Informal Lesson Plan:

Component 1: Preplanning Tasks

A. *Connection Analysis:* TEKS 7.1B – Students will convert between fractions, decimals, whole numbers, and percents mentally, on paper, or with a calculator. TEKS 7.12B – Students will use addition, subtraction, multiplication, and division to solve problems involving fractions and decimals.
B. *Content Analysis:*
   1. Demonstrate how to perform the various operations involving fractions, decimals, and percents while using multiple operation skills, and discerning which method to solve the problem.
   2. Prerequisite Skills: addition, subtraction, multiplication, division, unit conversion, order of operations, mixed numbers, improper fractions, equivalent fractions, and all forms of decimal operations.
   3. Key Terms: Improper Fraction, Equivalent Fractions, Mixed Numbers, Percent, Numerator, Denominator, PEMDAS
C. *Objective*: Students will demonstrate multiple ways to solve equations using decimals, percents, and fractions using multiple operations, and discern which operations to use at what time correctly 10 out of 10 times on an in class quiz. Students will then generate their own mathematics quiz to be taken by a classmate.
D. *Objective Rationale*: The quiz is designed to assess student discernment using operations with different units to show mastery of operations and rationale in operations. The activity is designed to enlist creative thinking skills in the development of equations that are applicable in real world situations.
E. *Critical Management Skills*: Students will be seated and work independently. Students will have privacy dividers to ensure accuracy of the assessment, the assessment, and a pencil. During the activity, students will work in pairs.

Component 2: Lesson Set-Up

A. *Gain Attention:* When I say "CLASS", students respond with "YES", and then they are silent as this is the signal that they need to listen for further instruction.
B. *Behavioral Expectations:* No talking during the quiz, do quiz in pencil only, read AR book when quiz is finished, and stay silent until the teacher signals otherwise.

Component 3: Lesson Opening

A. *Generate Interest:*

1. Give a brief overview of all the operations that are expected on the quiz. Ensure to answer any last minute questions by the students before beginning to pass out the quiz.
2. Remind students of the rules when test taking or quiz taking.

B. *Objective and Purpose:*
   1. The purpose of this quiz is to show what you have learned for operations that involve fractions, decimals, and percents. You will be able to assess this knowledge so that you can apply it to real world situations.
   2. Today you will solve equations and list what areas outside of school this knowledge will be helpful for.

C. *Advanced Organizer:* Students tend to shy away from learning math thinking that they will never need it anyway, so why do it? Mathematics operations are used in a myriad of ways throughout life.

Component 4: Lesson Body

A. *Delivery Reminders:*
   1. Move around the room to ensure students stay on task and keep their eyes on their own papers.
   2. Assist students who have modification for their quiz.

B. *Lesson:*
   1. Administer quiz.
   2. When all students have finished quiz, have them put away their pencils and get out a pen.
   3. Ensure that all pencils are off the desks and only pens are being used before proceeding.
   4. Begin with problem one. CFU by asking students how to solve the problem.
   5. Involve the use of AP by having students correct any mistakes using their pen only.
   6. Engage students in critical thinking. Ask "How is this type of equation relevant to the world outside of the classroom?"
   7. Allow time for student discussion. Let them share their opinions on relevancy.
   8. Proceed with steps 5, 6, and 7 for all subsequent questions.

Component 5: Extended Practice

A. *Activity Explanation for day 2:*
   1. Have students work in pairs to develop their own quiz.

2. Have each person in the pair make the same quiz.
3. Students will be making quizzes to give to the pair of students next to them.
4. Each quiz must contain 5 problems.
5. After 20 minutes, students will exchange quizzes.
6. Students will take the quiz given them and answer the questions. At the same time, if any question is inaccurate students will write a critique of that question explaining to the student who wrote it how to correct the question.
7. After at least 20 minutes has passed, students will hand the quiz given to them back to the student who made it.
8. The student who made the quiz will assess the answers and/or critiques on the paper and then pass it in to the teacher.

Component 6: Lesson Closing

A. *Summarize:* Mathematics is a useful skill for so many things that will happen life. For some, you will need the information for your job, running your household, or for completion of everyday tasks.
B. *Question and Answer:* Does anyone have any questions?
C. *Preview:* Tomorrow we will be introducing squares and square roots into our mathematics arsenal.

Component 7: Evaluation

A. Assess quizzes for equation evaluation accuracy.
B. Assess made quizzes for application of equations.