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| **GRADE: 6th Resource Math** | | |
| **Unit Title: Map Reading**  **Lesson Title:** Locating Points on a Coordinate Plane  **Estimated Duration: 45 minutes** | | **Real-World Purpose:** To be able to locate places/ locations on a map. |
| ***I Can: locate points on a coordinate plane to be able to read a map***  **Standard(s):\_\_\_\_6.NS.6b\_\_\_\_**  **Understand signs of numbers in ordered pairs indicating location in quadrants of the coordinate plane** | | |
| **Performance Objective: (Evidence of Learning)**  **Student(s) will be able to locate points on a coordinate plane in order to read a map and locate places on a map with 60% accuracy or better.** | | |
| **Prerequisite Skills:**   * **Students should know the meaning of left, right, east, west, north, south, up and down.** * **Students should know negative and positive numbers and the differences between the two.** | | |
| **Materials/Resources:**         * Computers * Paper * Pencils * maps | | **Key Vocabulary:**   * positive * negative * quadrant     coordinates  x-axis  y-axis  I |
| **Elements of Rigor:**   * **Conceptual understanding of key concepts** * **Procedural skill and fluency** * **Rigorous application of mathematics in real-world contexts (transfer of skill to map of Columbus, Mississippi)** | | |
| **Lesson Introduction** | | |
| **How will you introduce the lesson? Ask the students about places that they have visited in Columbus, Mississippi.**  **Student Exploration Activity**  **Students will use the telephone book and brochures from various places in Columbus, Mississippi to find locations on map of places (addresses) they would like to visit in Columbus, Mississippi to share with partner.** | | |
| **Lesson Activities** | | |
| Bell Ringer: Label the quadrants  KWL – complete chart about coordinate grids  Model: Teacher shows examples of locating points on a grid/map on the overhead.  Partner activity: Pairs work together on locating points on a grid/map.  Independent activity: Student work independently on locating points on a grid on the computer.  Exit Ticket: What I will remember most is… students complete exit ticket prior to leaving classroom.  Do KWL of what is known about coordinate grids.  Go to http://www.teachers.ash.org.au/jeather/maths/dictionary.html to gather information about coordinate grids.  Can the students determine from grid how the numbers are ordered (x number first, y number second)? Have students discuss  with their partner the order of numbers in a coordinate pair. Review together.  Journal – “Now that you know coordinates are ordered number pairs of the location of an object, how could a coordinate grid help you give directions or find a location?”  Practice with Smart Board template. (Locate and name ordered pairs, write directions for moving from shape to shape using direction names…)  Use the graph to determine the coordinate of each piece of equipment. Practice giving partner directions using north, south, east, west, up, down, left, and right in moving around the playground. | | |
| **Lesson Closure** | | |
| 1.Review lesson and key concepts  2. Reflections: Students – what was learned – does anything need a little more work or is there anything that you still do not understand- GOOD, BAD or UGLY | | **Essential Questions:**   * How can a coordinate grid help you give directions to someone   who is lost? |
| **Standards for Mathematical Practice** (select all that apply) | | |
| * Make sense of problems and persevere in solving them. \*   Reason abstractly and quantitatively.  Construct viable arguments and critique the reasoning of others.   * Model with mathematics. \* * Use appropriate tools strategically. \* * Attend to precision. \*   Look for and make use of structure.      * Look for and express regularity in repeated reasoning. \* | | |
| **Supplemental Activities** | | |
| **Intervention**   * For students who have difficulty with directional words (prerequisite skills) a foldable with directional vocabulary words.      * IXL * UTUBE   https://www.youtube.com/watch?v=5\_mbezgmlec | | **Enrichment**      QUIZZ.COM       * In groups, students will develop their own coordinate grid of a park, carnival, classroom, etc. After developing their grid, students will write a descriptive paragraph explaining their grid design including explanations of why they chose to place the equipment in the place they chose |
| **Performance Based Assessment Task** | | |
| **Math Task**  *IXL U.1 Objects on a coordinate plane*  *https://www.ixl.com/math/grade-3/objects-on-a-coordinate-plane*  *IXL U.2 Coordinate planes as maps*  *https://www.ixl.com/math/grade-3/coordinate-planes-as-maps* | **Rubric/ Plausible Student Response(s)**  *Observations – Tutorial class*  *Graded in IXL* | |