**Laura Robinson**

**IDT 3600-501**

**Excel Lesson Plan**

**LVKCKHAM@memphis.edu**

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**NTeQ Spreadsheet Lesson Plan**

**Lesson Title:** What’s your Latitude/Longitude?

**Content Subject Area(s):** Social Studies

**Grade Level(s):** 4th

**Time Required:** Students will have a total of 4 hours split between 3 days to complete this assignment.

**Lesson Summary:** Given access to the Internet and informative books provided each student will locate 5 major cities around the world on a map, giving the latitude and longitude for each city as well as the time zone for each place. Students will have to compare the distances between cities as well as the time zone differences.

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| **Learning Objectives****By the end of this lesson, the students will:** | **State Content Standard and Learning Expectations**  |
| * Locate major cities around the world on a map
 | *Tennessee Department of Education Grade 4 Social Studies, Standard 3- Geography.*  |
| * Find the time zone of each city
 | 4.3.01 Understand how to use maps, globes, and other geographic representations, tools, and technologies to acquire, process and report information from a spatial perspective.b. Locate places on a map using cardinal and intermediate directions, latitude and longitude, and time zones. |
| * Compare distances between cities
 | **NETS-S Standards** |
| * Calculate the time difference between each city
 | **Research and Information Fluency** Students apply digital tools to gather, evaluate, and use information. Students:a. plan strategies to guide inquiry. b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.d. process data and report results. |

**Materials:**

* Before computer activity students will need their textbook, books provided by the teacher, pencils and paper.
* During computer time students will only need pencil and paper to write information down.
* After computer time students will need pencil and hand outs provided by the teacher.
* Students will also be provided materials to create their paper mache globe.

**Websites for Research:**

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| * GoGooligans:

<http://www.lures.info/childrens_search/gogooligans.html> | * Ask Kids: <http://www.askkids.com/>
 |
| * Yahooligans: <http://kids.yahoo.com/>
 | * KidsClick!: <http://www.kidsclick.org/>
 |
| * National Geographic: <http://www.nationalgeographic.com/kids-world-atlas/>
 | * Fact Monster: <http://www.factmonster.com/atlas/>
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**Computer Functions and Data Manipulation:**

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| --- | --- | --- |
| **Computer Function** | **Computer Application** | **Data Manipulation** |
| * Use the Internet to locate information
 | * Internet Explorer
 | * Sort information
 |
| * Create Spreadsheet in Microsoft Excel
 | * Microsoft Excel
 | * Place in Excel Spreadsheet
 |
| * Type information found from research into Spreadsheet
 |  | * Compare distances between cities
 |

## Specify Problem:

Attention all students! We are taking a trip around the world. We each have a list of 5 cities that we may travel to. Before we leave we have to gather important information! We have to map out where the cities are in the world and find out what time zone the city is in. Once we have all the information we have to compare it to find what city we will be going to. Everyone get ready to pack!

**Results Presentation:**

Each student will create an Excel Spreadsheet to show required information about each city researched.

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# Teacher Activities Before Lesson:

* Introduce the lesson about latitude and longitude
* Have students complete textbook chapter about latitude, longitude and map reading
* Assign 5 cities to each child
* Have students review books/maps provided to identify city locations
* Explain how to make a paper mache globe

# Computer Activities:

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| Activity 1 |
| **Teacher** actions to be completed prior to going to the computer: | **Student** actions to be completed prior to going to the computer: |
| * Introduce lesson to the students
* Teach students how to find cities using latitude and longitude
* Go over what is required of each student
* Assign 5 cities to each student
 | * Read chapter from textbook
* Read information from books provided by the teacher
* Look over maps to identify cities
 |
| **Teacher** actions to be completed at the computer: | **Student** actions to be completed at the computer: |
| * Make sure each child stays on task
* Make sure required research is being done
* Help students if they need assistance
 | * Research each city assigned
 |
| **Teacher** actions to be completed after going to the computer: | **Student** actions to be completed after going to the computer: |
| * Make sure every child has all of the information required
 | * Make sure all information they wrote down is correct
* Finish reading textbook chapter and work on chapter review
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| Activity 2 |
| **Teacher** actions to be completed prior to going to the computer: | **Student** actions to be completed prior to going to the computer: |
| * Hand out Data Collection and Planning Sheet
* Make sure each child understands the requirements
 | * Fill out the Data Collection and Planning Sheet to the best of your ability
 |
| **Teacher** actions to be completed at the computer: | **Student** actions to be completed at the computer: |
| * Make sure each child finds required information
 | * Use the Internet to research any cities that student could not find on the map
 |
| **Teacher** actions to be completed after going to the computer: | **Student** actions to be completed after going to the computer: |
| * Make sure required information is found
 | * Gather all information found
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| Activity 3 |
| **Teacher** actions to be completed prior to going to the computer: | **Student** actions to be completed prior to going to the computer: |
| * Explain how to find answers to the “Think Sheet” questions
 | * Finish Paper Mache globe project
* Start working on the “Think Sheet” worksheet
 |
| **Teacher** actions to be completed at the computer: | **Student** actions to be completed at the computer: |
| * Make sure each child can create the Excel Spreadsheet
 | * Create Spreadsheet with information
 |
| **Teacher** actions to be completed after going to the computer: | **Student** actions to be completed after going to the computer: |
| * Make sure each child printed their Spreadsheet
 | * Make sure the Spreadsheet printed correctly
* Finish the “Think Sheet” worksheet
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# Supporting Activities:

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| --- | --- | --- |
| Activity 1* Read chapter and complete chapter review
 | Activity 2* Complete the Data Collection and Planning Sheet using books provided
* Start working on paper mache globe
 | Activity 3* Complete the Think Sheet assignment provided
* Finish paper mache globe
 |

# Rotation Plan:

# Students will be given access to their textbooks as well as library books that give information about locations to different countries. The students will be given their 5 cities to research and will read their textbook chapter while waiting for their turn at the computer. After they have read their chapter the students will start their Data Collection and Planning Sheet using books I provide from the library; once that is completed they will go to the computer to do further research if needed and create their spreadsheet. While some students are waiting to use the computer they will start making a paper mache globe. After both of these assignments are done the students will rotate out. The students that finish their spreadsheet and paper mache will then move on to the Think Sheet assignment.

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# Assessment:

The student will be assessed based on (a) the accuracy of latitude information (b) the accuracy of longitude information (c) all 5 cities were researched (d) correct time zone given for each city (e) the spreadsheet correctly formatted

Rubric Template:

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| --- | --- | --- | --- | --- | --- |
| **Objective or Performance** | **Exemplary****4** | **Accomplished****3** | **Developing****2** | **Beginning 1** | **Score** |
| **Student found the latitude for all 5 cities** | All latitudes throughout Spreadsheet are accurate. There are no factual errors. | Most latitudes found are accurate, but there is one piece of information that might be inaccurate. | The latitudes are generally accurate, but 1 latitude is clearly flawed or inaccurate. | Student has more than 1 wrong latitude. Most information is confusing and inaccurate. | **/20** |
| **Student found the longitude for all 5 cities** | All longitudes throughout Spreadsheet are accurate. There are no factual errors. | Most longitudes found are accurate, but there is one piece of information that might be inaccurate. | The longitudes are generally accurate, but 1 longitude is clearly flawed or inaccurate. | Student has more than 1 wrong longitude. Most information is confusing and inaccurate. | **/20** |
| **Student found the time zone for each city** | All time zones throughout Spreadsheet are accurate. There are no factual errors. | Most time zones found are accurate, but there is one piece of information that might be inaccurate. | The time zones are generally accurate, but 1 time zone is clearly flawed or inaccurate. | Student has more than 1 wrong time zone. Most information is confusing and inaccurate. | **/20** |
| **Student created a Spreadsheet for their information** | Student created a complete Spreadsheet with room for all information. | Student created a complete Spreadsheet, but one row or column was missing. | Student created a Spreadsheet but it was hard to read or understand facts. | Student did not create the requiredSpreadsheet. | **/10** |
| **Student filled out the Data Collection & Planning Sheet** | Student had all correct information for every question on the sheet.  | Student answered all but 1 question correctly. | Student answered questions but more than two were wrong. | Student did not answer the majority of the sheet. | **/10** |
| **Student filled out the Think Sheet** | Student had all correct information for every question on the sheet. | Student answered all but 1 question correctly. | Student answered questions but more than two were wrong. | Student did not answer the majority of the sheet. | **/10** |
| **Student used complete sentences and correct grammar while answering worksheets** | Both worksheets had no misspellings or grammatical errors. | Worksheets had 1-2 misspellings, but no grammatical errors. | Worksheets had 1-2 grammatical errors but no misspellings. | Worksheets have more than 2 grammatical and/or spelling errors. | **/5** |
| **Student followed directions while completing the paper mache globe.** | Student listened to instructions and completed the paper mache globe with no problems. | Student listened to instructions and only had 1-2 problems when creating the paper mache globe. | Student did not listen to instructions very well and had issues completing the paper mache globe. | Student did not listen to instructions at all and was unable to create the paper mache globe.  | **/5** |
|  |  |  |  | **Total Points** | **/100** |

**Credits & References:**

Curriculum Standards

Tennessee Department of Education

<http://www.tennessee.gov/education/ci/ss/doc/SS_Grade_4.pdf>

NETS-S Standards

Educational Technology Standards for Students

<http://www.iste.org/Content/NavigationMenu/NETS/ForStudents/2007Standards/NETS_for_Students_2007.htm>