

Name _____

Leonardo Da Vinci and the Giant

Students will be investigating human proportion through an interactive time-travel story. Using the measurements of the human body, they will discover that ratios can be created and by using the concepts of equivalent fractions, they can discover the size of smaller or larger things with similar proportions. Their final project will be a culmination of all of the information they've gained as they try to help Leonardo Da Vinci solve the problem of a giant with an 8' footprint that has been destroying their village marketplace. They will be building a proportionally appropriate giant-sized object to help make the giant a happier being, so he will stop destroying the renaissance town.

5.NF.5	Interpret multiplication as scaling (resizing), comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. Lesson: 1.4 and 1.5-8—Normal Foot length = 7 inches Abnormal Foot Length=14 ft. = 168 inches. Multiply by 24
5.NF.6	Solve real world problems involving multiplication of fractions and mixed numbers Lesson 1.4 and 1.5-8—Students will solve the problem of multiplying the size of real world objects to be equivalent to an abnormally tall "averagely proportioned" person.
5.OA.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Lesson 1.4—Students will identify corresponding terms within their ratios to make sure they are aligned correctly and determine the rule to create an equivalent fraction. Ex. Human Height a: Human Height b = Desk Height a: Desk height b Rule: Multiply the numerator by the same number you multiply the denominator by.
5.OA.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18932\ 921)$ is three times as large as 18932 921, without having to calculate the indicated sum or product. Lesson 1.2—Students will write expressions to represent ratio rules. Ex. $H=A$ (Height equals armspan) or $4h=a$ 4 x hand length = arm length.
5.MD.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. Lesson 1.3—Converting between units of length—Students must convert their personal measurements into inches to determine general ratio rules. $5' 4" = 64"$

Final Unit Evaluation

<i>Characteristic of Gifted Students</i>	P <i>Needs Practice</i>	S <i>Satisfactory</i>	O <i>Outstanding</i>
<i>Uses systematic questioning, problem-solving and decision making skills to solve problems and dig deeper into topics</i>			
<i>Communicates creative ideas fluently through writing and speaking with adequate support and elaboration.</i>			
<i>Evaluates and builds upon unit concepts by asking deep questions and developing new ideas.</i>			
<i>Exhibits task commitment through perseverance, self-motivation, and concentration</i>			
<i>Is mentally and physically involved in the creation of products using a variety of resources in a unique way.</i>			
<i>Develops quality products through a series of detailed steps that are accurate, neat, and pertain to real life.</i>			