Fractions: Doughnut Decimals

Aim:	Success Criteria:	Resources:
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. I can recognise thousandths and use them as decimals and fractions.	I can identify thousandths. I can write decimal numbers with thousandths as fractions using a denominator of one thousand.	**Lesson Pack** Whiteboards and pens – class set
	Key/New Words: Thousandth, hundredth, tenth, equivalent, decimal.	**Preparation:** **Doughnut Decimals Activity Sheets** – one per child **Doughnut Decimal Loop Cards** – one per group

Prior Learning: It will be helpful if children have a good understanding of the relationship between tenths and hundredths.

Learning Sequence

Decimal Hundredths: Use the counting stick on the **Lesson Presentation** to rehearse counting forwards and backwards in different steps of decimal hundredths.

Thousandths: Use the text and images displayed on the **Lesson Presentation** to remind the children that numbers that have digits to the right of a decimal point are numbers between whole numbers. Rehearse the decimal place value positions of tenths and hundredths and introduce the place value position of thousandths using base ten equipment.

Writing a Decimal: Working with a partner, identify the decimal numbers represented in base ten equipment on the **Lesson Presentation**. Clarify the role of the place-holding zeros: that there is nothing in the column, but we still need to show the ones and tenths to give value to the hundredths column.

Decimals as Fractions: Use the text and images displayed on the **Lesson Presentation** to practise reading and writing decimals including thousandths as fractions with a denominator of ten, one hundred or one thousand. Emphasise decimal equivalence between tenths, hundredths and thousandths.

What's My Number? The children sit back to back with their partner, with only one child able to see the whiteboard. The child facing the whiteboard has thirty seconds to describe the decimal number shown on the **Lesson Presentation** using the language of tenths, hundredths and thousandths. The pair score 1 point if the other child writes the correct fraction equivalent on their individual whiteboard. The children swap roles for the next round.

Doughnut Decimals: Children complete the differentiated **Doughnut Decimals Activity Sheets**, to show they can recognise thousandths and use them as decimals and fractions.

★ Match up the decimal and fraction equivalents involving tenths, hundredths and thousandths.

★★ Convert between decimals and fractions that involve thousandths and put them on a number line.

★★★ Convert between decimals and fractions that involve thousandths and use them to complete magic squares that total 1.

Diving into Mastery: Schools using a mastery approach may prefer to use the following as an alternative activity. These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Children explore how many thousandths make a whole, a tenths and a hundredth. They match base ten representations of decimals to decimal number and draw representations.

Children identify errors in pictorial representations of decimal numbers. They partition numbers with 3 decimal places in different ways.

Children apply their understanding to problems involving decimals with three decimal places.

Exploreit

Matchit: Using the **Tenths, Hundredths and Thousandths Cards** take it in turns to turn over two cards to try and find equivalent fractions. Some of the thousandths fractions don't have a match. These can either be removed or could be kept by children who identify them as having no tenth or hundredth equivalent.

Compareit: Select two of the **Tenths, Hundredths and Thousandths Cards** and write a comparison statement about them using the greater than or less than symbols.