Class/Grade: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Teacher(s):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

­­­­­­­­­­­­­­­­

**1. Cluster:**

|  |  |  |
| --- | --- | --- |
| **Previous Lesson** | **Grade Level Standard(s)****Central to Lesson** | **Upcoming Concept** |
|  |  |  |

**2. Relevance/Rationale:** (The following are process questions to help you decide the appropriate lesson type.)

1. Why are the outcomes of this lesson important and applicable in the real world?
2. Why are these outcomes essential for future learning?
3. What level of rigor is appropriate?

• Conceptual Understanding • Procedural skill & fluency • Application

1. How is conceptual understanding going to be developed?
2. How will students interact with the mathematics?

**3. What lesson type best meets the learning target?**

**-Keep in mind which one(s) of the 8 Math Practices you chose)**

* Debate / Open-ended discussion
* Developmental
* Direct Instruction
* Drill and Practice
* Discovery
* Modeling-Real World
* Skill Application
* Reinforcement
* Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \*see appendix A for descriptions/examples

Common Core Standard(s) for Mathematical Practice Addressed:

* 1. Make sense of problems and persevere in solving them.
* 2. Reason abstractly and quantitatively.
* 3. Construct viable arguments and critique the reasoning of others.
* 4. Model with mathematics.
* 5. Use appropriate tools strategically.
* 6. Attend to precision.
* 7. Look for and make use of structure.
* 8. Look for and express regularity in repeated reasoning.

**4. Learning Target(s):**

|  |  |
| --- | --- |
| Lesson Concept(s): Students will understand… | Lesson Skills(s): Students will be able to… |
|  |  |

**5. Formative Assessment Criteria for Success:**

What types of formative assessments will you use and at which points in your lesson will you check for understanding?

**6. Timeline / Lesson Sequence:**

Opener: How will you engage the students?

Activities/Tasks: What activities or tasks support your learning target?

Key Questions: What questions will you use to promote mathematical thinking?

Closure: How will you summarize the learning target?

**7. Resources/Materials:** (What texts, digital resources, & materials will be used in this lesson?)

**8. Access for All:** (How will you ensure that all students have access to and are able to engage appropriately in this lesson? Consider all aspects of student diversity.)

EL Learners-

Special Needs-

Low Performing-

Advanced-

**9. Reflection:** (The following are process questions to help with reflect and reteach)

How did the student perform on tasks?

What evidence did you collect?

 What are you going to do with it?

Were students participating and engaged?

Do you need to reteach? If so, what parts?

 How will you reteach?

Appendix A Lesson Descriptions/examples

**Debate:** Students are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

**Direct Instruction:** A systematic method of instruction wherein the teacher leads the students in a carefully constructed step-by-step lesson.

**Discovery:** Students will grapple with a math task that requires them to discover or uncover mathematics that has not been presented directly. This will position students to necessitate the mathematics the teacher intends to draw out through the lesson. Students will personalize the mathematical ideas which will in turn create a deeper independent understanding.

**Drill and Practice:** Students will acquire rote skills through repetitive practice. These are small tasks such as memorizing or practicing facts and procedures. Practice does not necessarily make perfect, but does make permanent.

**Modeling:** Students will apply the mathematics they know to solve problems arising in everyday life. Students make assumptions and approximations, and then analyze those relationships mathematically to draw conclusions. Students interpret their mathematical results in the context of the situation and reflect on whether the results make sense.

**Reinforcement:** A lesson that encompasses several mathematical concepts that have been previously taught. This new lesson would present or repackage them in an integrated format. This is different from direct instruction or drill and practice is that students are applying multiple skill sets simultaneously.