**5E Lesson Plan**

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| **Standard Addressed: Standard -** **CC.2.1.7.D.1****Analyze proportional relationships and use them to model and solve real-world and mathematical problems.****Lesson Name:** Percents  |
| **Author:** Ryan Mulville  |
| **Subject area / grade level:** Math / 7th and 8th graders |
| **Time:** 75 minutes |
| **Materials:** * Percent Worksheet
* Shopping Worksheet Activity
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| **Lesson objective(s): Students Will Be Able To…**1. Calculate the percent given a part of a whole
2. Calculate the percentage of a number
3. Conduct savings and costs when buying food
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| **What will the Teacher be Doing** | **Elicit Questions** | **What are the Students Doing** |
| **ENGAGEMENT** |
| * Teacher will ask the students a question with a “yes” or “no” answer. Question should be relatable such as “How many students play Fortnite?” Count the students and place answer on board.
* Ask elicit question
* Introduce the term percent, the symbol for a present, and explain how they work.
 | * Imagine if there was 1000 people that I asked this question for. Would I go about counting all the people? Is there something that would give me a good sense of how many people play fortnite?
 | * Respond to the engaging question
* Provide answers to the illicit question, leading to the answer of percents.
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| **EXPLORATION** |
| * After introducing the term of percents, instruct students to answer questions on worksheet about percents.
* These questions will be questions that require students to make a prediction of the percent and show work of how they came up with their percent.
 |  | * Construct their percents for the questions and be ready to defend their answer and show work.
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| **EXPLANATION** |
| * Have students show their work to the questions.
* Ask if students agree or disagree with the percents created?
* Incase students haven’t defended their answer by dividing the part by the whole, refer back to the first engaging question and ask students how to figure out the percent who said yes.
	+ This will show students that to find a percent, they put the part over the whole and then multiply by 100.
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| **ELABORATION** |
| * Transition from giving two numbers and finding the percent to finding the percentage of a certain number.
* Use the engaging question again as an example.
* Provide instruction to the students on how to find the percentage of a number.
* Proceed to the complete the second part of the worksheet, where students need to find the percentage of numbers.
 | * Now imagine that we were told that 70% of people play fortnite in this room of 20 kids, how many kids play fortnite?
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| **EVALUATION*** Students will complete the “Shopping” activity where students need to conduct savings and the final cost when buying food for a party.
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**CC.2.3.8.A.2**

**Understand and apply congruence, similarity, and geometric transformations using various tools.**

**CC.2.1.6.E.3**

**Develop and/or apply number theory concepts to find common factors and multiples.**

**CC.2.1.6.D.1**

**Understand ratio concepts and use ratio reasoning to solve problems.**

**CC.2.1.7.D.1**

**Analyze proportional relationships and use them to model and solve real-world and mathematical problems.**