Instructor’s Overview: Students will research, design, and present information about aspects of flooding.

Objectives:
• To practice using Microsoft® Word® and formatting text and graphics
• To have students become aware of the risks of flooding
• To complete a cross-curricular science activity, and practice writing and presentation skills

Materials
• Computer access and Microsoft® Word® for Days 1 and 3
• Paper
• “How to Make a Fantastic Brochure” guide
• Student handout

General Information and Procedure
If you do not have computer access, this activity can be done using handouts, computer paper, markers, colored pencils, scissors, etc.

Projects are designed for students to collaborate on designing a product to inform their classmates about risks associated with flooding.

Collect one student project sheet from each group to use for assessment.

The students choose a set of questions to answer in their brochure.

Day 1 is devoted to research. This can be done in a computer lab or if that option is not available, then print out the packet of information the student can use for taking notes. Be sure to collect some statistics on the topic.

Day 2 will be used to design the layout of the brochure. Formatting must be followed exactly. Have students take out two pieces of paper and fold them into thirds. Number the panels (see “How to make a fantastic brochure” guide included on the Handy Handouts 3 CD-ROM). Have these available for the students to reference. It is vital that they know exactly what they are going to do before they go to the computer lab. The students should decide what formatting they are going to use (for example Word Art, bold font, etc.) and where they are locating the required graphics. The completed draft is due before the end of class and must be approved by the teacher. Remember that written text takes up much more room than typed text. Students must put the information in their own words. They must pull the most relevant information out of what they have researched and use that in their brochure.

Students who research what to do before, during, and after a flood will encounter long lists of things to do. They will be tempted to put these lists in their brochures. The brochure should not be one long list. Encourage the students to be creative with their titles. Some student-created titles have been “Flooding for Dummies” and “Reading this may save your life: Guide to Flooding.”

Be sure there is enough information on each page. Students should double check that they have answered all questions; groups should elaborate on their topics.

Well-prepared students and on-task groups will be able to complete the project on time. For students to complete this on time, it is important for everyone to work on the final draft. It is suggested that one member take side one, another take side two, and have another work on locating graphics. If you are using a computer, have each group member work on a specific panel.

Some student may express interest in researching a specific flooding event or they may want to include their own experiences. Large flooding events could include hurricanes Charley, Ivan, Rita, Andrew, Hugo, or Katrina; the Johnstown Flood of 1889; or the great Mississippi River floods of 1929 or 1993.
Flooding Project Lesson Plan

Background: From 1983 to 1997 floods in Indiana cost an average of $35 million every year. Nationally about 140 people are killed in flood events each year; half of these deaths involved a vehicle. Flooding can occur in any state at any time of the year*. To save lives and property, it is important to understand flooding and to be aware of the risks. More links to information about floods can be found at Digital Library for Earth System Education (search for floods) or the site-specific links below:
http://www.usgs.gov/hazards/floods/
http://www.howstuffworks.com/flood.htm
http://water.usgs.gov/wid/index-hazards.html

Purpose: Students will research, design, and present information about aspects of flooding. Projects are designed for students to collaborate on designing a product that will inform their classmates about risks associated with flooding.

Objectives:
• Practice using Microsoft® Word® for formatting text and graphics
• Be aware of the risks of flooding
• Cross-curricular science activity, and practice writing and presentation skills

Materials
• Computer Access and Microsoft® Word® for days 1 and 3
• White paper
• “How to Make a Fantastic Brochure” guide (included on Handy Handouts 3 CD-ROM)
• Student handout

If you do not have computer access this activity can be done with information handouts, computer paper, markers, colored pencils, scissors, etc.

Guidelines/Notes
Day 1 is to be devoted to research. Briefly go over the handout and address any questions before the students begin. It is a good idea to point out the assessment section. Before research can begin, groups should be assigned or chosen. Topics can be chosen by the group or at random (such as drawing a number out of a hat). It is recommended that a limit is placed on the number of groups covering the same topic. For example, if you have twelve groups, only three of these groups can have topic Q4. This helps prevent the same information being presented by each group on the last day. If this is implemented, it is best to have the groups complete a task and bring the completed task to you to determine the order in which the topics are chosen. The task can be as simple as filling out the group member’s names and task to be completed on the front of the handout, correctly answering a question on the back, and bringing that paper to you.

This activity can be done in a computer lab or—if that option is not available—print out packets of information the students can use to take notes on. Be sure to remind students to collect some statistics on their topic.

Note: Some student may express interest in researching specific flooding events or they may wish to include their own experience with floods.

Day 2 will be used to design the layout of the brochure. Formatting must be followed exactly in order for the final copy to print correctly. Have students take out two pieces of paper and fold them into thirds. Number the panels (see “How to Make a Fantastic Brochure” guide) as a class, this will prevent lots of questions and confusion later. Have example brochures available for the students to reference while they design their own. It is vital that they know exactly what they are going to do before going to the computer lab. The students need to decide the formatting to use (for example Word Art, bold font, etc.), specifically where they are locating the required graphics. The completed draft is due before the end of class and must be approved by the teacher. Remember that written text takes up much more room than typed text. Be sure the students have enough information on each page. Double-check that they have answered all of the questions; some groups need to elaborate on their topics. Also, students need to put the information

*Background information provided by the National Center for Atmospheric Research: University Corporation for Atmospheric Research. Link http://www.ucar.edu/communications/newsreleases/1999/inextr.html accessed October 18, 2006
in their own words, and pull out what they think is the most relevant information in their research. It is a good idea to have the student check with you at the end of class so you can see that they are ready to go for the next session. The students may want to bring a disk for that session.

If you would like, you may announce to the class that there will be a contest for the best brochure. During the presentation on the last day after all of the brochures have been presented, the class can vote. A prize for this could be 5-10 points added to the group’s score.

Note: Students who research what to do before, during, and after a flood will encounter long lists of thing to do; they will be tempted to put the entire list in their brochure. The brochure should not be one long list. Encourage students to be creative with their titles. Some student-created titles have been “Flooding for Dummies,” and “Reading this may save your life: Guide to Flooding.”

Day 3 is production day. It is best to provide blank templates that your students can use. You can follow the formatting guidelines included with this activity. Be sure to save it as a template, not a document. A brochure template is provided by Microsoft® Word®, but changing the formatting can be difficult. The students will need to turn in their final copy at the end of class. Many students get caught up in formatting fonts and do not get all of their information typed into the brochure. It is best that they type all of their information out first and then format the text. If they do not finish in the time allotted, it becomes homework; this is where having a disk comes in handy. If the majority of your class is not finished, you may decide to schedule another day in the computer lab.

Well-prepared students and on-task groups will be able to easily complete the project on time. For students to complete this on time, it is important for everyone to work on the final draft. It is suggested that one member take side one, another take side two, and have the final group member work on locating graphics. This strategy works well if the computers are networked.

Timing: This lesson can be completed within the time allotted. As a teacher, you know your students’ work habits and capabilities, so adjust the activity timeline accordingly for your students.

Day 4 is presentation day. For bell work that day, have the students create flooding brochure listening sheets. Listening sheets include the title of the brochure and any variety of facts you specify written down. For example, have the students write down all of the questions that were to be answered in the brochure. For each group presentation, write down the title of their brochure and two statistics or interesting facts they included.

Procedure
1. Introduce the assignment and go over the project sheet. Be sure to explain how topics will be chosen.

2. Have the students choose groups or assign groups.

3. Collect one student project sheet from each group to use for assessment. Be sure they have filled out the appropriate information (such as name and task) and inform you what questions their brochure will be covering.

4. Follow the Guidelines as outlined above for days 1 though 4.

5. For presentations, remind the students about appropriate behavior. If they are disrespectful during a presentation, they will lose points off of their grade (disrespectful behaviors include talking, passing notes, or putting their head down).

6. Complete the majority of the assessment as the students are giving the presentations. Final scores can be assigned after you double-check the brochure.

7. After presentations are complete, have to students take out some scrap paper or provide them with some. Have them put their name on it, and then write down the title of the brochure they think was the best. Collect the information, tally it, and announce the winner.
Flooding: What do you know

During the next three days, you will learn about risk associated with flooding by designing a brochure. You will have one day to do research in class, one day to design the layout, and one day to create the brochure. Your group will present a brochure to the class the fourth day ( ). This project is to be done in class.

Group members: _____________________ Task: _____________________
_____________________  _____________________
_____________________  _____________________

Topics: Choose with your group one of the following groups of questions to address in your brochure.

Q1
How does flooding occur?
What is meant by a 100-year flood?
Does global warming increase our chances of having a flood?

Q2
What should you do if there is a flood?
How do you protect your person and property before, during, and after a flood?

Q3
Where are people most at risk for flooding?
How do people find out if their area has a high risk of flooding?
Who should purchase flood insurance and where can you buy it?

Q4
Should you drive or walk through flooded roadways and areas? Why?
What should you do if caught in a flash flood?

Where to start: The following sites will help you start collecting information

http://en.wikipedia.org/wiki/Flood
http://www.fema.gov/hazard/flood/index.shtm
http://www.ucar.edu/communications/factsheets/Flooding.html
http://www.ci.renton.wa.us/fire/dem/flooding.htm

Brochure layout:
Side 1:
Panel 2: Main points and graphic
Panel 3: Continuation of main points
Panel 4: Conclusion of primary information and graphic

Side 2:
Panel 1: Title panel including graphic
Panel 5: Bulleted information and statistics
Panel 6: Additional information, by line, citation

Presentation:
- Communicate information accurately and clearly
- Follow formatting layout
- CITE INFORMATION
- Be neat and check spelling

Assessment: (100)

<table>
<thead>
<tr>
<th>Points available</th>
<th>Points received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily points</td>
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</tr>
<tr>
<td>Answered questions</td>
<td>25</td>
</tr>
<tr>
<td>Presentation Criteria</td>
<td>50</td>
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<tr>
<td>Total</td>
<td>100</td>
</tr>
<tr>
<td>Daily points</td>
<td></td>
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<tr>
<td>Answered questions</td>
<td></td>
</tr>
<tr>
<td>Presentation</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>
Step 1: Open a new document in Word®. Select File->Page setup.

Step 2: Set each margin to 0.5 inches and change the layout to Landscape. Click OK.

Step 3: Select Format -> Columns.
Step 4: Select 3 columns. Be sure the *Equal* column width box is selected. Make the spacing 1 inch.

You want the spacing to be one inch so that when you fold it all of the margins are one-half inch.

To make scrolling between columns easy, insert page breaks.

Step 5: Be sure that your cursor is the first column. Hit enter twice then select *Insert->Break*. Select *Column Break* and click *OK*.

Step 6: Repeat step 5 until the cursor is in the third column of the second page.

Save the file as a template if you are setting up the Word® file for the students. If you are having the students format the document themselves, have them follow only steps 1-6.

Step 7: Select *File->Save As*. At the bottom of the window find *Save as Type*. Select the dropdown menu and locate *Document template* and click on it. Type in your file name and click *Save*. 