

At the end of today I will be able to...

- I can convert decimals in the tenth and one hundredth place value into fractions.
- I can understand the difference between a decimal and a fraction.
- I can understand that the same number can be represented in numerous ways.

We Will Rock You

A creative, engaging and fun math lesson plan

Outcome: N7.3 → Demonstrate an understanding of the relationships between positive decimals, positive fractions (including mixed numbers, proper fractions and improper fractions), and whole numbers.

Subject: Main focus is mathematics, also includes arts education and literacy.

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Main Idea: Students will be able to understand that decimals and fractions can represent the same number in different forms. They will be able to understand how to convert positive decimals to positive fractions.

Essential Question: What method can we use to convert decimals into fractions?

I Can Statements:

- I can convert decimals in the tenth and one hundredth place value into fractions.
- I can understand the difference between a decimal and a fraction.
- I can understand that the same number can be represented in numerous ways.

Outcome:

N7.3 → Demonstrate an understanding of the relationships between positive decimals, positive fractions (including mixed numbers, proper fractions and improper fractions), and whole numbers.

Indicators:

- (b) Match a set of fractions to their decimal representations.

Total Time: approx. 60 minutes. Could be adapted to be shorter or longer.

Prior Knowledge:

- What is place value?
- What is a fraction?
- What is a decimal?
- Understanding that a decimal and fraction represent same values, but in different forms.

Set (20 minutes)

1. Briefly go over place value. **Place Value**→ is the value of the location of a digit in a number. For example, 516. 5 is in the 100th zone, 0 is in the tens zone, 6 is in the ones place value. Saying it is five hundred and six. When we read right of the decimal we say *6 tenths* not point 6. Ask students what ones, tens, hundreds and thousands looks like. Show video.
https://www.youtube.com/watch?v=gsvrhKka1nc&start_radio=1&list=RDgsvrhKka1nc&t=8
2. Discuss the video, mainly the focus of the number to the right of the decimal (THS). It goes tenths, hundredths, thousandths. Reference poster paper as a resource for the students. (Poster paper will have a visual understanding of place value.
3. Move on to asking the class how else could we represent 0.5? What is 0.5? It is equivalent to the fraction $\frac{1}{2}$ or $50/100 = 1/2$. But how do we know that???
4. Teach the process of converting decimals to fractions on the board. Practice 4-5 examples. Use the *say it, write it, simplify it method*. Play video at 1.13 till 1.39 seconds. <https://msnewburn.wordpress.com/2007/01/22/fractions-to-decimals-song/>
5. Explain to students the game they will be playing first. *
6. Pass out “practice sheet” and go over the expectations with the students. Students will need to answer all of the questions and then figure out the phrase at the end. Once students have finished this, they need to show the teacher the phrase which will be their “ticket” to start playing the game. Have students pair up with others once they are finished the sheet.

Development (20 minutes)

1. GAME TIME!
2. Students will pair up and play the Dot Game. By playing this game students will be able to practice what they have just learned about the conversion of decimals to fractions in a fun and interactive experience. They will also practice basic addition skills.

Objective of the game:

To play, students will roll the dice, find the sum and find the decimal value that is equivalent to the fraction form. Then, students draw a line between two of the dots surrounding the answer. When a student's line forms a complete square, they get to capture that square. The student with the most squares at the end of the game is the winner!

3. Get students into groups of two (who they are sitting beside), pass out 2 dice/group along with a game board.
4. Explain the purpose of the game to the class. Encourage students to write down the decimals that they aren't sure about and ask for help. Answer any questions about the game.
5. During the game, be walking around and anecdotally assessing students progress.
6. Allow students to play for 15-20 minutes. Have students add up how many finished squares they have completed.
7. Give a 5, 3, 1-minute count down.
8. Have students hand each game sheet in.

Closure (15 minutes)

1. Exit slip!!! Pass out pink stickies' and have students answer the questions that are on the board. Once students are done, have them post their stickie on the poster paper.
 - What is the saying we use when converting decimals to fractions?
 - Use the method we used in this class to answer the following:
0.12, 0.8
 - How do you think you would answer the following question?
Change 2.5 into its fraction form.

Assessment

Formative: Assessment for & as Learning → The twitter board is a quick activity for students to understand what they have learned and also a way for the teacher to observe what they got out of the lesson. Students will be able to reflect on what they know while playing the board game. They can assess themselves with what their peers know and understand what areas they need more work on.

Adaptations

1. Print out enough copies of the game board for students who want to play independently.

Resources

1. <https://games4gains.com/products/fractions-decimals-and-percents-squares-game>