Edward Peake Church of England Middle School			
Topic: Decimals		**Year: 6**	**NC Strand: Number**

What should I already know?

- How to read and write decimal numbers as fractions [for example, 0.71 = 71/100
- How to use thousandths and relate them to tenths, hundredths and decimal
- equivalents
- How to round decimals with two decimal places to the nearest whole number and to one
- decimal place
- How to read, write, order and compare numbers with up to three decimal places
- How to solve problems involving number up to three decimal places

What will I know by the end of the unit?

- How to describe the value in words and digits in numbers with up to three decimal places
- How to multiply numbers with three decimal places by 10, 100 and 1,000
- How to divide numbers with three decimal places by 10, 100 and 1,000
- How to multiply decimals by an integer
- How to divide decimals by an integer
- How to use division to solve problems (where the answer has up to two decimal places)
- How to write a decimal as a fraction using place value knowledge
- How to write a fraction as a decimal. Using equivalence to write fractions with a denominator of 10, 100 and 1,000
- How to use knowledge of division to write a fraction as a decimal

Vocabulary

decimal	Exchanging	equivalent	Thirds
Decimal places	Tenths	Dividing	Quarters
Value	Hundredths	Sharing	Eighths
Digit	Thousandths	Grouping	Fifths
Place value	Zero	Multiplying	Denominator
Words	Place holder	Fractions	Numerator
Column	Decimal point	simplify	convert

Investigate/Homework tasks

- Homework will be set by your teacher using google classroom
- You should complete at least 30 minutes of maths tasks on Maths Whizz (not games). Please attend help sessions if you do not have access to the internet at home
- Additional work you could complete:
    - Find out more about the meaning of the vocabulary list using
      http://www.amathsdictionaryforkids.com/
- To challenge yourself: Answer the key questions to deepen your knowledge

Diagram/Key Information

Hundreds	Tens	Ones	•	Tenths	Hundredths	Thousandths

Multiplying and Dividing by 10, 100 and 1000

10 000	1000	100	10	1	• $\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$

Multiplying

X 10   digits move LEFT **1** space
X 100   digits move LEFT **2** spaces
X 1000   digits move LEFT **3** spaces

←

Dividing

÷ 10   digits move RIGHT **1** space
÷ 100   digits move RIGHT **2** spaces
÷ 1000   digits move RIGHT **3** spaces

→

	= 1	= 1
	= ½	= 0.5
	= ⅓	= 0.33
	= ¼	= 0.25
	= ⅕	= 0.2
	= ⅛	= 0.125
	= ¹⁄₁₀	= 0.1
	= ¹⁄₁₀₀	= 0.01

Key skills/Timeline/Topic Questions

How many hundredths are the same as 5 tenths?

Why is 0 important when multiplying by 10, 100 and 1,000?

What happens to the counters/digits when you divide by 10, 100 or 1,000?

Why is zero important when dividing by 10, 100 and 1,000?

What is happening to the value of the digit each time it moves one column to the right?

What are the relationships between tenths, hundredths and thousandths?

Which is bigger, 0.1, 0.01 or 0.001? Why?

How many 0.1s do you need to exchange for a whole one?

How else could we partition the number 3.69? (For example, 2 ones, 16 tenths and 9 hundredths.)

Can you have a unit fraction that is larger than 0.5? Why?

How many hundredths are equivalent to one tenth?

How could you convert a fraction to a decimal?

Do we divide the numerator by the denominator or divide the denominator by the numerator? Explain why.

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