along the sides of a river." (1 point)
2. p. 31: "levee: a structure built next to a river to stop floods." (1 point)
3. The glossary definition tells readers that levees are built to stop floods. (1 point)
4. Levee's definitions:
1. (noun): "a reception held by a person of distinction on rising from bed," "an afternoon assembly at which the British sovereign or his or her representative receives only men," and "a reception usually in honor of a particular person." (3 points)
2. (noun): "an embankment for preventing flooding; a river landing place; a continuous dike or ridge (as of earth) for confining the irrigation areas of land to be flooded." (3 points)
3. (verb): "to provide with a levee." (1 point)
5. Etymology:
1. (noun): Levee comes from the French word *lever*, which comes from the Middle French for "act of arising," from (se) *lever* which means "to rise." (2 points)
2. (noun): Levee comes from the French word *levée*, which comes from the Old French for "act of raising," from *lever* which means "to raise." (2 points)
6. Answer will vary but should include something about how both involve raising—either raising the banks of a river by building them up, or raising one's body out of bed. (2 point)

Group 2: Dams

1. p. 31: "dam: a wall that stops water from flowing." (1 point)
2. p. 18: "Dams are walls built in rivers." (1 point)
3. Dams help people control or slow the flow of water (p. 18), they can prevent flooding (p. 18), they sometimes use the force of flowing water to generate electricity (p. 18), they can be used to collect and store lots of water (p. 19), they can cause flash floods when they break (p. 15), computers help engineers design them, (p. 26), designing and building them can reduce flood risks (p. 27), and there are four kinds of dams (pp. 20–21). (8 points)
4. kinds of dams:
arch dam: a curved dam built inside a canyon. Water pushing against the curved wall holds the dam in place (p. 20). (1 point)
buttress dam: a dam with supports on the outside that push back against the weight of the water (p. 21). (1 point)
embankment dam: a dam made of a thick earthen wall (p. 21). (1 point)
gravity dam: a concrete dam that is thicker and heavier on the bottom (p. 20). (1 point)
5. They all perform the same function of slowing or holding back water, but they have different shapes that use different methods to hold them in place. (1 point)
6. Answers will vary. Potential answers include lightbulbs (halogen, incandescent, LED, etc.) and automobiles (gasoline, diesel, electric, etc.). (1 point)

Group 3: Predict

1. p. 23: "One way that meteorologists predict floods is by using radar." (1 point)
2. Answers will vary but should include something about telling future events. (1 point)
3. "to say that (something) will or might happen in the future." (1 point)
4. Predict is a verb. (1 point)
5. Similar words:

In the list: predictability (n), predictable (adj), predictive (adj), predictively (adv), predictor (n), prediction (n). (5 points)

Elsewhere on the page: predict (n) (1 point)

6. Answers will vary. (6 points)

Group 4: Fertile

1. p. 31: "fertile: good for growing plants." (1 point)
2. "producing many plants or crops; able to support the growth of many plants; producing a large amount of something; or producing many ideas." (1 point)
3. The three synonyms are fecund, fruitful, and prolific. (1 point)
4. *Fecund* emphasizes bearing fruit or offspring, *fruitful* adds the idea of producing desirable results, and *prolific* emphasizes spreading rapidly. (3 points)
5. The seven antonyms are *barren*, *dead*, *infertile*, *sterile*, *unfertile*, *unfruitful*, and *unproductive*. (7 points)
6. Answers will vary. Potential answers include the fact that *dead* and *barren* both describe things devoid of life, while *sterile* and *infertile* can refer to living things that cannot reproduce. (3 points)