Lesson 6: Writing Hundredths

Textbook pages: 17 – 19

Lesson Objective

To be able to recognise and write decimal equivalents of any number of hundredths.

Lesson Approach

To begin this lesson, show pupils the In Focus task and ask them if they know what number is shown by the number discs. What is the number shown on each disc? (0.01, 1 hundredth, 1⁄100) How many are there? We have to start by counting how many hundredths there are. Let pupils count them to establish there are 15 hundredths.

Ask pupils what we should do when there are more than 10 hundredths. We regroup 10 hundredths into 1 tenth. Ask them to show the regrouping of 10 hundredths into 1 tenth using manipulatives or moveable discs on a place-value chart. Then ask pupils to think about how to write the decimal. Write on the board:
15 hundredths = 10 hundredths + 5 hundredths. Ask them after we regroup, what happens to 10 hundredths. It becomes 1 tenth. Continue the equation: 15 hundredths = 1 tenth + 5 hundredths.

Ask pupils to write 1 tenth and 5 hundredths as decimals and add them: 0.1 + 0.05 = 0.15. The number that the 15 discs show is 0.15. Repeat the process for Let's Learn 2.

During Guided Practice, pupils are using number discs to help them write numbers as decimals.

Lesson 7: Writing Hundredths

Textbook pages: 20 – 25

Lesson Objective

To be able to recognise and write decimal equivalents of any number of hundredths.

Lesson Approach

To begin this lesson, show pupils the In Focus task and ask them if they can apply what they have learnt previously to solve the problem. We know that Ruby uses 124 discs of 0.01 to show a number. What is the number she is trying to show?

124 discs of 0.01 can be read or written as 124 hundredths. Can we write this number as a fraction? 124 hundredths = 124⁄100. Can we write it as a decimal? Allow pupils to think and discuss in pairs. Provide them with place-value charts and number discs to work out the regrouping to find the number 1.24.

Can we use fewer discs to show the same number? How many different combinations of discs can we come up with? Record pupils' responses and work through the three possibilities as shown in Let's Learn.

Ask pupils if they know the place value of the digits in 1.24. What is the place value of the digit 1? What is the place value of the digit 2? What is the place value of the digit 4? Show them the number line in Let's Learn 2. Guide them by asking questions such as: Where should we place 1.24? Is it more or less than 1? By how much? What are the increments that have been marked on the scale? What are their values? Count on together with pupils, starting from 1, 1.1, 1.2, 1.21, 1.22, 1.23, 1.24. It may be necessary to repeat the same process for another number (e.g. 129 hundredths) to ensure pupils' understanding, either as a class or small group.

During Guided Practice, pupils are writing numbers in words and fractions as decimals, and identifying decimals on number lines.

Lesson 8: Writing Decimals

Textbook pages: 26 – 27

Lesson Objective

To be able to read and write numbers as decimals.

Lesson Approach

To begin this lesson, show pupils the In Focus task. Tell them your friend wants to make different numbers using the digit cards and the place-value chart and wonders how many different numbers she can make.

Allow pupils to discuss the numbers before moving the digit cards into the place-value chart. Prompt them with questions such as: What digit is in the ones place? What does the the digit 3 stand for? How do we read the number? What other ways can we write the number; as a fraction?

Allow pupils time to work in pairs using mini whiteboards and pens as you model the process. Ensure they all get a chance to respond to the questions by getting them to show you their answers every so often.

During Guided Practice, pupils are identifying the value of the same digit in different places in decimal numbers in pairs.

Lesson 9: Comparing and Ordering Decimals

Textbook pages: 28 – 30

Lesson Objective

To be able to compare and order numbers with the same number of decimal places up to 2 decimal places.

Lesson Approach

Prepare the materials as shown in the In Focus task.

To begin this lesson, tell the class they will be playing a game and then demonstrate how the game is played. Roll a dice and place the digit shown in the tenths place of the chart. Roll again and place the second digit in the hundredths place. Ask a volunteer to do the same. Then compare the 2 numbers; which is smaller?

Ask pupils how can we determine which decimal is more or less? Can we use number discs to show this? Show them how number discs can be used to compare the decimals. When using this method, take the opportunity to guide pupils to conclude that we should compare the tenths first as tenths have a greater value than hundredths. How about a number line? Model how a number line can be drawn to make the comparison. Use the symbols > or < when writing the comparison on the board.

Let pupils play the game in pairs. Provide them with charts and number discs for making the comparisons. Ask them to write the comparison using > or <. After a few rounds, pupils will be able to conclude that once the tenths are determined, they can tell which number is greater or smaller.

During Guided Practice, pupils are comparing and ordering decimals up to 2 decimal places.

Lesson 10: Comparing and Ordering Decimals

Textbook pages: 31 – 34

Lesson Objective

To be able to compare and order numbers with the same number of decimal places up to 2 decimal places.

Lesson Approach

Prepare the materials as shown in the In Focus task.

To begin this lesson, show pupils the In Focus task and ask them to read the game instructions. Is this game similar to the game they played in the previous lesson? What is different? In this game, the players can place the digit in the ones place. They can also place the digit in any place they like, regardless of the sequence of the numbers rolled.

Discuss Emma's statement. Is she correct? How can we find out? Is there a strategy to increase the chances of winning the game?

Demonstrate how to play the game, thinking aloud when deciding where to place the digits. Invite two pupils to play the game with you. Use number discs to compare the three numbers, then show them on a number line as well as using a place-value chart as shown in Let's Learn 2. Finally, arrange the three numbers in order from smallest to greatest.

Ask pupils to play the game in groups of three and record their comparisons. After three rounds, bring pupils back together as a class and ask if Emma's statement is correct and if they have a winning strategy. At the end of the game, pupils should be able to conclude that the comparisons should start by comparing the ones, then the tenths and then the hundredths.

During Guided Practice, pupils are comparing and ordering decimals up to 2 places.