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| **FFA Sixth Grade Math** | | | | | | | |
| **UNIT NAME** | **ESTIMATED DURATION** | **6 Weeks** | | | | | |
| **UNIT 1: NUMBERS** | **10 DAYS** | **1** | **2** | **3** | **4** | **5** | **6** |
| **Unit Overview** | | | | | | | |
| The student applies mathematical process standards to represent and use rational numbers in a variety of forms. | | | | | | | |
| **Enduring Understandings (Lesson Objectives)** | | | | | | | |
| The student will understand that: | The distance from zero as the absolute value or magnitude of a rational number.  Rational numbers are a subset of the real number system.  Visual representations illustrate the relationship between sets of numbers  Number lines are used to locate, compare, and order rational numbers arising from mathematical and real world context.  Fraction notation can be written as division | | | | | | |
| **Concepts** | | | | | | | |
| Rational Numbers | A number that can be written in the form of *a/b*, where *a* and *b* are integers and b does not equal zero. | | | | | | |
| Number Line | A visual representation of the values of the rational numbers in order from least to greatest from left to right. | | | | | | |
| Absolute Value | The distance of a number from zero on a number line. | | | | | | |
| Integer | A member of the set of whole numbers and their opposites. | | | | | | |
| Inequality | A mathematical sentence that shows the relationship between quantities that are not equal. | | | | | | |
| **Guiding/Essential Questions** | | | | | | | |
|  How do you identify an integer and its opposite?   How do you compare and order integers and rational numbers?   How do you find and use absolute value of integers and rational numbers?   How can you classify rational numbers?   How can you use a number line to represent and model a problem involving integers? | | | | | | | |
| **Learning Targets and Progressions** | | | | | | | |
|  Students extend their understanding of our real number system to include integers using a number line and a Venn Diagram.   Absolute value is the distance from zero   A number line is a visual representation of integers and rational numbers   Classify whole numbers, rational numbers, and integers   Identify a number and its opposite  Students will able to compare and order rational numbers and integers.   Write inequalities and make statements about the relationship between two numbers   Locate integers and rational numbers on a number line   Students extend their understanding of integers to represent mathematical and real-world problems.   Relate integers to the real-world | | | | | | | |
| **Student Generated Product (SGP)** | | | | | | | |
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| **TEKS: Readiness Standards** | **TEKS: Supporting Standards** | | | | | | |
| **6.2D** order a set of rational numbers arising from mathematical and real-world contexts | **6.2A** classify whole numbers, integers, and rational numbers using a visual representation such as a Venn diagram to describe relationships between sets of numbers  **6.2B** identify and number its opposite, and its absolute value  **6.2C** locate, compare, and order integers and rational numbers using a number line  **6.2E** extend representations for division to include fraction notation such as a/b represents the same number as  where b 0. | | | | | | |
| **TEKS Process Standards** | | | | | | | |
| **6.1A** apply mathematics to problems arising in everyday life, society, and the workplace  **6.1B**use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution  **6.1C** select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems  **6.1D** communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate  **6.1E** create and use representations to organize, record and communicate mathematical ideas  **6.1F** analyze mathematical relationships to connect and communicate mathematical ideas  **6.1G** display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication | | | | | | | |
| **Processes and Skills:**  **What students should be able to DO** | **Facts:**  **What students should KNOW** | | | | | | |
|  Classify whole numbers, rational numbers, and integers.   Relate integers to the real-world   Locate, compare and order integers and rational numbers   Identify a number, its opposite and its absolute value. |  Absolute value is the distance from zero   A number line is a visual representation of integers and rational numbers   Rational numbers include integers and whole numbers.   Write inequalities and make statements about the relationship between two numbers. | | | | | | |
| **Topics** | | | | | | | |
| Absolute Value  Comparing and ordering integers and rational numbers  Inequalities | Integers and their opposites  Number Lines  Rational Numbers | | | | | | |
| **Academic Language** | | | | | | | |
| absolute value classify compare inequalities integers negative | opposite order positive  rational number representations | | | | | | |
| **CIF Connections** | **State Assessment Connections** | | | | | | |
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| **Resources** | | | | | | | |
| Springboard Unit 1 Activity 1, Springboard Unit 2 Activity 7 | | | | | | | |