The Great Lakes: A 4th Grade Unit
Unit Plan
Time frame: Three weeks
Unit Title: The Great Lakes  
Grade: 4th grade Social Studies

Overview of the Unit: In this unit, we will cover the formation, history, resources, problems, and current conditions of the five Great Lakes.

Standards:
• 4.SL.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others’ ideas and expressing their own clearly.
• CCSS.ELA-Speaking and Listening.4.SL.1.c Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.
• 17.A.2a Compare the physical characteristics of places including soils, landforms, vegetation, wildlife, climate, natural hazards.
• 17.C.2b Describe the relationships among location of resources, population distribution and economic activities (e.g., transportation, trade, communications).
• 17.A.1b Identify the characteristics and purposes of geographic representations including maps, globes, graphs, photographs, software, digital images and be able to locate specific places using each.

Objectives:
• Students will be able to identify each of the Great Lakes.
• Students will be able to interpret information presented visually, orally, or quantitatively.
• Students will be able to compare and contrast the differences and similarities between the five Great Lakes.
• Students will recognize the benefits of the Great Lakes and they challenges they face to survive.

Key Concepts:
• Natural Resources
• Migration
• Settlers

Key Skills:
• Cause and Effect
• Compare and Contrast
• Map Skills

Key Vocabulary:
• Canal
• Contamination
• Ecosystem
• Fishermen
• Fresh water
Essential Questions:
How were the lakes formed?
Why are the Great Lakes so important to humans?
What problems do the lakes face and how can we help?
What would happen if the Great Lakes drained away?

Learning Activity 1: Launching The Great Lakes Unit
To engage students on the topic of the Great Lakes we will watch “Great Lakes: Carving Great Lakes” from the National Geographic’s channel. Next a read-aloud of Great Lakes by Kimberly Valzania will be done. Students will identify new vocabulary words that will be recorded on a word wall. During the read-aloud, students can stop the teacher to ask questions that will be recorded on an Inquiry wall. Students will learn the acronym H.O.M.E.S. which represents the five lakes to remember their names. In pairs, students will act out 10 of the new vocabulary words and choose one of those 10 words to act out in front of the class. For homework, students will draw a picture and write a sentence for each of the 10 vocabulary words they worked with in class.

Learning Activity 2:
We will teach the concept of rise and fall by using a bowl of water. We will have the students predict what would happen if we added ice to the bowl, sand to the bowl, and garbage to the bowl. We will watch “The Rise and Fall of the Great Lakes” and write any rises or falls we hear during the video in their notebook. We will create a T-chart after the video and write the rises and falls on either side of the chart. Once the T-chart is finished, we will review what a cause and effect map is and create our own to chart the causes of the rises and falls of the Great Lakes and the effects of these causes. We will then ask the students if it is possible for the lakes to drain away and what some of the causes could be. The students will fill in a new cause and effect map that include what they believe could be causes that would result in the Great Lakes draining away based on what we saw in the video. Students will use their T-charts and cause and effect maps to predict what would happen to Chicago if Lake Michigan drained away and write a paragraph explaining what would happen to Chicago, surrounding cities, and people. We will come back to these predictions at the end of the unit when we read The Day the Great Lakes Drained Away.

Learning Activity 3:
We will teach a mapping skill to familiarize students with mapping tools, such as a compass, longitude, latitude, legend/key, etc. We will emphasize that a map is a
scaled down version of some larger landscape. We will learn about the Great Lakes in the order of H.O.M.E.S., so we will learn about Lake Huron this day. We will read *Lake Huron* by Anne Ylvisaker in small groups, and students will answer questions about the lake: Where is the lake located? How did the lake form? Who settled near the lake? What are some natural resources near the lake? What problems did the lake face? Students should create a chart in their social studies notebook where they will organize the questions and answers they found in the text. Students can organize their charts with topic words such as Location, Formation, Natural Resources, and Problems. We will explain that this chart will be added to the following day for the next Great Lake. We will review the vocabulary from *Great Lakes* that we recognize in *Lake Huron*. Students will look back at their sentences and pictures for each word they find and add to it if necessary.

**Learning Activity 4:**
We will teach the concept of migration and explain to the students that people migrated near the Great Lakes because the major cities surrounding the lakes were booming with businesses. We will provide examples and non-examples of migration, such as migrating from Oklahoma to Illinois as an example and migrating from Michigan to Illinois as a non-example since both of the states surround Lake Michigan. We will learn about Lake Ontario on this day. We will read *Lake Ontario* by Anne Ylvisaker in small groups, and students will answer questions about the lake: Where is the lake located? How did the lake form? Who settled near the lake? What are some natural resources near the lake? What problems did the lake face? We will have the students continue to add answers into their chart in their social studies notebook. We will review the vocabulary from *Great Lakes* that we recognize in *Lake Ontario*. Again, students will look back at their sentences and pictures for each word they find and add to it if necessary.

**Learning Activity 5:**
We will learn about Lake Michigan on this day. We will read *Lake Michigan* by Anne Ylvisaker in small groups, and students will answer questions about the lake: Where is the lake located? How did the lake form? Who settled near the lake? What are some natural resources near the lake? What problems did the lake face? We will have the students continue to add answers into their chart in their social studies notebook. We will review the vocabulary from *Great Lakes* that we recognize in *Lake Michigan*. Students should already know, based on the previous activities, to look back at their sentences and pictures for each word they find and add to it if necessary. We will have the students write a postcard to a friend and pretend they are visiting Lake Michigan. On front of the postcard, students will draw a picture of Lake Michigan, whether they are at the beach, looking at the lake from a skyscraper, or how the lake looks on a map. On the back of the postcard, students will write about their experience at the lake, what they did around Lake Michigan, and why their friend should visit Lake Michigan.

**Learning Activity 6:**
We will learn about Lake Erie on this day. We will read Lake Erie by Anne Ylvisaker in small groups, and students will answer questions about the lake: Where is the lake located? How did the lake form? Who settled near the lake? What are some natural resources near the lake? What problems did the lake face? We will have the students continue to add answers into their chart in their social studies notebook. We will review the vocabulary from Great Lakes that we recognize in Lake Erie. Students should already know, based on the previous activities, to look back at their sentences and pictures for each word they find and add to it if necessary.

Learning Activity 7:
We will teach the skill of compare and contrast using a Venn diagram. We will model a compare and contrast of Lake Huron and Lake Ontario, recording the differences on each side and the similarities in the center of the Venn diagram. We will have students practice the skill by choosing two different lakes to compare. We will move on to learn about Lake Superior. We will read Lake Superior by Anne Ylvisaker in small groups, and students will answer questions about the lake: Where is the lake located? How did the lake form? Who settled near the lake? What are some natural resources near the lake? What problems did the lake face? We will have the students continue to add answers into their chart in their social studies notebook. We will review the vocabulary from Great Lakes that we recognize in Lake Superior. Students should already know, based on the previous activities, to look back at their sentences and pictures for each word they find and add to it if necessary.

Learning Activity 8:
Students will take a vocabulary quiz on the new words they learned so far in the unit. Words will be taken from the word wall. Students will be informed of the words they will need to know beforehand to prepare for the quiz. After the quiz, the students will work in five groups of six to create projects about one of the five Great Lakes. Each group will receive a different lake that will be assigned to them. Students will use the book we read in small groups regarding their Great Lake, their textbook, and notes in their notebooks to find information. We will provide research questions for them to follow: What is the history of the lake? What problems did the lake face? What is the lake like today? What activities take place around the lake? Why should someone visit this lake instead of the others? What does this lake have that the others do not?

Learning Activity 9:
Students will research their lake in the computer lab using the websites Great Lakes for Kids and Sheppard Software to answer any of the questions they could not find in their notes, textbook, or small group book. We will go back to the classroom where students will put their posters together. These posters should be put together as if they are going to be shown around the world to advertise the lakes.

Learning Activity 10:
Students will present their posters to the class in their individual groups in the order of H.O.M.E.S., and each group member will participate. While the students
present their posters, they will pretend that they are sharing this information with people who do not know what the Great Lakes are. After the presentation, the group will answer any questions their classmates may have. Once the presentations are over, students will begin a Tic-Tac-Toe assessment on the Great Lakes and complete it for homework.

**Learning Activity 11: Culminating Activity (Conclusion)**

We will conduct a read-aloud of *The Day the Great Lakes Drained Away* by Charles Ferguson Barker. During the read-aloud, we will stop and discuss what is happening as the story progresses and what we predict might happen next. After the story, we will look back at our paragraphs from Learning Activity 2 where the students predicted what would happen if the Great Lakes drained away and compare it to what happened in the story.

**Formative Assessment**
- Note-taking about each lake
- Compare and contrast Venn diagram
- Vocabulary sentences and pictures
- Vocabulary quiz on word wall vocabulary

**Summative Assessment**
- Great Lakes Presentations
- Great Lakes Tic-Tac-Toe Assessment

**Resources**

**Websites:**
- [http://www.sheppardsoftware.com/usaweb/regions/GreatLakes.htm](http://www.sheppardsoftware.com/usaweb/regions/GreatLakes.htm)
- [http://www.grc.nasa.gov/WWW/k-12/Sumer_Training/LincolnParkES/START_PROJECT.html](http://www.grc.nasa.gov/WWW/k-12/Sumer_Training/LincolnParkES/START_PROJECT.html)
- [http://www.youtube.com/watch?v=afs_A_Lz2w4](http://www.youtube.com/watch?v=afs_A_Lz2w4)

**Books:**

**Textbook:**
Lesson Plans
I. Contextual Information (What?)

Think about the questions below as you brainstorm and complete your lesson plan. These are questions you should be aware of as you formulate your lesson plan. Weave these areas of concern into your lesson plan.

Shields Elementary is located in Brighton Park on the south side of Chicago. It is a community where 90% of people are Hispanic and 90% are categorized as working-class or low socioeconomic. Ms. Lopez teaches a 4th grade class with 25 students. All students are Hispanic, with the exception of one student who is Caucasian. The school is title one and all but two students receive free lunch.

Ms. Lopez holds high expectations for her students and treats them with respect. There are few behavior issues besides the occasional compliance issue with one student with an IEP. There are nine students with IEP’s but inclusion shall be practiced in this lesson, with modifications made when students content knowledge is being assessed. Teachers will take notes on charts for student with auditory challenges and there.

Students have just finished taking the ISAT tests which included material on Math, Reading, and Writing. Students should have prior knowledge on the states and capitols of the Southern region which includes Texas, Alabama, Arkansas, etc. They should have an understanding that the US is made up of states which are separated by invisible borders. They should have some background knowledge of the Great Lakes region and maybe some personal experience with Lake Michigan which give services to Chicago land. Students are tested on the States and Capitols as part of their class curricula and have been learning the material through their social studies text book and premade worksheets for each US region. Students follow instructions well, practice good time management, and are productive throughout the school day.

II. Lesson Rationale (Why?)

Learning Goals and Focus (What?):

The purpose of this lesson is to familiarize students with the Great Lakes Region, also known as Eastern North Central region. Students should learn not only the States and Capitols of the region but also key terms that refer to the landscape of the region. Through the text Great Lakes by Kimberly Valzania students should become aware of the Great Lakes, their location, some history, and their purpose and use. Students will have a space to ask questions that will be recorded on an Inquiry wall. Students will use the acronym H.O.M.E.S. to memorize the names of the Great Lakes. Students will write sentences and draw pictures of 10 new vocabulary words.
Illinois Common Core State Standards:
- 17.A.2a Compare the physical characteristics of places including soils, landforms, vegetation, wildlife, climate, natural hazards.
- 17.C.2b Describe the relationships among location of resources, population distribution and economic activities (e.g., transportation, trade, communications).

Academic Language target for you and your students:
Lake Huron, Lake Ontario, Lake Michigan, Lake Erie, Lake Superior, Great Lakes region, Pollution, Ecosystem, Fresh water, Waterway, Waterfall, Glacier, Wildlife, Drinking water.

III. Instructional Strategies and Learning Tasks (How?)

<table>
<thead>
<tr>
<th>Time</th>
<th>Learning Activities - What learning activities do you have planned for the students (Note: these describe what the students do during the lesson)</th>
<th>Purpose</th>
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</thead>
<tbody>
<tr>
<td>5 min.</td>
<td><strong>Orientation/Engagement/Motivation:</strong> To engage and introduce students to the topic show video “Carving Great Lakes” video from National Geographic Channel to activate student thinking about how the Great lakes formed. Students will receive ideas as well as visuals through the video. <strong>Presentation/Explicit Instruction:</strong> “Today we will be moving on to the next region of the United States. This region is called the Eastern North Central region, or you can also call it the Great Lakes region, or the Midwest. This region includes our own state, Illinois. We will be going a little more in depth with this region. We are going to learn about the States and Capitols of this region of course, but we will also focus on the formation of the landscape, and learn cool facts about each great lake. Does anyone know what the great lakes are? Where they’re located? Why they are important? How many of them are there?” Allow for a student to list the names of the lakes, record on Word Wall. “Great, I’m glad you all have some background knowledge on this region. Can anyone remember a time they may have visited one of the great lakes and</td>
<td>Introduction: familiarize students with topic. Geographic awareness of great lakes location, facts, and purpose. Record new vocabulary. Connect great lakes topic to students own lives. Allow students to share experience, get a better understanding of the topic through listening to peers personal stories. Connect lake Michigan to Chicago.</td>
</tr>
<tr>
<td>20 min for explicit instruction and reading of text</td>
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</tbody>
</table>
share with the class?”
“Yes! One of the great lakes is right here in Chicago. When we go swimming at the beach, we are swimming in Lake Michigan.”
“I will be doing a read aloud of the non-fiction informational text called Great Lakes by Kimberly Valzania. We want to notice new vocabulary as well as any questions we may have and add them to our walls.”
Before beginning to read, show students the front cover of the book, point and identify each great lake. Point to Chicago and explain how this is the same water at our local beaches.

**Structured Practice/Exploration:**
During read aloud, stop and ask if students have any questions. Write questions on Inquiry wall; also keep a record of new vocabulary words on the Word wall.

**Guided Practice/Feedback:**
Provide students with the Acronym H.O.M.E.S. which represents the names of the five great lakes to help them remember them.

**Independent Practice/Application:**
“Wow, I learned a lot about my own region, I hope you did too. We learned how important water is and how we are really blessed to live in an area where fresh water is readily available. In some other parts of the worlds, people have to take long walks to wells and fill up jars with water and bring it back home to use it. Even places like Arizona, which is in the US have trouble having enough water. I know we heard a lot of new terms and I’m so happy that we have this wonderful word wall to help us keep track of them. But we are going to need more than just a word to remember our new vocabulary words.
In pairs, I would like you to act out 10 of the new vocabulary words you learned today. For example, for the word waterfall one of you can stand up straight and still representing the rock/land formation while the other motions with their hands, water following down the fall. You can use sounds as well. Choose your best act to share with the class.”

Familiarize students with topic. Geographic awareness of great lakes location, facts, and purpose.

Give students space to ask questions that are coming to mind during read aloud. Teacher is open and assessing what more students want to find out as well as where they may be confused. Record vocabulary for students to learn.
Use acronym as a way to remember the names of the great lakes.

Interactive way for students to practice using vocabulary words.
For homework:
“In your social studies journal, write sentences and draw a picture for each of the 10 new words we learned today. I don’t want you to focus so much on how the drawing looks, do not spend a lot of time drawing, just use it as a resource to remember the word. I will be checking your journals to be sure you are using the word correctly. You may have to look up the word again in the dictionary to remember what it means. You can also refer back to the acting you did in class to help you remember. I will grade these by looking for the correct definition and visual representation”

Students practice using vocabulary in sentences and visual representation to help them learn the new words and refer to them later. They will also need their notes to study for their vocabulary test at the end of the unit.

### IV. Assessment (What?)

**Formative Assessment (Process):**
As a formative assessment teacher will record questions on Inquiry wall and guide discussion accordingly. By being aware of student’s inquiry teacher will be able to observe where students have trouble, what information they struggle with, and how to continue to lead the discussion.

**Summative Assessment (Product):**
As a summative assessment teacher will check the 10 sentences and drawings students did in their social studies journal. Teacher will read and check for accuracy of use of the new vocabulary words. Teacher will mark if the sentence does not properly represent the word, and have the student write a new sentence. Students will need to keep the sentences and drawings to use to study for the vocabulary test.

### V. Instructional Materials, Resources, and Technology

Great Lakes: Carving Great Lakes
http://channel.nationalgeographic.com/channel/videos/carving-great-lakes/
Great Lakes by Kimberly Valzania
Inquiry Wall
Word Wall
Social Studies Journal
### VI. Reflection

- Once you have completed the lesson plan, take a moment to analyze and reflect on what you have designed and consider the criteria of internal consistency.

| The lesson procedures are consistent with the objectives. Students should be becoming familiarized with the five great lakes through the read aloud of *Great Lakes* by Kimberly Valzania. The assessment focuses on questions students have to further the next lesson, as well as a development of their vocabulary on the topic. The purpose of reading the Great Lakes is to provide students with information, facts, statistics, and the use of the great lakes. The lesson is developed and logically sequenced. The read aloud is used to introduce the topic, stopping places provided for students to ask questions, record H.O.M.E.S., record new vocabulary. The steps are clear and concise. |
I. Contextual Information (What?)

This lesson follows the first learning activity that introduces the Great Lakes. Its purpose is to point out the rises and falls of the Great Lakes so students can look for the causes of these while studying each lake individually throughout the unit. Prior to this lesson, students will know the names of the five Great Lakes and their surrounding states. To begin this lesson, I am going to ask the students if they remember the names of the Great Lakes and ask questions about each lake to measure their own personal knowledge of the lakes. I plan to create a T-chart that includes the rises and falls of the lakes, and this will be filled out as a class while the students copy it in their notebooks. Once the T-chart is made, we will map out the causes of the rises and falls (the effects). Since eight of the students have IEPs, I will provide a pre-made T-chart and a cause and effect map for them and allow their neighbors to help them if needed. These students enjoy participating, so I do not think there will be any problems with students asking questions or providing examples during the lesson. I am teaching this lesson in Mrs. Lopez’s 4th grade classroom of 30 students in the Chicago Public Schools district. She did not provide me with any expectations or requirements. With their new behavior management program, students can take away other’s bead necklaces if a student is off task, not paying attention, or talking when they are not supposed to. Therefore, students do not typically misbehave. However, there is one student with an IEP who does not participate in lessons and sits at his desk. There is one ELL student in the classroom who just transferred to the school last year, but she participates and asks questions when she needs help. This student leaves the classroom throughout the school day for linguistic help.

II. Lesson Rationale (Why?)

Learning Goals and Focus (What?):

- Students will be able to identify rises and falls of the Great Lakes.
- Students will be able to comprehend what led to the rises and falls of the Great Lakes through a cause and effect map.
- Students will be able to use what they just learned to predict what would happen if the Great Lakes drained away.

Illinois Common Core State Standards:

4.SL.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others’ ideas and expressing their own clearly.
CCSS.ELA-Speaking and Listening.4.SL.1.c Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

**Academic Language target for you and your students:**
Great Lakes, cause, effect, rise, fall

### III. Instructional Strategies and Learning Tasks (How?)

<table>
<thead>
<tr>
<th>Time</th>
<th>Learning Activities: What learning activities do you have planned for the students? (Note: these describe what the students do during the lesson)</th>
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</tr>
</thead>
</table>
| 10 minutes | **Orientation/Engagement/Motivation:**  
1. I will ask the students if they remember the names of the five Great Lakes and write them on the overhead and remind them of the H.O.M.E.S. acronym. – approx. 1 minute  
2. I will ask questions about the lakes (Which states surround it? Which lake is biggest/smallest? Are the lakes surrounded by big cities or small cities?) to see what the students remember from the previous lesson and to measure their own knowledge of the Great Lakes. – approx. 4 minutes  
3. I will teach the concept of rise and fall by using a bowl of water. I will have the students predict what would happen if I added ice to the bowl, sand to the bowl, and garbage. – approx. 5 minutes | **Orientation/Engagement/Motivation:** The purpose of asking the students the names of and questions about the Great Lakes is to assess whether they retained important information from the previous lesson. Reviewing H.O.M.E.S. will help them remember the names and make it difficult to forget after reviewing it each lesson. |
| 24 minutes | **Presentation/Explicit Instruction:**  
1. I will introduce the video “The Rise and Fall of the Great Lakes” by saying, “We are going to watch a video about the Great Lakes. It takes you on a journey that follows one man’s canoe trip through the history of the Great Lakes,” and I will tell the students to write any rises or falls they | **Presentation/Explicit Instruction:** Rather than getting information about the Great Lakes solely from texts, I believe it is important for students to be able to visually see the rises and falls of the lakes. They will be taking notes to promote better note-taking and to aid them in their activities throughout the lesson. A T-chart |
hear during the video in their notebook. – approx. 2 minutes
2. We will watch “The Rise and Fall of the Great Lakes” as a class, and I will make sure students are taking notes by walking around every few minutes. Throughout the video, I will take notes on the causes of the rises and falls for an activity later in the lesson. – approx. 17 minutes
3. Once the video is over, I will tell the students to create a T-chart in their notebook, labeling one side with “Rises” and the other with “Falls,” (I will have pre-made charts for my IEP students) and put my already-made T-chart (on chart paper) on the board in the front of the class. I will ask for volunteers to provide a rise or a fall of the Great Lakes that they recorded in their notebooks during the video. Although there should not be a problem with students volunteering, I will call on students whom I know do not participate enough to give a rise or a fall. – approx. 5 minutes.

**Structured Practice/Exploration:**
1. Once the T-chart is completed, I will review what a cause and effect map is and demonstrate how to create it on the overhead projector. – approx. 2 minutes
2. I will put my already-made cause and effect map (on chart paper) on the board at the front of the classroom and tell the students to create their own in their notebook (I will have pre-made maps for my IEP students). I will provide two examples using the rises and falls we came up with as a class to demonstrate how to use a cause and effect map. – approx. 4 minutes
3. I will instruct the students to copy the examples from the board into their notebook and finish the map on their own using the rises and falls in the T-chart. If an IEP students needs help, their neighbor is allowed to help and coach them through the activity. – approx. 7 minutes

is critical so students can see the separate topics: rises and falls. This does not allow any confusion between the two, and students will not have to ask which examples are rises are falls throughout the lesson because they will have them separated into the correct columns. Pre-made charts for my IEP students will help them see how the chart is made and the topics of the columns they have to complete.

**Structured Practice/Exploration:**
Students should know how to fill out a cause and effect map. I did the T-chart first to aid the students. The examples that I demonstrate will help them understand and visualize how the cause results in the effect. They will be on their own from there, with only necessary help, and IEP students will receive help from their neighbor before they receive help from me to promote partnership and collaboration.
4. Students will share their ideas with the class of causes of the rises and falls of the Great Lakes, and I will write them on the chart paper. – approx. 4 minutes

Guided Practice/Feedback:
1. I will ask the students if it is possible for the lakes to drain away and what some causes could be. – approx. 2 minutes
2. I will provide all students with a new, pre-made cause and effect map and have them write down causes they believe would result in the Great Lakes draining away based on what we saw in the video. – approx. 5 minutes
3. I will choose four or five students to share what their causes are and how it would result in the lakes draining away. – approx. 3 minutes

Independent Practice/Application:
1. If time permits, students will use their T-charts and cause and effect maps to predict what would happen to Chicago if the Lake Michigan drained away. If time does not permit, students will do this for homework. Students will write a paragraph explaining what would happen to the Chicago, surrounding cities, and people if the Lake Michigan drained away. We will come back to these predictions at the end of the unit when we read *The Day the Great Lakes Drained Away*.

Guided Practice/Feedback:
Now that students have practiced using a cause and effect map, they will fill in a new one that involves some predicting of their own. This will hopefully give them more practice, and it will be what they believe rather than what they heard or read somewhere.

Independent Practice/Application:
The purpose of this activity is to promote higher-order thinking and foreshadow the end of the unit.

## IV. Assessment (What?)

**Formative Assessment (Process):** I will collect student work (T-chart, cause and effect map) to assess whether students created and filled them out correctly. If not, I will create a mini-lesson out of it later in the unit.

**Summative Assessment (Product):** I will collect their predictions to assess their comprehension of the lesson and whether they were able to pick up ideas from the visual representation (video) and class discussions.
V. Instructional Materials, Resources, and Technology

- What materials will you need in order to teach this lesson?
- What materials will students need?

Overhead projector
Video ([http://www.youtube.com/watch?v=afs_A_Lz2w4](http://www.youtube.com/watch?v=afs_A_Lz2w4))
T-chart on chart paper
Marker for T-chart
Pre-made T-chart for IEP students
Pre-made cause and effect map for IEP students
Pre-made cause and effect map for all students

VI. Reflection

- Once you have completed the lesson plan, take a moment to analyze and reflect on what you have designed and consider the criteria of internal consistency.

My lesson plan procedures are consistent with the objectives and assessments provided. The students are performing these specific learning activities to gain a deeper understanding of the Great Lakes, and they are learning skills during the process. I believe the lesson is developmentally and logically sequenced in that it follows a specific order in which the activities must be performed. The activities are planned accordingly so that students will be able to use their prior knowledge, notes, and charts to complete upcoming learning activities. The lesson and learning activities are clearly stated and thoroughly explained.
Assessments
# Great Lakes Tic-Tac-Toe Assessment

Choose as many assignments as you would like as long as they add up to at least 10 points. Choose only one from each category.

<table>
<thead>
<tr>
<th>Category</th>
<th>Level 1 2 points</th>
<th>Level 2 3 points</th>
<th>Level 3 5 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>Research five major cities that surround all of the Great Lakes. List them by population, greatest to least, and be sure to include the population number next to each city.</td>
<td>Research one of the Great Lakes that you did not do for your group project. Write a paragraph about how the lake benefits the surrounding cities.</td>
<td>Research if any presidents lived near any of the five Great Lakes. Write a short paragraph about each historical figure and whether they took part in the development of the lakes.</td>
</tr>
<tr>
<td>Writing</td>
<td>Write a summary of the Great Lakes while comparing and contrasting the lakes by using the notes you have taken throughout the unit. Be sure to summarize all five lakes.</td>
<td>Write a journal entry as if you are going to build the city of Chicago by Lake Michigan. Begin with <em>Dear Diary,</em> and describe why you are building a major city next to the lake and what you hope will be the outcome.</td>
<td>Write a letter to the president. Describe the effects that pollution is having on the Great Lakes and what needs to be done to save them. Be sure to demonstrate your understanding of pollution’s negative effects on the Great Lakes.</td>
</tr>
<tr>
<td>Visualization</td>
<td>Visualize and draw what the Great Lakes would look like if they were one great big lake. Be precise with how the lakes’ borders look while drawing (look at the outer edge of the lakes).</td>
<td>Visualize and draw what it would look like if the Great Lakes drained away based on the read-aloud. The scene should have a title and an explanation of what is occurring in the picture.</td>
<td>Create a poster for an event that you are putting together to raise awareness about the Great Lakes. Include a preview of what you will be presenting and be creative!</td>
</tr>
</tbody>
</table>
Level 1: Research
Chicago (LM) 2,707,120
Detroit (DR) 713,777
Milwaukee (LM) 597,867
Cleveland (LE) 393,806
Buffalo (LE) 261,025

Level 2: Research
Lake Michigan aids water to nearly twelve million people in the surrounding cities including Chicago and Milwaukee. Many small cities in Northern Michigan and Wisconsin are offer tourist attractions centered on Lake Michigan, people from Chicago, Milwaukee, grand rapids, Detroit, even from Florida and Texas travel to see the beauty and recreational opportunities offered by Lake Michigan. People enjoy the clean water beaches all along the lake. People have summer homes along the waterfront and return home for the winter. The southern tip of the lake near Gary, Indiana is heavily industrialized. There are over 50 cities on the shores of Lake Michigan in the states of Michigan, Illinois, Indiana, and Wisconsin.

Level 3: Writing
Dear President Obama,

I am in 4th grade at Shields Elementary in Chicago, Illinois. This year we learned about the Great Lakes, I even learned an acronym to remember all their names, trust me I know them. Although I learned about all the benefits, like how the great lakes holds 20% of the whole worlds fresh water, that we need so desperately to drink and use to wash with. I also learned about how the lakes are being polluted, by people! People are using it as a dumping ground, putting garbage in it. This is not right. Not only is the water being contaminated, by fish are being effected as well as the food chain. People are being effected as well when we play in the beach. I live in Chicago and every summer my family and I make trips to the beach. We spend the whole day there. I like to get in the water as soon as I get there, even if its cold. Then I like to get out and dry off in the hot sun, and then do it all over again. But now I found out how mercury and E.coli from sewage are contaminating my water. Research shows that E. Coli and enterococcus were found in 20% of the samples of water from the beaches. If humans take in the bacteria, they can get very sick with typhoid fever or other diseases. It so bad that 32% of beaches had to close in 2003. The only way to protect of water, fish, and ultimately ourselves, we have to stop dumping in the Great Lakes and contaminating and ruining a fifth of the world’s cleanest water. Please, you are the only one who can stop the dumping. Help us Mr. President!

Thank you so much,
Emma Jeffries
Great Lakes Vocabulary Quiz

Match each letter to the correct vocabulary word.

1. ___c___ Ecosystem  a. five freshwater lakes in the northeastern United States
2. ___e___ Walleye  b. people who fish
3. ___g___ Pollution  c. a community of living organisms and their environment
4. ___j___ Canal  d. a river, canal, or other body of water used for transportation
5. ___h___ Glaciers  e. a freshwater food or game fish
6. ___b___ Fishermen  f. a steep flow of water from up high
7. ___k___ Contamination  g. contamination in the environment that causes harm or disorder in the ecosystem
8. ___d___ Waterway  h. large bodies of ice that move slowly and spread outward on land
9. ___i___ Fresh water  i. water that is not salty and is a natural resource
10. ___a___ Great Lakes  j. a man-made channel for water
11. ___f___ Waterfall  k. unclean by contact or mixture
## Poster and Presentation Rubric

### Great Lake:

<table>
<thead>
<tr>
<th>Student Name:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong></td>
<td>Audience cannot understand presentation because there is no sequence of information.</td>
<td>Audience has difficulty following presentation because student jumps around.</td>
<td>Student presents information in logical sequence which audience can follow.</td>
<td>Student presents information in logical, interesting sequence which audience can follow.</td>
<td></td>
</tr>
<tr>
<td><strong>Subject Knowledge</strong></td>
<td>Student does not have grasp of information; student cannot answer questions about subject.</td>
<td>Student is uncomfortable with information and is able to answer only rudimentary questions, but fails to elaborate.</td>
<td>Student is at ease and answers most questions with explanations and some elaboration.</td>
<td>Student demonstrates full knowledge (more than required) by answering all class questions with explanations and elaboration.</td>
<td></td>
</tr>
<tr>
<td><strong>Visual Aids</strong></td>
<td>Student uses excessive visual aids or no visual aids.</td>
<td>Student occasionally uses visual aids that rarely support the presentation.</td>
<td>Student's visual aids relate to the presentation.</td>
<td>Student's visual aids explain and reinforce the presentation.</td>
<td></td>
</tr>
<tr>
<td><strong>Mechanics</strong></td>
<td>Student's presentation has four or more spelling errors and/or grammatical errors.</td>
<td>Presentation has three misspellings and/or grammatical errors.</td>
<td>Presentation has no more than two misspellings and/or grammatical errors.</td>
<td>Presentation has no misspellings or grammatical errors.</td>
<td></td>
</tr>
<tr>
<td><strong>Eye Contact</strong></td>
<td>Student makes no eye contact and only reads from notes.</td>
<td>Student occasionally uses eye contact, but still reads mostly from notes.</td>
<td>Student maintains eye contact most of the time but frequently returns to notes.</td>
<td>Student maintains eye contact with audience, seldom returning to notes.</td>
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<tr>
<td>Verbal Techniques</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>-------------------</td>
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<td></td>
</tr>
<tr>
<td>Student mumbles, incorrectly pronounces terms, and speaks too quietly for audience in the back of class to hear.</td>
<td>Student's voice is low. Student incorrectly pronounces terms. Audience members have difficulty hearing presentation.</td>
<td>Student's voice is clear. Student pronounces most words correctly. Most audience members can hear presentation.</td>
<td>Student uses a clear voice and correct, precise pronunciation of terms so that all audience members can hear presentation.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group Work</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot work with others in most situations. Cannot share decisions or responsibilities.</td>
<td>Works with others, but has difficulty sharing decisions and responsibilities.</td>
<td>Works well with others. Takes part in most decisions and shares in the responsibilities.</td>
<td>Works very well with others. Assumes a clear role in decision making and responsibilities.</td>
</tr>
</tbody>
</table>

Total Points:

A= 26-28  B= 23-25  C= 20-22  D= 17-19  F= 0-16
Review of Resources
Resource Review
The Great Lakes
4th Grade

Website:
Great Lakes for Kids Retrieved 26 Feb 2013 from
http://www.grc.nasa.gov/WWW/k-12/Summer_Training/
LincolnParkES/START_PROJECT.html

This website Great Lakes for Kids is a great resource for
students to use during this unit. It includes facts for all five of the
Great Lakes and activities that students can utilize to study the
lakes. This resource includes everything one may need to learn
about and understand the Great Lakes, their history, and their
location. Great Lakes for Kids is not only useful for students, but it
includes resources for teachers as well. The objectives that it
addresses are based off of the Illinois State Standard 17.A.2b Use
maps and other geographic representations and instruments to
gather information about people, places and environments.
Students will use this resource to learn about the major cities
surrounding the Great Lakes and use the maps provided to predict
how the lakes affect the states that surround them. They will be
given a quiz that asks them to use the website to find various facts
about each lake.

Book:

The Day the Great Lakes Drained Away offers students a look
at the bottoms of the Great Lakes. What might we see at the bottom of
the lakes? How would travel be affected? Would the very character of
the state be taken away? These are all questions that can be answered
while reading this book. After learning how the states and surrounding
cities are affected by the Great Lakes, this is a great book to read to
find out how those same states and cities would be affected without the
Great Lakes. The objectives that it addresses are based off of Illinois
State Standards 17.A.2a Compare the physical characteristics of places
including soils, land forms, vegetation, wildlife, climate, natural
hazards and 17.C.2a Describe how natural events in the physical
environment affect human activities. Students will learn the importance
of protecting the lakes, compare what the surrounding cities looked like
and produced because of the Great Lakes, and they will create their
own interpretations of what the Great Lakes may look like if they really
were drained.
Video:
The Rise and Fall of the Great Lakes Retrieved 3 Mar 2013 from
http://www.youtube.com/watch?v=afs_A_Lz2w4

This video is of a lone canoeist rowing through the Great Lakes. He starts during the Ice Age and travels through the development of the Great Lakes. This video is great to show students because it is engaging and makes you want to know what is going to happen next. The objectives that it addresses are based off of the Illinois State Standard 17.A.2a Compare the physical characteristics of places including soils, landforms, vegetation, wildlife, climate, natural hazards. This video will be at the beginning of the unit, so students will make predictions of what would happen if the lakes drained away and come back to them at the end of the unit. This video is a great introduction to the Great Lakes because it explains how the lakes came to be.

Website:
Sheppard Software: We make learning fun Retrieved 2 Mar 2013 from
http://www.sheppardsoftware.com/usaweb/regions/GreatLakes.htm

The website Sheppard Software: We Make Learning Fun really does make learning fun. Students can choose the region they are currently studying and learn the history, major cities, population, and geography of that particular region. To make it even better, students are able to select each individual state and learn about the geography, history, famous historical figures, the economy, and what to see if you visit the state.

The objectives that it addresses are based off of the Illinois State Standard 17.C.2b Describe the relationships among location of resources, population distribution and economic activities (e.g., transportation, trade, communications). Students will explore this website during their time in the computer lab and compare it to the other website Great Lakes for Kids. The will see if the information matches up and is similar and determine which website they would later like to use as a resource for a project about the Great Lakes region.
The book *Great Lakes* is a great read for students to learn about the location of the Great Lakes, how they were created, and the different types of animals that live there. Geographic facts about Lake Huron, Lake Ontario, Lake Michigan, Lake Erie, and Lake Superior are provided throughout the book along with vocabulary words students should know and their definitions. The objectives that it addresses are based off of the Illinois State Standard 17.A.2a *Compare the physical characteristics of places including soils, land forms, vegetation, wildlife, climate, natural hazards*. Students will use this book to create a list of vocabulary words and find pictures to help visualize the word, and they will be tested on these vocabulary words later on in the unit.

*Lake Michigan* explains how the land and eater systems impact human culture and development. Since we are closest to Lake Michigan, I find it important to focus on this particular Great Lake a bit more than the other four. This book shows how human civilization and nature interact, and it is recommended by the National Geography Standards. The objectives that it addresses are based off of the Illinois State Standard 17.A.2a *Compare the physical characteristics of places including soils, land forms, vegetation, wildlife, climate, natural hazards* and 17.C.2b *Describe the relationships among location of resources, population distribution and economic activities (e.g., transportation, trade, communications)*. Students will compare what they know about the other Great Lakes with everything they read about Lake Michigan in this book. They will create a Venn Diagram for each Great Lake and Lake Michigan and compare the land, climate, resources, etc.

This book is part of a series on the Great Lakes; it focuses on Lake Superior. It is divided into little chapters about the formation of the lake, the early history, American Indians and Settlers, what problems it faced, and lastly with what the lake is like today and how it is used. The book is for grades K-3 but can be useful for a 4th grade small group discussion. The book offers a lot of information and facts on the lake, it can help students make comparisons between the lakes.
This book is part of a series on the Great Lakes; it focuses on Lake Ontario. It is divided into little chapters about the formation of the lake, the early history, American Indians and Settlers, what problems it faced, and lastly with what the lake is like today and how it is used. The book is for grades K-3 but can be useful for a 4th grade small group discussion. The book offers a lot of information and facts on the lake, it can help students make comparisons between the lakes.

This book is part of a series on the Great Lakes; it focuses on Lake Huron. It is divided into little chapters about the formation of the lake, the early history, American Indians and Settlers, what problems it faced, and lastly with what the lake is like today and how it is used. The book is for grades K-3 but can be useful for a 4th grade small group discussion. The book offers a lot of information and facts on the lake, it can help students make comparisons between the lakes.

This book is part of a series on the Great Lakes; it focuses on Lake Erie. It is divided into little chapters about the formation of the lake, the early history, American Indians and Settlers, what problems it faced, and lastly with what the lake is like today and how it is used. The book is for grades K-3 but can be useful for a 4th grade small group discussion. The book offers a lot of information and facts on the lake, it can help students make comparisons between the lakes.

The Great Lakes series would be implemented in the classroom through small discussion group. The use of this book will help students work collaboratively discussing one of the Great Lakes. They will come to the group prepared and ready to discuss questions and interests of the book. Students will be able to engage and build on each other’s ideas on the text. The objectives are based on the Common Core State Standard for Eng LA &
Literacy in History/Social Studies, Science and Technical Subjects, for Speaking and Listening: Comprehension and Collaboration. Grade 4 students 1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and text, building on others’ ideas and expressing their own clearly. Part a: Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion. B: Follow agreed upon rules for discussions and carry out assigned roles. C: Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others. D: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion. In addition, the second standard in the same section says, 2. Paraphrase portions of the text read aloud or information presented in diverse media and formats including visually, quantitatively, and orally. This text will be used in a small group of four or five. Each student will be provided a copy of the text and will answer questions and have discussions with proper scaffolding from the teacher.

Textbook:

This textbook includes all of the states and their regions that are studied throughout the school year. For this unit, we focus on the Eastern North Central states and discover the many characteristics of each state and the Great Lakes. The objectives that it addresses are based on Illinois State Standards 17.A.2b Use maps and other geographic representations and instruments to gather information about people, places and environments and 17.C.2b Describe the relationships among location of resources, population distribution and economic activities (e.g., transportation, trade, communications). The textbook will aid in the learning and understanding of the states surrounding the Great Lakes, geographical information and history about each state, their capitals, and major cities. Students will be assessed at the end of the unit on the states and their capitals along with where the states are located on the map, and they will produce a project in groups about one of the five states.
Handouts and Student Work
<table>
<thead>
<tr>
<th>Lake</th>
<th>Location</th>
<th>Formation</th>
<th>Settlers/Migration</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Huron</td>
<td>N America West of Ontario, Canada. East of Michigan State</td>
<td>Formed by melting ice as the continental glaciers moved toward the end of the last ice age.</td>
<td>French, Europeans 1658 Frenchman Nicolas Vaugondy, maps Lake Huron as lake superior which means &quot;Freswater Sea&quot;</td>
<td>• 1,000 shipwreck • Storm of 1913 • 2004 Binational Partnership Action Plan • Low water levels</td>
</tr>
<tr>
<td>Ontario</td>
<td></td>
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</tr>
</tbody>
</table>
Make a plan... with Lake Michigan

22,300 square miles of water!

Relax on Beaver, North or South Manitou ISLANDS!!

Pick a canoe, kayak, or crusie to ride!

Take a break, set up tent, have a few dogs, and knock out!!

Take a dip in one of the hundreds of beaches!! Enjoy the fresh water for Scuba Diving and fishing!!!
The Great Lakes Word Wall

- Canal
- Contamination
- Ecosystem
- Fishermen
- Fresh water
- Glaciers
- Great Lakes
- Pollution
- Walleye
- Waterfall
- Waterway
Rises

• During the Ice Age, the weight of the ice made the land go down.
• The Sun melted the ice and continually melted the glaciers. Great Lakes were born!
• Land sprung up again as the weight of the glaciers moved away → water levels lowered.

Falls

• Man-made changes.
• Rocks & debris from construction polluted the water.
• Oil from freighters (shipping goods) & boats got into the Great Lakes.
• Pollution from people (garbage).
• Sudden changes in water levels.