**Lesson Cycle**

Kasey Murphree

**Lesson Title/Topic:** Geographic Tools

**Target Concept:** Construct and Interpret Maps

**Standards/Rationale**: TEKS 113.16 (b) (6) (A) The student uses geographic tools to collect, analyze, and interpret data. The student is expected to apply geographical tools, including grid systems, legends, symbols, scales, and compass roses, to construct and interpret maps.

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| **Lesson Objectives:** The students will locate key landmarks on a world map using latitude and longitude coordinates. | **Assessment:** Authentic assessment utilizing attached worksheet and “Find Someone Who” structure. |

**Materials:** Handouts/worksheets, tangerines (1 per student or per pair), marker, sample map

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| **The teacher will:** | **The student will:** |
| **Focus/Mental Set:**  The teacher will give a tangerine to each student and will request he/she follows these  instructions:  -'Divide the fruit in 2 by making a dotted line down the middle of it' (horizontally). Ask students if they remember the name of this line (equator)  -Show students the marks on the peel that go from top to bottom.  -Peel it. Show students the lines that go from top to bottom. Ask students if they remember the names of these lines (meridians) - Explain that despite the similarities, each line represents a different part of the  tangerine (Earth).  Play the video: | The student will follow the teacher's instructions after receiving a tangerine:  -Examine the tangerine and note its similarities to the Earth  -Mark the equator on the tangerine with a black marker  -Peel and examine the inside of the tangerine, finding the lines that define its segments. |

**Lesson Cycle:** Direct instruction

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| **Teacher Input:**  The teacher will:  Review the concepts of Longitude and Latitude  -Introduce the mnemonic device for:  -LONGitude: measures how far north or south somewhere is from the equator  -Latitude as in LADDER: measures how far east or west somewhere is from the prime meridian  -Repeat them during the lesson.  -Review how to identify specific longitudinal and latitudinal coordinates on a map.  -Review the concepts of parallels and meridians:  -Introduce the mnemonic device:  -PARALLELS: the horizontal lines that determine latitude. These run parallel to the equator  -MERIDIANS: the vertical lines that determine longitude.  -Introduce the concept of Hemispheres: the equator virtually cuts the Earth in 2 parts: North and South hemisphere (like our tangerine's dotted line).  -Explain the Greenwich meridian: the main longitude line that cuts the Earth in 2 parts: east and west. This gives us the Eastern and the Western hemisphere. This line passes through the city of Greenwich, England, and is where all these lines naming started (Greenwich is the beginning with a longitude of 0\*) | | -The students will repeat the mnemonic device after the teacher for:  -LONG Longitude  -LADDER Latitude  -Parallels -5 are parallels  -Meridians  -The students will refer to tangerine for the introduction of the concept of hemisphere  -Students will be asked to read lesson vocabulary words aloud (one at a time) – class will discuss meanings and usage |
| **Guided Practice**:  -Teacher will break students up into groups (3-4 per group). Have them discuss what they already know about maps based on a sample map that is handed out.  -Instruct students to circle key features that they identify.  -Teacher will discuss details of latitude (running horizontally) and longitude (running vertically).  -Have students identify familiar points on the map (home location, major cities, favorite park),  -Discuss the importance of using latitude and longitude as identifiers of locations on a map. | | -Students will discuss knowledge from previous lessons with members of group. What do they already know about maps? Identify areas on map using legend.  -Students will circle key locations on the map to shows understanding of legend and basic map features.  -Students will identify latitude and longitude points on a physical map. Students will verbalize the concept of latitude and longitude lines being guide points and not physical lines on the ground. |
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| -Teacher will identify common locations on map and have students identify latitude and longitude points of that location. | -Students will identify familiar places on the map and provide latitude and longitude points for these familiar locations.  -In their groups, students will talk about why latitude and longitude are important and how they are helpful for locating points on a map  -Students will participate in review involving teacher requesting coordinates from class (verbally) for common places on a map |
| **Independent Practice:**  -Teacher will instruct students to identify the following locations individually:   * States in the U.S. that are on the same line of latitude * States in the U.S. that are on the same line of longitude * Foreign countries that are on the same line of latitude * Foreign countries that are on the same line of longitude   -Teacher will ask the student to write down their answers and turn them in when finished. | -Student will provide answers to the four items listed below and turn the assignment in.   * List 2 states in the US that are on the same latitude line * List 2 states in the US that are on the same longitudinal line * List 2 countries that are on the same latitude line * List 2 countries that are on the same longitudinal line   -Student will turn assignment into teacher at the end of class |
| **Closure:**  Provide review of key terms – play YouTube video via link below to close.  https://www.youtube.com/watch?v=0SB62SSk-  l.JM&featureüvoutu.be | The students will watch the video and fill in an exit ticket with close questions, such as:  "The LONG lines that go north to south are called  "The meridians are not  "The divides the Earth in 2  North and South." "Meridians and Parallels are lines."  "Greenwich is calledmeridian." |

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| **Options:** |  |
| ***Enrichment:*** Student will construct a map of his/her neighborhood, identifying latitudinal and longitudinal points of home, the local post office, the closest grocery store, and two additional landmarks. Legend should identify nearby bodies of water, a local church, and your local park. | ***Reteach:*** Utilize peer coaching as a method to explain latitude, longitude, map symbols, and legends to groups of students that are not grasping complete concept. Group teams of students together (3-4 students) and assign 1 student to be the peer coach (this student should be comfortable with the material, but not yet at the mastery level). Groups should use sage and scribe structure, with peer coach leading and providing guidance as necessary. |

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| **Accommodations/Modifications:** |  |
| ***504 Accommodations:***  Provide technological aid via [www.latlong.net](http://www.latlong.net). Student will enter points of interest (Eifel Tower, Big Bend, Statue of Liberty, and Grand Canyon) into tool by typing name of landmark, and will then provide correct latitudinal and longitudinal points for each landmark. | ***Special Education Modifications:*** Student will utilize manipulative objects to identify common symbols that are used on a map to identify common structures (buildings, mountains, railroads, rivers, cities, etc). Different shaped blocks, rods, objects will be provided to help student create symbol (triangle shape for trees, pipe-cleaners for rivers, etc). Refer to <https://mapofthemonth.com>. |