

Year 4 Maths Distance Teaching and Learning

Week beginning: 29th June 2020

Lesson 1	-	
Learning Intention:	Key Vocabulary:	What you will need:
WALT: explore the place		
value of decimal numbers	Ones	A computer, tablet or phone
	I entrs	for the starter
	Bart whole model (chorry	Mains book Boneil and ruler
	diagram)	Video: Vear 4 Maths – S2
	Regroup	Week 5 - lesson 1
	Placeholder	
Starter		
Log into Times Table Rock S	tars and complete a gig if it is a	available. If not, complete a
studio session.		
Main Taashing		
This work, we will be looking	alaaaly at daaimal numbara. V	Vo will loorp to represent
them using a part whole mod	el (cherry diagram) we will co	mare and order decimal
numbers think about their fra	action equivalents and learn to	round them
Today we are focussing on the	ne place value of decimal numl	pers.
We can represent the numbe	r 2.36 using dienes like this:	
But we can also use a part w number:	vhole model (cherry diagram	to represent the same
2.36		
2 0.3 0.06		
We can see clearly that there	e are 2 ones, 3 tenths and 6 hu	ndredths
2 + 0.3 + 0.06 = 2.36		





The missing number is 0.3 which is 3 tenths.



Example 3

Write the number that is four ones and 8 hundredths

We can use a place value chart to help us with this problem. Read the problem through and write the digit in the correct position. So, we need to put a 4 in the ones column and an 8 in the hundredths column.

tens	ones	tenths	hundredths
	4		8

There are no tenths so we must remember to put a zero in the tenths column. This is called a **placeholder**.

tens	ones	tenths	hundredths
	4	0	8

The number is 4.08

Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

Challenge 1

- 1. Draw a cherry diagram to represent each number and state the place value of the underlined digit:
 - a) 5.<u>6</u>3
 - b) 9.7<u>1</u>
 - c) <u>5</u>.89
 - d) 7.6<u>5</u>
 - e) 8.<u>0</u>3
 - f) <u>4</u>.91
- 2. Find the missing number
 - a) = 6 + 0.7+ 0.04

b) 5.23 = 5 + 0.2 +

- 3. Use a place value chart to help you write the number that is:
 - a) Three ones, seven tenths and four hundredths
 - b) Nine ones, five tenths and two hundredths



	Challenge 2
1.	Draw a cherry diagram to represent each number and state the place value of the
	underlined digit:
	a) 5. <u>6</u> 3
	b) 9.7 <u>1</u>
	c) 1 <u>5</u> .89
	d) 7.6 <u>0</u>
	e) 8. <u>0</u> 3
	f) <u>3</u> 4.91
2.	Find the missing number
	a) 7.45 = 🗌 + 0.4 + 7
	b) 80.6 = 80 + _ + 0.6
3.	Use a place value chart to help you write the number that is:
	a) Six hundredths, three tenths and five ones
	b) Four tenths, three ones and two hundredths
_	Challenge X
:	2.45 = 2 ones, 4 tenths and 5 hundredths
lt i	is also equal to 24 tenths and 5 hundredths.
	How else could we say this number?











e) 8. <u>0</u> 3 <mark>0</mark> te	enths	
f) <u>3</u> 4.91 <mark>3 te</mark>	8 0.0 0.03 8 0.0 0.03 0.0 30 34.91 4 0.9 0.01	
2. Find the missin	ng number	
a) 0.05		
b) 0		
3. Use a place va	alue chart to help you write the number that is:	
a) <u>5.36</u>	tensonestenthshundredths5436	
b) 3.12	tens ones tenths hundredths	
0) 0.42		
	Challenge X	
2.45 = 2 ones, 4 ten	nths and 5	
hundredths	S	
It is also equal to 24 to hundredths	enths and 5 s.	
How else could we number?	e say this	
2 ones and 45 hur 245 hundredths	ndredths	



Lesson 2		
Learning Intention:	Key Vocabulary:	What you will need:
WALT: order and compare the place value of numbers up to 2 decimal places	Inequality sign Compare Order	A computer, tablet or phone for the starter Maths book Pencil and ruler Video: Year 4 Maths – S2 Week 4 - lesson 2

Starter

Log into Times Table Rock Stars and complete a gig if it is available. If not, complete a sound check session.

Main Teaching

Today, we will be **comparing** two decimal numbers to decide which is the highest in value and then we will be putting several decimal numbers in **order** from smallest to largest.

Inequality Signs

> means greater than

< means smaller than.

Example 1

Which number is larger, 0.7 or 0.45?

To compare two numbers you need to look at the highest value digit first. We can put both numbers in a place value chart to help us.

tens	ones	tenths	hundredths
	0	7	
	0	4	5

In the numbers above, we look at the ones column first – here they are both zero.

So, we need to move to the next highest column which is the tenths column – here we have 7 tenths and 4 tenths. Therefore, the number with 7 tenths is bigger than the number with 4 tenths.

0.7 > 0.45

Example 2

Arrange these decimal numbers in order from smallest to largest: 0.63, 0.35, 0.36, 0.56



We need to compare these numbers to each other to find the smallest one. Again, we look at the highest value digit first. To help us we can use a place value chart.

tens	ones	tenths	hundredths
	0	6	3
	0	3	5
	0	3	6
	0	5	6

These numbers all have zero in the ones column so we now have to look at the tenths column.

We can see that 3 tenths is the smallest value here but there are two numbers with 3 tenths 0.35 and 0.36.

If we now look in the hundredths column of these two numbers we see there is one with 5 hundredths and one with 6 hundredths. The one with 5 hundredths is the smallest so we write this first followed by the one with 6 hundredths:

0.35, 0.36

To find the next largest number we have to look at the remaining two numbers 0.56 and 0.63. In this case we just need to look at the tenths column as they are different and we can see that 5 tenths is smaller than 6 tenths. We can now add these numbers to our list in the correct order

0.35, 0.36, 0.56, 0.63

Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

Challenge 1
Use the inequality signs < and > to show which number is the largest:
1. 2.4 24
2. 5.2 25
3. 3.6 6.0
4. 9.0 0.9
5. 2.0 2.2
6. 2.7 2.3
7. 4.8 4.5
8. 5.3 7.03
Write these decimal numbers in order from smallest to largest
-
9. 6.3, 6.0, 7.3, 3.7



10. 4.0, 4.4, 3.3, 3.4 Challenge 2 Use the inequality signs < and > to show which number is the largest: 1. 5.42 5.27 2. 1.18 0.81 3. 12.19 11.92 4. 2.55 2.46 5. 11.06 11.60 6. 13.6 13.47 Write these decimal numbers in order from **smallest** to **largest** 7. 2.15, 1.22, 1.52, 2.51 8. 8.17, 7.88, 7.78, 8.07 9. 1.11, 1.01, 1.1, 1.04 10. 3.7, 3.07, 3.71, 3.17 Challenge X 1. Rav says that 0.48 is greater than 0.8 because 48 is greater than 8. Seek and destroy his misunderstanding. 2. Use the digits 4, 5 and 7 to make the smallest decimal number and then the largest decimal number.



Independent Tasks
Challenge 1
Use the inequality signs < and > to show which number is the largest:
1. $2.4 < 24$ 2. $5.2 < 25$ 3. $3.6 < 6.0$ 4. $9.0 > 0.9$ 5. $2.0 < 2.2$ 6. $2.7 > 2.3$ 7. $4.8 > 4.5$ 8. $5.3 < 7.03$
Write these decimal numbers in order from smallest to largest
9. 3.7, 6.0, 6.3, 7.3 10. 3.3, 3.4, 4.0, 4.4
Challenge 2
Use the inequality signs $<$ and $>$ to show which number is the largest:
1. $5.42 > 5.27$ 2. $1.18 > 0.81$ 3. $12.19 > 11.92$ 4. $2.55 > 2.46$ 5. $11.06 < 11.60$ 6. $13.6 > 13.47$
Write these decimal numbers in order from smallest to largest
7. 1.22, 1.52, 2.15, 2.51 8. 7.78, 7.88, 8.07, 8.17 9. 1.01, 1.04, 1.1, 1.11 10. 3.07, 3.17, 3.7, 3.71
Challenge X
 Rav is wrong because there are 8 tenths in 0.8 and only 4 tenths in 0.48. 8 tenths are greater than 4 tenths.
2) Smallest = 4.57 Largest = 7.54



Lesson 3			
Learning Intention:	<u>Key Voo</u>	<u>abulary:</u>	What you will need:
WALT: estimate decim numbers	al Estimate Number Position Intervals Benchm	e line arks	A computer, tablet or phone for the starter Maths book Pencil and ruler Video: Year 4 Maths – S2 Week 4 - lesson 3
Starter			
Log into Times Table R	Rock Stars and o	complete a gig if it is a	available. If not, complete a
garage session.	· _ · · · · · · · · · · · · · ·	1	
_			
Main Teaching			
Number lines do not al Today we are going to where not all the interve place benchmarks suc line first.	ways have ever be estimating t als have been n ch as half, a qua	y interval (section) r he position of decim narked. To help us do arter and three quarte	narked on them. nal numbers on number lines o this we need to be able to er positions on the number
0			2
The benchmarks for the	is line would be:		
0 0.5	5	1 1	.5 2
Example 1 Estimate the position	of the arrow		
0		1	4 tenths
To start, we can put the	e benchmarks o	n the number line	
•			





Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

NOTE: As we are estimating in this lesson, you may be up to a tenth out either way Challenge 1





	<u>Challenge 2</u>
Where would the number 0.2 be on this nur	nber line?
0	1.2
2. Where would the number 0.7 be on this nu	mber line?
0	1.8
3. Where would the number 1 be on this num	nber line? 2.4
 3. Where would the number 1 be on this num 0 4. Where would the number 1.5 be on this number 1.5 be on th	nber line? 2.4 umber line?
 3. Where would the number 1 be on this num 0 4. Where would the number 1.5 be on this num 0.5 	nber line?
 3. Where would the number 1 be on this num 0	nber line?

What is the position of the arrow?









Independent	t Tasks				
Challenge 1					
1. Where wo	ould the number	0.7 be on this numb	er line?		
0		0.5	0.7	1	
2. Where wo	uld the number	0.25 <u>be on th</u> is numb	per line?		
0	2.5	0.5		1	
3. Where wor 0 4. Where wor	uld the number (0.5 uld the number (0.5 be on this numbe	er line?	2	
0	0.6	1.5		3	
5. Where wo	uld the number	1.0 be on this numbe	er line?		
0		0.6	1.0	1.2	



			N/ 0
What is the position	of the arrow?		
	0.4		
6.			
0.4		0.6	
7.	٢		
0	1.1	1.4	
8. 0	1.0	1.8	
9. 0.5	2	.2 1.5	
		Ļ	
10. 1.2		2.4	
Challenge 2			
1. Where would the number 0	0.2 be on this number line?		
o 0.2	0.6	1.2	
2. Where would the number (7 ha an this number line?		
2. where would the number 0.7		1 9	
0	0.7	1.0	
2 Whore would the number	1 ha an this number line?		
0 0.8		2.4	
4. Where would the number	1.5 be on this number line?		
0.5	2.0	3.5	
5. Where would the number	2.2 be on this number line?		
1.8	2.1	2.4	







Lesson 4		
Learning Intention:	Key Vocabulary:	What you will need:
WALT: find decimal	Equivalent	
equivalences to fractions	Numerator	
	Denominator	A computer, tablet or phone
		for the starter
		Maths book
		Pencil and ruler
		Week $A_{\rm c}$ lesson $A_{\rm c}$
		Week 4 - 1633011 4
Starter		
Log into Times Table Rock S	tars and complete a gig if it is	available. If not, challenge
someone to a rock slam!		
Main Teaching	v to find aquivalant fractions to	decimals and the other way
around An equivalent numb	er means a number with the s	ame value
around. An equivalent numb	er means a number with the s	
There are 100 hundredths in	one whole so we can use this	100 square to represent 1
If I shade in 10 of the 100 squ	Lares I can write this as a fract	ion
10 which can be simplified to	$\frac{1}{10}$ which is written as 0.1 as a	decimai.
100	10	
Example 1		
•		
What fraction and decimal	fraction of the hundred squa	re is shaded?
30 out of 100 squares have h	een shaded	
As a fraction this is 30 and as	a decimal fraction it is 0.30	
100		
We can simplify by dividing the	ne numerator (top) and the d	enominator (bottom) by 10
to get <u>3</u>		
10		



So the shaded fraction is $\underline{3}$ and the decimal fraction is 0.3

10

0.30 is exactly the same as 0.3 because we do not need the final zero on 0.30 Example 2

What is the decimal equivalent of <u>1</u>?

If we shade in a quarter of the squares on our 100 square we will need to shade in 25 as $100 \div 4 = 25$



The fraction shaded is $\frac{25}{100}$ and the decimal fraction is 0.25 100

Example 3

What is the fraction equivalent of 0.75?

We need to shade 75 squares.

We can see that <u>3</u> of our 100 square has been shaded.

So 0.75 is equivalent to
$$\underline{75}$$
 which is the same as $\underline{3}$
100 4
We know this is correct because $\underline{1}$ is equivalent to $\underline{25}$
4 100

And 25 x 3 = 75

Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.



Challenge 1
Write the following fractions as decimals
1) <u>41</u>
100
2) <u>78</u>
100
3) $\frac{2}{100}$
$\frac{4}{100}$
100 5) 7
3) <u>1</u> 10
Write the following decimals as fractions
6) 0.26
7) 0.57
8) 0.75
9) 0.09
10) 0.4
Challenge 2
Write the following fractions as decimals
1) $\frac{37}{400}$
100
2) <u>15</u> 100
3) 3
100
4) 9
10
5) 5
<u>1</u> 0
Write the following decimals as fractions. Simplify the fractions that you can.
6) 0.89
7) 0.20
8) 0.05
9) 0.5
10) 0.2
Challenge X
Which is larger? Explain your reasoning
1 or 0.14



Independe	ent Tasks
	Challenge 1
Write the	following fractions as decimals
1) <u>41</u>	0.41
100	
2) <u>78</u>	0.78
100	
3) <u>2</u>	0.02
4) 50	0.5
100	0.0
5) 7	0.7
<u> </u>	
_	
Write the	following decimals as fractions
6) 0.26	<u>_26</u>
	100
->	
7) 0.57	<u>57</u>
	100
8) 0.75	75
0) 0.70	100
9) 0.09	<u>9</u>
	100
10) 0.4	<u>4</u>
	10
	Challanga 2
Mrito tho	Challenge 2
1) 37	0 37
100	0.07
2) 15	0.15
100	
3) <u>3</u>	0.03
100	
4) <u>9</u>	0.9
10	
5) <u>5</u>	0.5
10	



Write the foll 6) 0.89	lowing decimals as fractions <u>89</u> 100
7) 0.20	$\frac{20}{100} = \frac{1}{5}$
8) 0.05	$\frac{5}{100} = \frac{1}{20}$
9) 0.5	$\frac{5}{10} = \frac{1}{2}$
10) 0.2	$\frac{2}{10} = \frac{1}{5}$
	Challenge X
Which is larg <u>1</u> or 0.14 4	ger? Explain your reasoning 4
<u>1</u> is larger be 4	ecause <u>1</u> is equivalent to 0.25 as a decimal. 0.25 is larger than 0.14 4



Lesson 5		
Learning Intention: WALT: round decimal numbers to the nearest whole number	Key Vocabulary: Rounding Benchmark Approximate	What you will need: A computer, tablet or phone for the starter Maths book Pencil and ruler Video: Year 4 Maths – S2 Week 4 - lesson 5

Starter

Log into Times Table Rock Stars and complete a gig if it is available. If not, challenge someone to a rock slam! Complete a studio session.

Main Teaching

In this lesson, we will be looking at rounding decimal numbers to the nearest whole number. **Rounding** is used in maths to alter a number to one that is less exact. This is done to make a calculation easier and will give us an **approximate** answer but not an exact one.

When we round a number, we look for its closest benchmark. So if we are rounding to the nearest whole number our benchmarks will be 0, 1, 2, 3, 4 ... (ie. whole numbers)

We need to remember the rounding rules:

If the digit we are looking at is 0, 1, 2, 3, 4 then we round <u>down</u> to the nearest benchmark

If the digit we are looking at is 5, 6, 7, 8, 9 then we round <u>up</u> to the nearest benchmark. **Remember 5 always rounds up!**

When we are rounding a decimal number to the **nearest whole number** then we need to look at the **tenths column**

Example 1

Round 2.85 to the nearest whole number

				_	1				_	_		1					
														_	_		-

If we represent 2.85 using the 100 squares above, we can see that our bench mark choices for rounding are either down to 2 whole ones or up to 3 whole ones.

This can be shown in the following way:



2.85

We can see clearly that 2.85 is closer to 3. We would therefore round up to 3.

We know this is correct because if we look at the tenths column in 2.85, there are 8 tenths and the rounding rule says we round up for 8.

2.85 rounded to the nearest whole number is 3

Example 2

Round 11.26 to the nearest whole number.

We do not have to draw a diagram each time we solve a rounding problem as long as we remember in order to round to the nearest whole number, we must decide what our two benchmarks are and then look in the tenths column.

So, for this problem our benchmarks are 11 and 12 as these are the whole numbers either side of 11.26

tenths

Then if we look at the tenths column we can see we have 2 tenths which means we must round down to 11.

11.26 rounded to the nearest whole number is 11

Example 3

Which of the following numbers would round to 3: 3.76, 3.5 and 2.92?

3.76 has 7 tenths so this number would round up to 4.3.5 has 5 tenths so this number would round up to 4.2.92 has 9 tenths so this number would round up to 3.

Therefore 2.92 is the only number here that would round to 3.

Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

Challenge 1	
Round these numbers to the nearest whole number	
1) 1.6	
2) 1.3	
3) 1.8	



4) 5) 6) 7)	2.7 10.5 5.92 4 12							
8)	8.24							
9)	Which	numb	ers cou	ld be rou	nded to 9	?		
	9.2	9.9	9.5	9.4				
10)	Which	of thes	se num	pers coul	d be roun	ded to 6?		
	6.6	6.5	6.2	5.6	5.9			
					Challe	nae 2		
Round	d these	numbe	ers to th	e neares	st whole n	umber		
1)	3.55							
2)́	3.49							
3)	7.82							
4)	12.28							
5)	57.57							
6)	0.61							
7)	74.12							
8)	154.39	9						
9)	Which	numb	ers cou	ld be rou	nded to 9	9?		
	98.7	80	97.9	97.5	98.4			
10)	Which	of thes	se num	pers coul	d be roun	ded to 16?		
	16.6	16.5	16.2	15.6	15.9			
					Challer	nae X		
I am a	a 3-diait	numb	er.			0-		
My ter	nths dic	git is do	uble m	y hundre	dths digit.			
My hu	Indredt	ns digit	is ever).	0			
When	rounde	ed to th	e neare	est whole	number	l become 8	5.	
What	numbe	rs coul	d I be?					



Independent Tasks
Challenge 1
Round these numbers to the nearest whole number
1) 1.6 2
2) 1.3 1
3) 1.8 2
4) 2.7 3
5) 10.5 11
6) 5.92 6
7) 4.12 4
8) 8.24 8
9) Which numbers could be rounded to 9?
<mark>9.2</mark> 9.9 9.5 <mark>9.4</mark>
10) Which of these numbers could be rounded to 6?
6.6 6.5 <mark>6.2 5.6 5.9</mark>
Challenge 2
Round these numbers to the nearest whole number
1) 3.55 4
2) 3.49 3
3) 7.82 <mark>8</mark>
4) 12.28 12
5) 57.57 <mark>58</mark>
6) 0.61 1
7) 74.12 74
8) 154.39 <mark>154</mark>
9) Which numbers could be rounded to 99?
98.7 80 97.9 97.5 98.4
10) Which of these numbers could be rounded to 16?
16.6 16.5 16.2 15.6 15.9
Challenge X
I am a 3-digit number. My tenths digit is double my hundredths digit. My hundredths digit is even. When rounded to the nearest whole number I become 8. What numbers could I be?
7.84 or 8.42