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| **Grade** | 5 | **Subject** | Math |
| **Unit name** | Ratio | **Lesson** | Understanding Ratio |
| **Lesson #** | 1 | **Teacher** | Monica Sims |

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| **CC Standards****for****Mathematics**  | **Ratios and Proportional Relationships Standards (page 42 )**6.RP.1 - Understand the concept of a ratio and use ratio language6.RP.3 – Use ratio to solve real world problems **Operations and Algebraic Thinking Standards (page 35 )**5.OA.3 – Identify apparent relationships between corresponding terms. |

**Lesson plan: Understanding Ratio**

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| **SECTION** | **TIME** | **SHIFT** | **DETAIL** |
| **Introduction**  | 2 minutes  |  | Problem is presented on the smart board or overhead projector. Teacher introduces the problem.*A necklace has 2 red beads for every 3 yellow beads. How many yellow beads are there if the necklace has 6 red beads?* Organize groups and distribute large size working paper |
| **Group activity** | 15 minutes | Conceptual understanding  | Students work in groups to draw and discuss the problem. Each group has a large size post it note to record the group’s answers and working. |
| **Whole class discussion and sharing** | 10 minutes | Conceptual understanding | Students share their solutions and the strategies used to get their solutions. Ask students about the relationship between numbers and how those numbers might change. Students are introduced to the term ratio and how it is a comparison where for every x units of one quantity there are y units of another.  |
| **Teacher instruction**  | 3 minutes | Conceptual understandingCoherence | Formal definition and explanation of three different ways to write ratios. (3 to 2, 3:2, 3/2) Pose question to the class on how ratios might be related to fractions |
| **Application** | 8 minutes | Application | Guided by the teacher, students explore the relationship of numbers with a recipe. Teacher demonstrates guided practice questions for the whole class.  |
| **Independent work** | 10 minutes | Conceptual understanding  | Students work independently. *A necklace has 2 red beads for every 3 yellow beads. How many yellow beads are there if the necklace has 18 red beads?* Students write two other equivalent ratios for 5:8 as an informal assessment. |
| **Close** | 2 minutes | Conceptual understanding | Discuss whether order matters in ratio representation (ie is 2:3 the same as 3:2?) |