Year 5 - Home Learning Project - Week 7 - 18/05/2020: Infinity and Beyond (5)

Daily activities:

English worksheet and tasks	Maths:	Reading Plus:	TTRS and Numbots	PE session	A Topic activity from the choices below.
Read 'Promise' and complete the tasks below.	Complete the White Rose Maths tasks at the end of this document - 1 per day. **Ensure you watch the video before you complete the task.**	Log into Reading Plus and complete your weekly reading comprehension tasks and vocabulary tasks. ***Site code: rpendea2***	Working on Times Table Rockstars - Can you complete all the set games and challenge somebody in our school? Are you winning in the current Battle of the Bands?	Join Joe Wickes live every morning @ 9:00am or access it any time throughout the day.	Try to complete all of the tasks and send your work to your teacher.

This week's themed learning is based around our new topic of **Space – Infinity and Beyond**

Science: The Moon

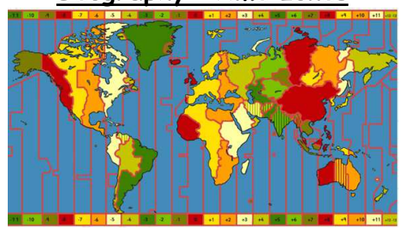
The Moon is Earth's closet satellite and has captured our interest and awe since the beginning of time.

What have scientists discovered about our nearest neighbour?

Research and collect facts about The Moon on National Geographic and Science Kids

Then complete 'The Moon' writing activity which has been set as a 2Do for you on Purple Mash.

Geography: Time zones



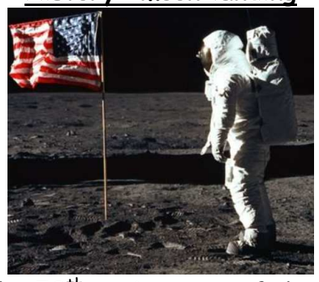
Time is different depending on where you are in the world. If it's daytime in the UK, it will be night-time in Australia. Midday (12 noon) is the time when the sun is highest in the sky.
The sun is highest in the sky at different times in different places in the world. So for every place in the world to have midday when the Sun is highest, we have to divide the world into time zones.
The Earth is a sphere divided into 360 degrees. The Earth turns 360 degrees in 24 hours. 360 divided by 24 is 15 degrees, so the Earth turns 15 degrees each hour.
The Earth has 24 different times zones- one for each hour in the day.

All time zones are measured from a starting point at England's Greenwich Observatory. This point is known as the Greenwich Meridian or the Prime Meridian. Time at the Greenwich Meridian is known as Greenwich Mean Time (GMT) or Universal Time.

Take a look at the video here and on BBC Bitesize to explain the idea more fully. When you are finished, complete the time zone activity found below.

For an extra challenge visit Time and Date World Clock and type in any location or time to see if it's day or night.

History: moon landing



Last year saw the 50th anniversary of the moon landing. On the 21st of July 1969 Neil Armstrong stepped on to the lunar surface and spoke the now famous words "That's one small step for man, one giant leap for mankind".
A camera was able to transmit the momentous occasion around the world to around 650 million people who were watching transfixed on their televisions.
BBC Newsround has fantastic information all about the preparation for the launch, what happened when they landed and the team behind it all at NASA.
You can watch the original footage here
When you have finished researching and watching the video take a moment to imagine what it would have been like to have watched this in 1969. How would you have felt as the astronauts came closer to the surface? What would you have thought when you saw the first ever human take a step on the lunar surface?
Write a diary page in role to describe the landing. Imagine that you were a child allowed to stay up late to watch it on tv with your family and don't forget to include how excited and amazed you were. You should also include some technical vocabulary from your research.

Computing: Coding with Scratch

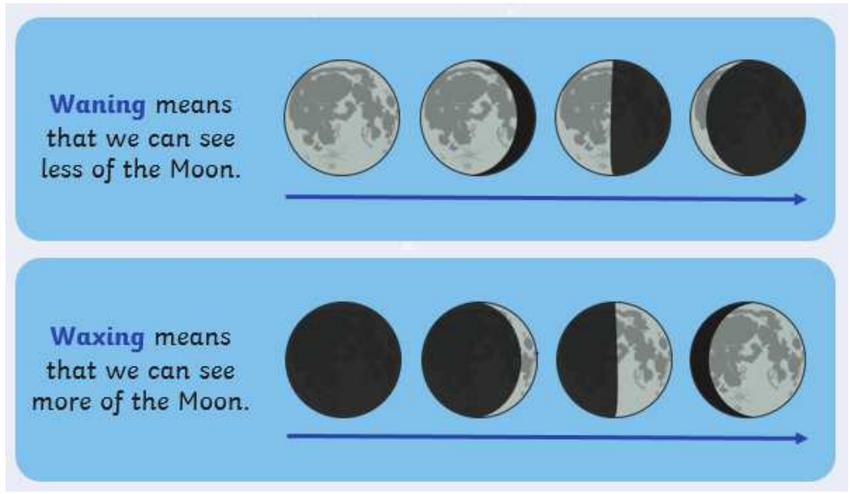
Get creative with your coding skills using Scratch and move through a series of challenges.

You have all created sprites and backdrops using Scratch when you were in year 3 and year 4. Now use these skills to complete challenge 1 and 2.

Read through the instructions carefully for each step (These are below) and **remember to save your work as there will be additional challenges next week.**

Science: movement of the moon

The Moon has fascinated humans for millennia and we are still finding out so much about it. Take a look at footage of The Moon on BBC Bitesize here
How does the moon move? Does it rotate? Why is the moon only lit from one side? Can we see The Moon during the day?
Find out more about how the moon moves around our planet and the different 'phases' here and here



When you have finished your research: 1) complete the Moon phases activity sheet underneath. 2) After this, go to Purple Mash and The movement of the moon activity has been set as a 2Do for you. Write a brief paragraph to explain the movement of The Moon in relation to The Earth.

As an extra activity - if you have Oreo biscuits at home these can make a great visual moon phases project.
(don't buy these biscuits especially you can also use paints or drawings instead)

4

Art

Abstract Space Art

Peter Thorpe completed the following pieces of abstract art based around his love for Space.

Take a look at this website to explore his ideas further and gain inspiration for your own art!
http://peterthorpe.net/rockets

Can you **sketch** a piece of space art using abstract methods using a variety of shapes, colours, forms and gestural marks.

If you have **materials**, you could also create your own interpretation of one of Peter Thorpe's pieces. Materials may include paint, newspaper, card, natural resources, chalk etc.

English: Grammar

Relative clauses.

A relative clause starts with a relative pronoun (who, that, which, whose, where, when) and is often added to a sentence to define a noun.

Watch the **BBC Bitesize** video on relative clauses and complete the activity.

https://www.bbc.co.uk/bitesize/topics/zwwp8mn

Write three sentences which include a relative clause.
E.g.
Rachel like the new chair, **which was very comfortable**.

Jamie, **who scored the winning goal**, was congratulated by this team.

Complete the relative clause grammar activity on **Purple Mash.**

Magic School

Relative clauses beginning with who, which, where, when, whose, that.

English: Writing

It's competition time!

Judged by Waterstones Children's Laureate Cressida Cowell

Closing date 22nd May 2020

Calling all story lovers everywhere!

It's Settle Stories 10th year. To celebrate we are launching the Yorkshire Festival of Story, throughout August.

The Yorkshire Festival of Story celebrates the best storytellers in Yorkshire today. Now, we want to hear from the next generation of storytellers. Can you inspire Cressida Cowell with 750 words? To enter you must be between 7-11 years old and live in the UK.
What are the prizes?

The two winners and 4 runners up will:
get a personalised response from author Cressida Cowell.
have their stories exhibited at our Yorkshire Festival of Story.
have their stories performed at our Yorkshire Festival of Story by a professional storyteller.
Alongside these prizes winners will also receive:

1st place:
A storyteller visit to their school.
Signed copies of Cressida Cowell's The Wizards of Once series and the first How to Train Your Dragon book.
A signed print from Cressida Cowell.
2nd place:
Signed copies of Cressida Cowell's The Wizards of Once series and the first How to Train Your Dragon book.
A signed print from Cressida Cowell.
Runners-up:
Signed copies of The Wizards of Once book 1.
A signed print from Cressida Cowell.

Task: Write a creative story, any genre, with 750 words. Remember to make is exciting to impress Cressida Cowell and you might be in with a chance of winning one of the prizes listed above.
Send your story to your teacher who will submit your entry for the competition. Good luck and we can't wait to read all of your amazing stories.

Big Question/Global Learning

Discuss – Could we ever live on the moon?

The longest anyone has every stayed on the Moon is 75 hours. But more than 40 years after Neil Armstrong took his first step, new research has developed.

Can one of mankind's dreams come true? Could the moon be inhabitable? What would it be like to live on the moon?

Take a look at the video and website to support your research:

https://www.youtube.com/watch?v=TNrhADcTNBk

https://www.theweek.co.uk/space/100126/can-humans-live-on-the-moon

Write a paragraph to summarise your thoughts and findings on if we could ever live on the moon.

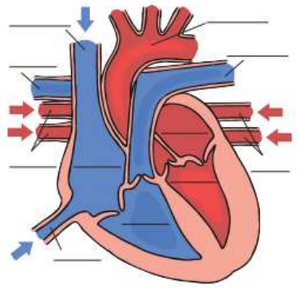
Sticky Knowledge (remembering our previous learning):

History

Think back to our 'It's all Greek to me' unit. The Battle of Marathon was a significant event in Greek history. Using the information below can you order the events from the Battle of Marathon?

You can find out information here to refresh your memory.

Science: The Human Heart



When we explored the human circulatory system in school we made salt dough models of the heart and used drama to act out how the blood flows through the different chambers.
You can recap on your learning here on this BBC teach video
After this, look at the full size diagram of the human heart (below) and label it correctly. All key vocabulary has been provided for you so please spell scientific terms accurately.

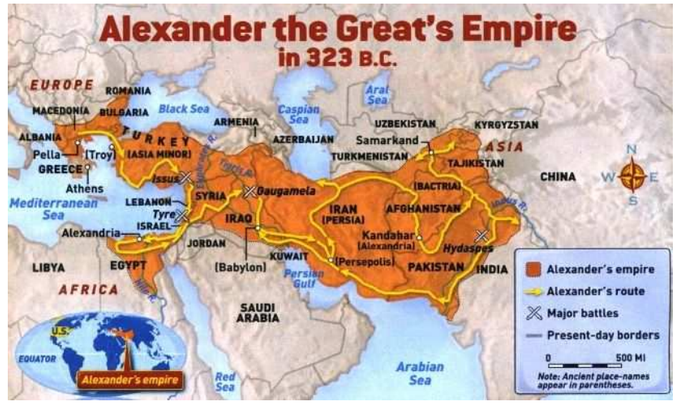
Geography/History

Where is Greece located?

Can you use google earth to locate Greece?
Can you use a world map to locate Greece?

Which countries did Alexander the Great travel through and conquer?

Can you write a list of all the countries you remember then check here to see how many you remembered?



Website links mentioned above:

https://www.natgeokids.com/uk/discover/science/space/facts-about-the-moon/ - National geographic moon facts
https://www.sciencekids.co.nz/sciencefacts/space/moon.html - Science kids moon facts
https://www.youtube.com/watch?v=-j-SWKtWEcU - video explaining time zones
https://www.bbc.co.uk/bitesize/topics/zvsfr82/articles/zjk46v4 - BBC bite size time zones
https://www.timeanddate.com/worldclock/sunearth.html - Link to time zones
https://www.bbc.co.uk/newsround/48789792 - Newsround moon landing information
https://www.sciencekids.co.nz/videos/space/moonlanding.html -Footage of moon landing
https://www.youtube.com/watch?v=t6MCtB752AE – Movement of the moon and phases
https://www.youtube.com/watch?v=B-b4XvuQo1Y – Movement of the moon and phases
https://www.bbc.co.uk/bitesize/clips/zvw8q6f - The Moon BBC Bitesize
https://www.youtube.com/watch?time_continue=139&v=pjOxpLEynIE&feature=emb_logo – Heart sticky knowledge video
https://www.youtube.com/watch?v=TNrhADcTNBk – Living on the moon video
https://www.theweek.co.uk/space/100126/can-humans-live-on-the-moon - Article for humans living on the moon
http://peterthorpe.net/rockets - Peter Thorpe art work
https://www.bbc.co.uk/bitesize/topics/zwwp8mn - Relative clauses
https://www.bbc.co.uk/bitesize/topics/z87tn39 - Battle of Marathon information
https://www.historyforkids.net/alexander.html - Alexander the Great

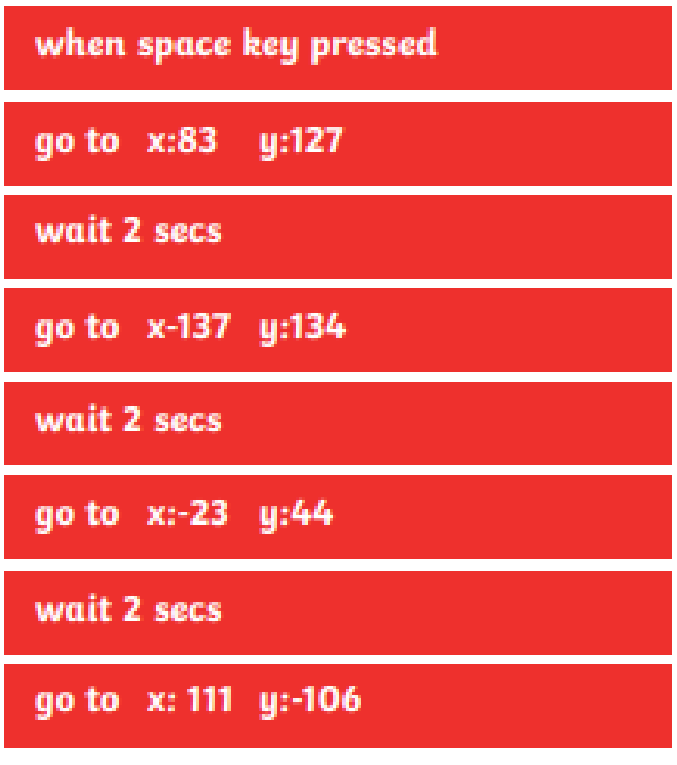
Space Journey

Getting Started
Select **Space** backdrop.
Choose **Spaceship** from the sprite library and decrease size.
Create new planet sprites and position all sprites decreasing size as required.

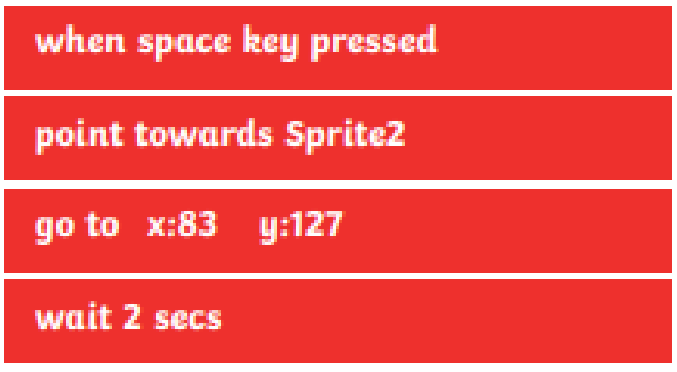
Challenge 1
Can you create new planet sprites and resize them onto the backdrop?

Challenge 2
Can you use coordinates to make the rocket travel to each planet and return to landing position?

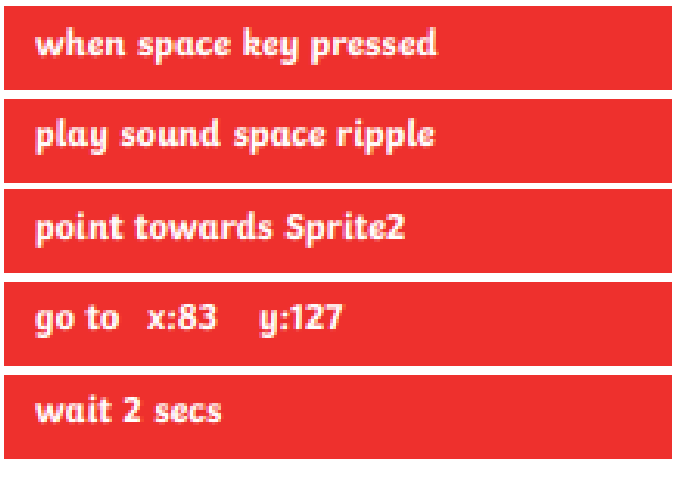
To make a sprite travel using coordinates:



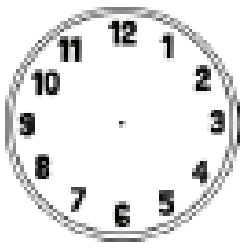
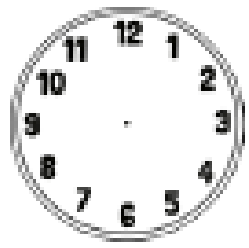
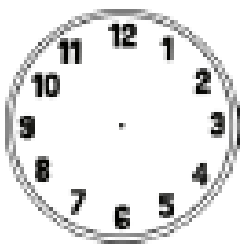
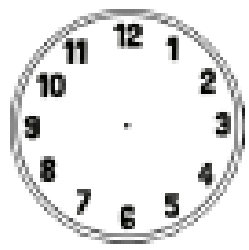
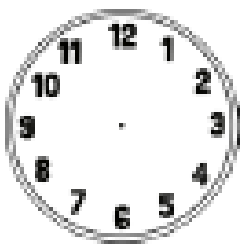
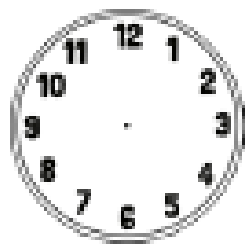
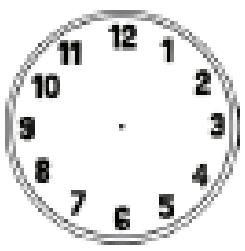
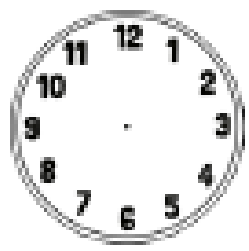
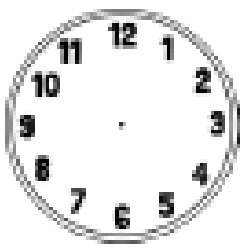
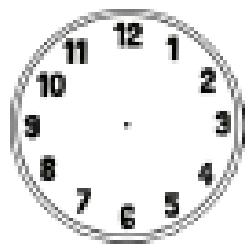
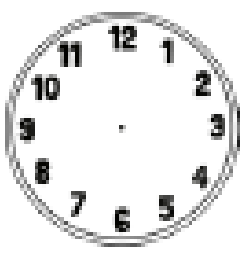
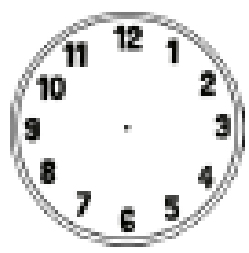
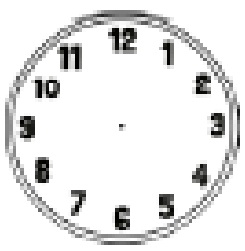
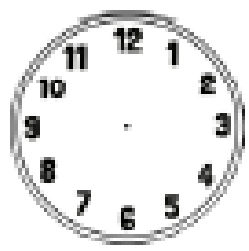
To point sprite in a particular direction:



To add a sound effect to a sprite:



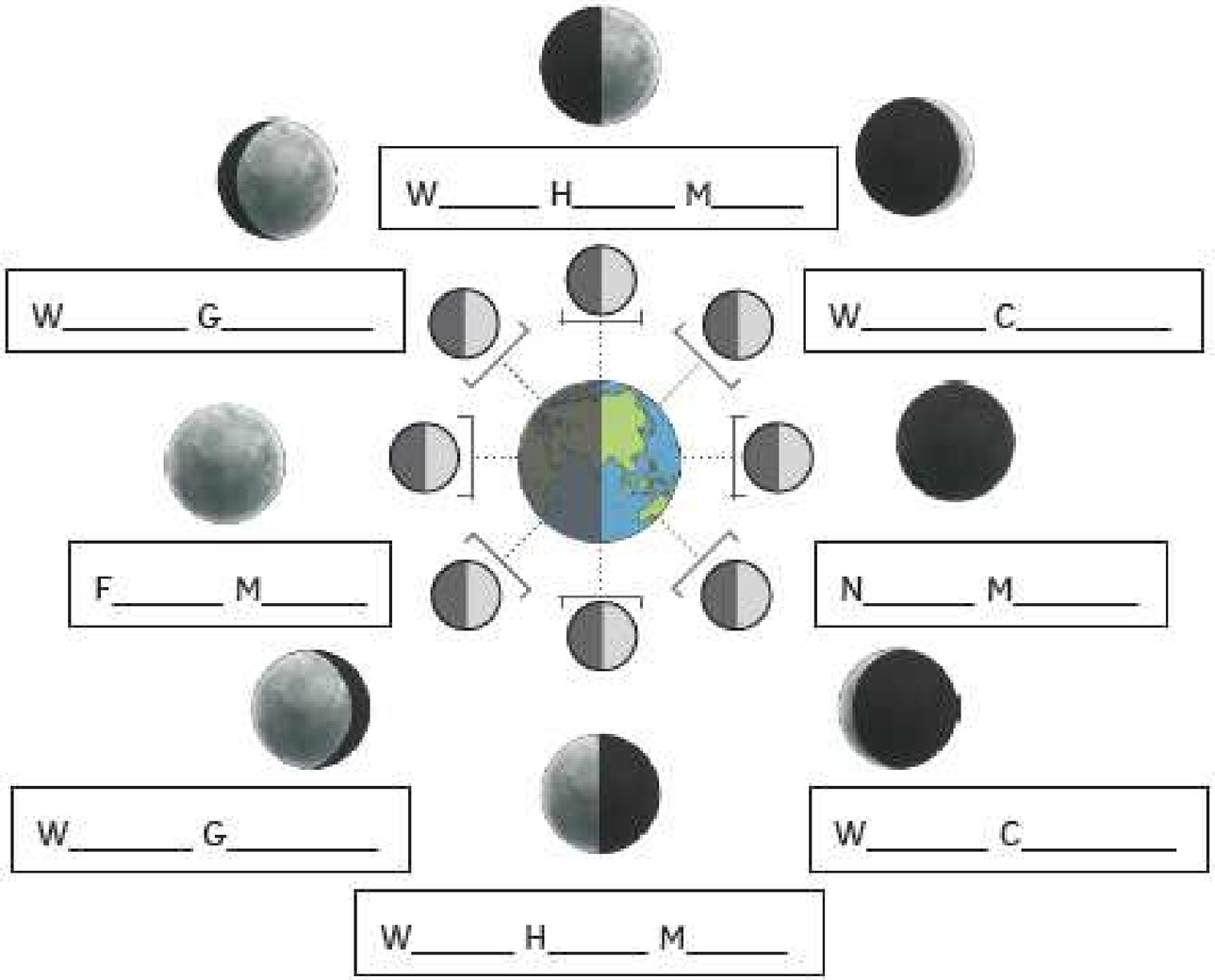
Read through the 'Time around the world' sheet and then complete this grid to show the time differences around the world

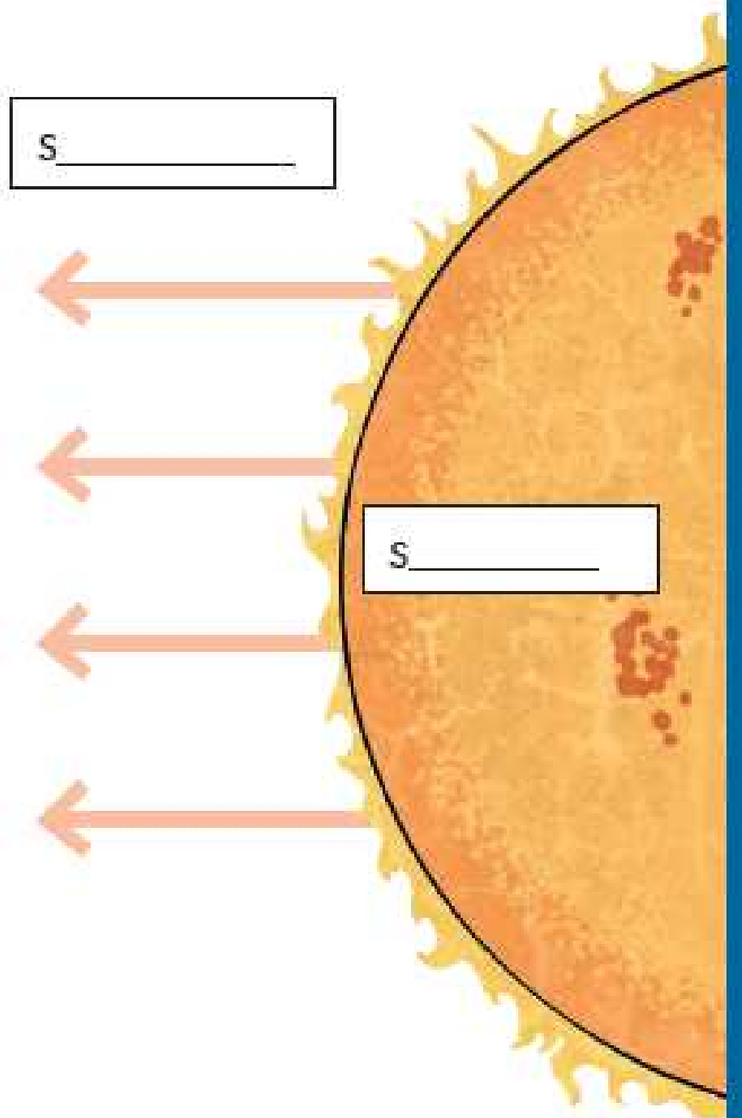
	**London** Monday 06:00	**Rio de Janeiro** _____	
	**London** Thursday 21:45	**New York** _____	
	**London** Sunday 03:50	**Washington** _____	
	**London** Tuesday 21:30	**Edinburgh** _____	
	**London** Friday 14:22	**Milan** _____	
	**London** _____	**Helsinki** Monday 01:00	
	**London** _____	**Sydney** Tuesday 05:30	

Time Around the World

City	Time	City	Time	City	Time
Amsterdam	+ 01.00	Helsinki	+ 02.00	Paris	+ 01.00
Athens	+ 02.00	Hong Kong	+ 08.00	Peking	+ 08.00
Bangkok	+ 07.00	Islamabad	+ 05.00	Rome	+ 01.00
Bonn	+ 01.00	Istanbul	+ 02.00	Rio de Janeiro	- 03.00
Buenos Aires	- 03.00	Kuwait	+ 03.00	Riyadh	+ 03.00
Beirut	+ 02.00	Los Angeles	- 08.00	Sydney	+ 10.00
Chicago	- 06.00	Lisbon	+ 01.00	Singapore	+ 08.00
Canberra	+ 10.00	Milan	+ 01.00	Seoul	+ 09.00
Cairo	+ 02.00	Montreal	- 05.00	Toronto	- 05.00
Edinburgh	GMT	Moscow	+ 03.00	Vienna	+ 01.00
Frankfurt	+ 01.00	New York	- 05.00	Washington	- 05.00
Gothenburg	+ 01.00	Oslo	+ 01.00	Wellington	+ 12.00

Phases of the Moon





Sun	Waxing Gibbous	Sunlight	Full Moon
New Moon	Waning Gibbous	Waning Half Moon	
Waning Crescent	Waxing Crescent	Waxing Half Moon	

Sticky Knowledge - History - The Battle of Marathon Events

The Athenians were worried but ran right into the Persian army lines as they were trying a new strategy.	Pheidippides then sadly died.
Pheidippides' last job was to take the victory message back to Athens. He told the city that they had won the battle.	The Athenians began to prepare after seeing King Darius' ships approaching.
The Persians knew they were losing so withdrew, but determined not to leave completely defeated, they went to Athens to attack the unprotected city. The Athenians managed to get back in time to defend their city.	Pheidippides ran to Sparta and asked for help as they often supported Athens, but Sparta said they could not help for two more days as they were celebrating a religious festival.
The Persians were not prepared for this new strategy. They nearly pushed through the Athenian lines but did not succeed. They lost many soldiers.	King Darius of Persia wanted to invade Athens to increase his empire.
6400 Persian soldiers died, but only 192 Athenians died in the famous battle.	The Persian soldiers arrived at Marathon ready to attack. The much smaller Athenian army waited anxiously for help from their allies, the Spartans. When no help arrived, they had to think of a new plan.

Look at the link for sticky knowledge on the heart and then label this diagram accurately

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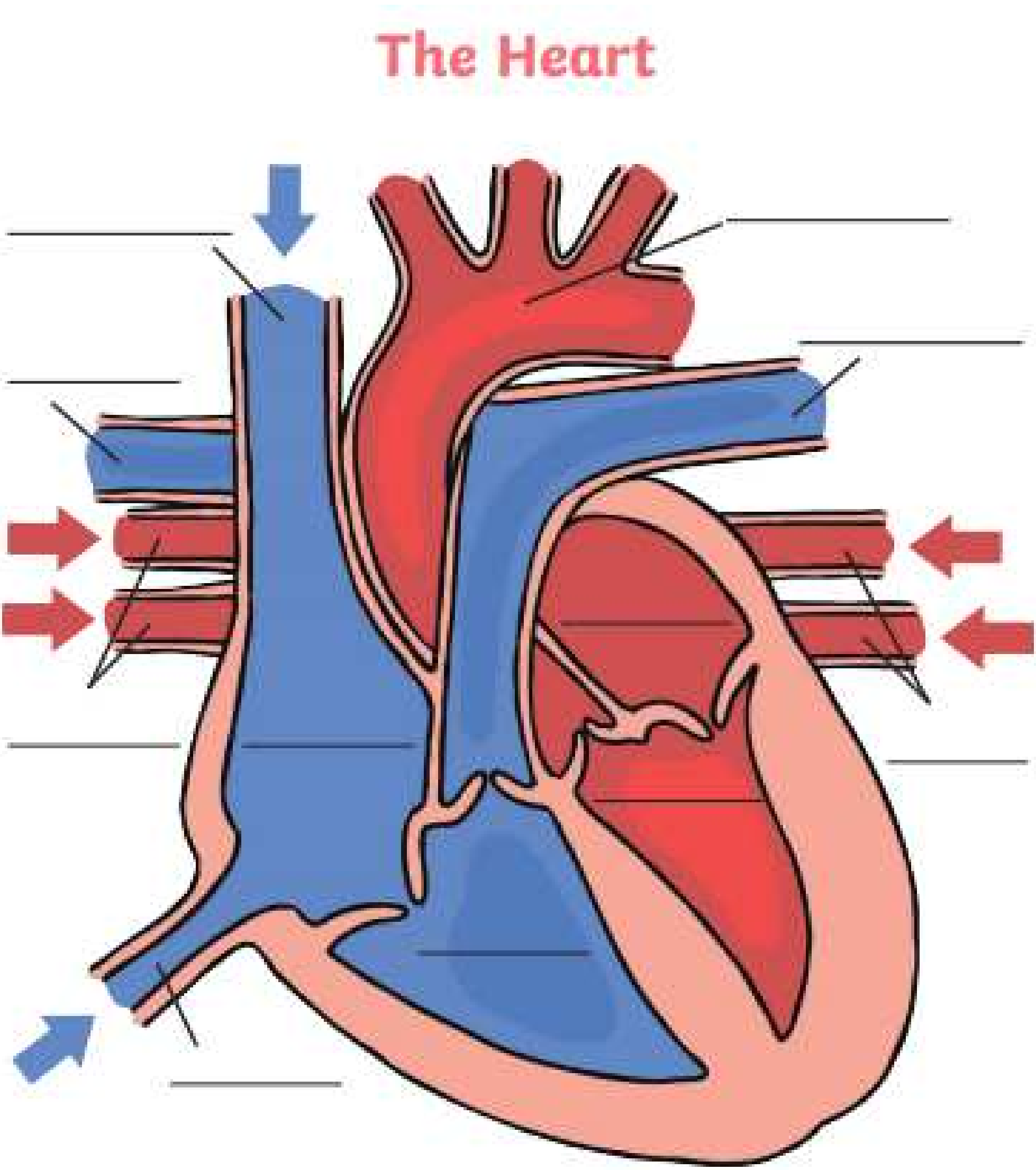


Inferior Vena Cava	Left Atrium	Left Pulmonary Veins
Superior Vena Cava	Right Atrium	Pulmonary Artery (Left)
Left Ventricle	Aorta	Pulmonary Artery (Right)
Right Ventricle	Right Pulmonary Veins	

Year 6 Home Learning - Summer Week 5 - English: Promise by Roger Stevens

Read the poem below then complete the tasks. Remember to send your work to Miss Harris on Teams so she can give you feedback.

Promise

You see them in doorways
you see them in parks
there are so many of them
that after a while
you don't even notice them
We were in Nottingham
and one of them
played a tune on a toy xylophone
and Mum put a five pound note
in his cup

Mum says
as you grow up
you'll find that life doesn't always turn out
as planned
You have to help people
if you can

Roger Stevens

Crisis, a charity for the homeless, says the latest figures showed that 4,751 people slept rough across England on any given night in 2017.

Reading

Read the Poem 'Promise'

1. Who is the poem talking about?

2. How does mum help?

3. Why do you not notice 'them'?

4. Why does mum say you should help people?

Extension: Find out about the homeless charity Crisis. What do they do and how do they help? **Create a leaflet to share what you find**.

Writing

Write your own poem about a time you have helped someone in need.

- ❑Looks and sound like the original poem
- ❑Tells a different story to the original poem
- ❑Same length as the original

Below are some suggested timings for each lesson:

Reading: 30 minutes (this includes time to re-read, look up unknown words and ask questions)

Writing - 45 minutes

Grammar - 5 minutes

Spelling - 10 minutes

How parents, carers or siblings can help:

- Read the extract aloud with you.
- Gather all the exciting and difficult words you want to find out about or use in your writing and put them on display to support your amazing writing.
- Help with ideas for planning your writing.
- Write a story at the same time as you. You could then compare your stories and give each other feedback. **(Remember: Be Kind, Be Specific, Be Helpful)**

Grammar

Circle the four prepositions in this sentence. On a mountain bike, you can cycle across rocky ground, along muddy paths and over harsh terrain.

Circle the four verbs in the passage below. There were hundreds of gulls circling in the sky. They gathered near the dock, searching for scraps.

Circle the possessive pronoun in this sentence. When Mum saw that I was wearing Oliver's gloves, she wanted to know where mine were.

Underline the subject of the sentence below. The tightrope walker carried a balancing pole.

Rewrite the two sentences as one sentence using an appropriate co-ordinating conjunction. We have time to play a game. We will have to finish it before dinner

Spelling

Practise each word. Choose two and write their definitions. Choose two to write in sentences.

foreign		harass
forty		hindrance
frequently		identity
government	guarantee	immediate(ly)

Crisis

Together we will end homelessness

Year 6 Home Learning - Maths: Multiply and divide by 10, 100 and 1000 - Monday 18th May 2020

Please watch the video first: https://whiterosemaths.com/homelearning/year-6/

Multiply by 10, 100 and 1,000

White Rose Maths

1 Complete the calculations and sentences.

Use place value counters to help you.

Th	H	T	O	Tth	Hth
			●●	●●	
				●	

a) 2.3 × 10 = ☐

When the number is multiplied by 10 the counters move ☐ place to the left.

b) 2.3 × 100 = ☐

When the number is multiplied by 100 the counters move ☐ places to the left.

c) 2.3 × 1,000 = ☐

When the number is multiplied by 1,000 the counters move ☐ places to the left.

2 Complete the diagram.

3.06 —× 10→ ☐ —× 10→ ☐

3 a) Draw counters on the place value charts to represent each calculation.

4.4 × 1

Th	H	T	O	Tth	Hth

4.4 × 10

Th	H	T	O	Tth	Hth

4.4 × 100

Th	H	T	O	Tth	Hth

4.4 × 1,000

Th	H	T	O	Tth	Hth

b) Complete the calculations.

4.4 × 1 = ☐

4.4 × 10 = ☐

4.4 × 100 = ☐

4.4 × 1,000 = ☐

What do you notice?

4 Complete the calculations.

a) 13.44 × 10 = ☐

b) 41.4 × 100 = ☐

c) 0.415 × 1,000 = ☐

d) 4.4 × ☐ = 4,400

e) ☐ = 1.03 × 100

f) 30.44 = ☐ × 10

5 Complete the diagrams.

What do you notice? Why does this happen?

6 Write >, < or = to compare the number sentences.

1.4 × 10 × 10 × 10 ◯ 1.4 × 1,000

1.4 × 10 × 100 ◯ 1.4 × 1,000

1.4 × 10 × 10 ◯ 1.4 × 1,000

1.4 × 10 × 2 ◯ 1.4 × 100

7 Kim is calculating 14.3 × 200

She writes this as her answer.

14.3 × 200 = 28,600

Explain Kim's mistake.

8 Use the cards to complete the calculation.

You can use each card more than once.

× 1	× 10	× 100	× 1,000

0.002 ☐ ☐ ☐ = 2,000

How many ways is it possible to complete this calculation?

Talk about it with a partner.

Divide by 10, 100 and 1,000

1 Complete the calculations and sentences.

Use place value counters to help you.

Th	H	T	O	Tth	Hth
	●	● ● ● ●			

a) 140 ÷ 10 = ☐

When the number is divided by 10 the counters move ☐ place to the right.

b) 140 ÷ 100 = ☐

When the number is divided by 100 the counters move ☐ places to the right.

c) 140 ÷ 1,000 = ☐

When the number is divided by 1,000 the counters move ☐ places to the right.

2 Complete the diagram.

3 a) Draw counters to represent the calculations.

123 ÷ 1

H	T	O	Tth	Hth	Thth

123 ÷ 10

H	T	O	Tth	Hth	Thth

123 ÷ 100

H	T	O	Tth	Hth	Thth

123 ÷ 1,000

H	T	O	Tth	Hth	Thth

b) Complete the calculations.

123 ÷ 1 = ☐

123 ÷ 10 = ☐

123 ÷ 100 = ☐

123 ÷ 1,000 = ☐

What do you notice?

4 Complete the calculations.

a) 16 ÷ 10 = ☐

b) 43.4 ÷ 100 = ☐

c) 614 ÷ 1,000 = ☐

d) 332 ÷ ☐ = 0.332

e) 2.4 ÷ 200 = ☐

f) 5.09 = ☐ ÷ 20

5 Complete the diagrams.

What do you notice? Why does this happen?

6 Write >, < or = to compare the number sentences.

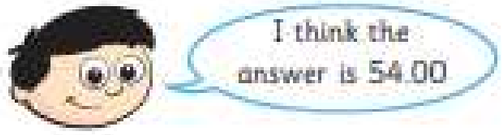
5,400 ÷ 10 ÷ 10 ÷ 10 ◯ 5,400 ÷ 1,000

60 ÷ 100 ÷ 10 ◯ 600 ÷ 100

5.7 ÷ 10 ◯ 57 ÷ 100

5,601 ÷ 1,000 ◯ 5.601 ÷ 10

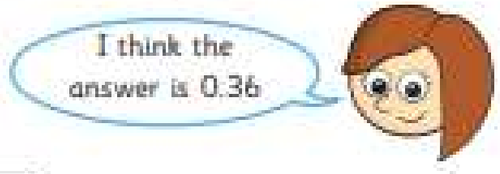
7 Dexter is solving the calculation 5,400 ÷ 100



Is Dexter correct? _____

Explain your reasoning.

8 Rosie is solving the calculation 3,600 ÷ 200



Is Rosie correct? _____

Explain your reasoning.

Year 6 Home Learning - Maths: Multiply decimals by integers - Tuesday 19th May 2020

Please watch the video first: https://whiterosemaths.com/homelearning/year-6/

Multiply decimals by integers

1 Use place value counters to solve the calculations.

a) 3.2 × 3 = ☐

Ones	Tenths
1 1 1	0.1 0.1
1 1 1	0.1 0.1
1 1 1	0.1 0.1

b) 4.6 × 2 = ☐

Ones	Tenths
1 1 1 1	0.1 0.1 0.1 0.1 0.1
1 1 1 1	0.1 0.1 0.1 0.1 0.1

2 Solve the multiplication. Draw your answer.

12.2 × 3 = ☐

Tens	Ones	Tenths

3 Nijah uses long multiplication to solve 3.72 × 3

		3	7	2	
	×			3	
		0	0	6	
		2	1	0	
		9	0	0	
	1	1	1	6	

Use long multiplication to work out the calculations.

a)

		4	8	6	
	×			4	

b)

		2	0	9	
	×			6	

4 Work out the multiplications.

a) 5.2 × 4 = ☐

b) 14.3 × 3 = ☐

c) 6 × 9.1 = ☐

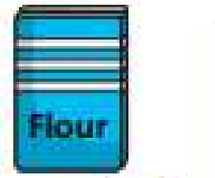
d) ☐ = 2.34 × 3

e) 11.505 × 4 = ☐

f) 9.602 × 6 = ☐

5 0.25 kg of flour is needed to make one cake.

How much flour is needed to make four cakes?



6 Work out the multiplications.

a) 7.2 × 2 = ☐

7.2 × 4 = ☐

14.4 × 4 = ☐

7.2 × 8 = ☐

b) ☐ = 3.45 × 3

☐ = 34.5 × 3

☐ = 345 × 3

7 Amir is solving 3.4 × 4

To solve this, I did 34 × 4, which was 136. Then I multiplied my answer by 10 to get an answer of 1,360

Do you agree with Amir? _____

Explain why.

8 Use the digits 1, 2, 3 and 4 once each to create a calculation.

1	2	3	4

☐ . ☐ ☐ × ☐

a) How many different products can you make?

b) What is the greatest possible product?

☐

c) What is the smallest possible product?

☐

d) What is the product closest to 12?

☐

Compare answers with a partner.

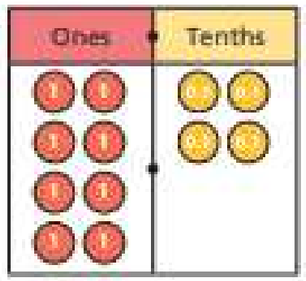
Year 6 Home Learning - Maths: Divide decimals by integers - Wednesday 20th May 2020

Please watch the video first: https://whiterosemaths.com/homelearning/year-6/

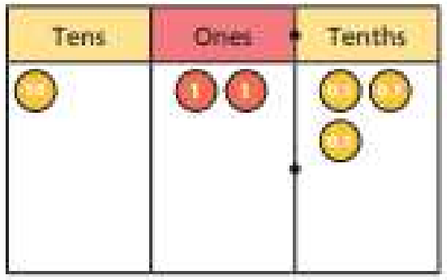
Divide decimals by integers

1 Use place value counters to work out the divisions.

a) 8.4 ÷ 4 = ☐

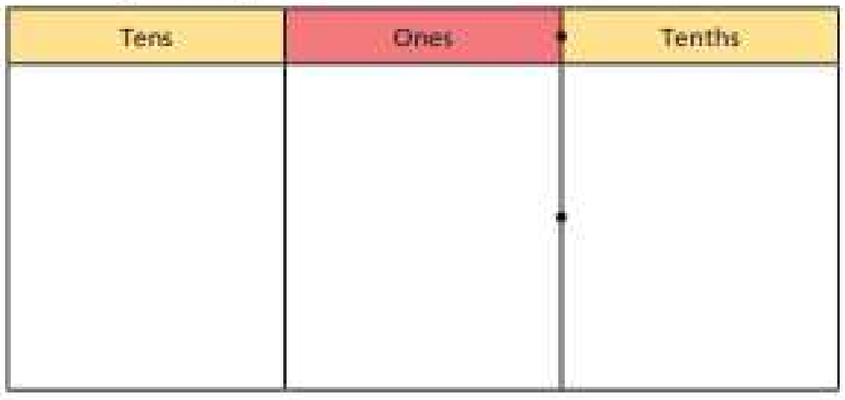


b) 12.3 ÷ 3 = ☐

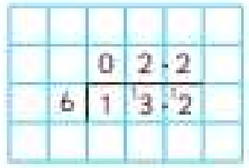


2 Work out the division. Draw your answer.

16.4 ÷ 4 = ☐

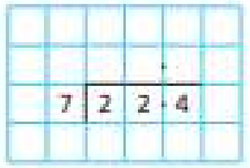


3 Brett uses short division to work out 13.2 ÷ 6

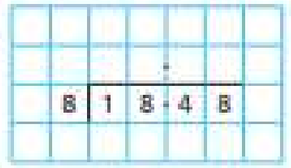


Use short division to work out the calculations.

a)



b)



4 Work out the divisions.

a) 25.6 ÷ 8 = ☐

b) 14.8 ÷ 4 = ☐

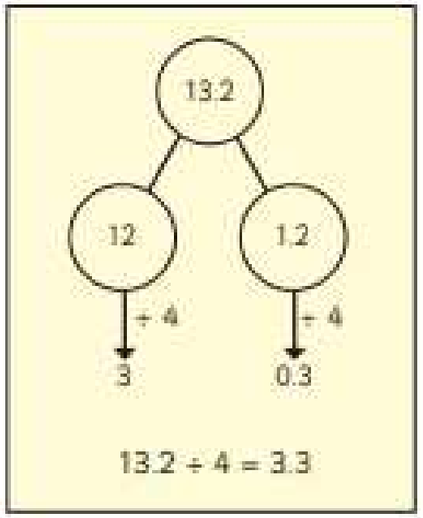
c) 18.48 ÷ 6 = ☐

d) ☐ = 19.45 ÷ 5

e) 202.35 ÷ 3 = ☐

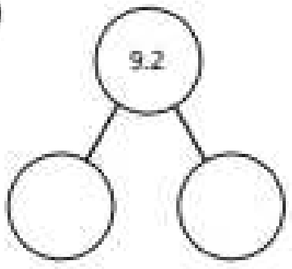
f) 105.12 ÷ 9 = ☐

5 Esther solves 13.2 ÷ 4 by partitioning 13.2 into two numbers that are easier to divide.



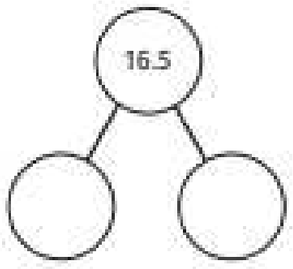
Use Esther's method to complete the part-whole model and calculation.

a)



9.2 ÷ 4 = ☐

b)



16.5 ÷ 3 = ☐

Compare answers with a partner. Did you partition your numbers in the same way?

6 Work out the divisions.

a) 9.64 ÷ 4 = ☐

96.4 ÷ 4 = ☐

0.964 ÷ 4 = ☐

9.64 ÷ 8 = ☐

b) 19.44 ÷ 9 = ☐

19.53 ÷ 9 = ☐

19.62 ÷ 9 = ☐

7 Fill in the missing numbers.

3.6 ÷ 4 = 36 ÷ ☐

3.6 ÷ 4 = ☐ ÷ 8

8 Complete the calculation.

8.4 ÷ ☐ = 4.2 ÷ ☐

How many different solutions can you find?

What patterns do you notice? Talk about it with a partner.

Year 6 Home Learning - Maths: Decimals as fractions - Thursday 21st May 2020

Please watch the video first: https://whiterosemaths.com/homelearning/year-6/

Decimals as fractions

White Rose Maths

1 Complete the sentences.

a)

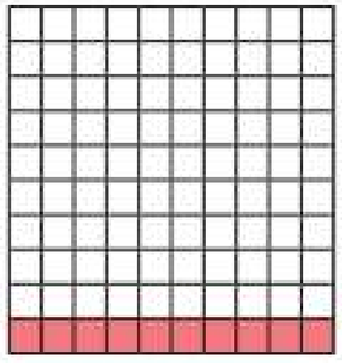
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

The whole has been divided into ☐ equal parts.

Each part is worth ☐

This is equivalent to ☐

b)



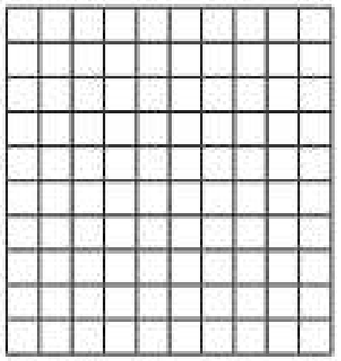
The whole has been divided into ☐ equal parts.

Each part is worth ☐

☐ parts out of ☐ are shaded.

This is equivalent to ☐

2 a) Shade 0.17 of the hundred square.



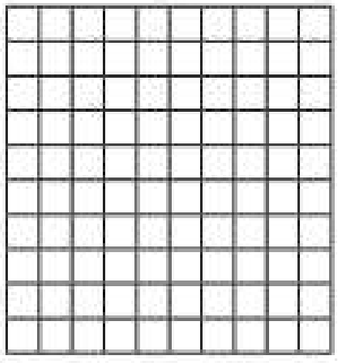
Complete the sentence.

☐ parts out of ☐ are shaded.

Write 0.17 as a fraction.

0.17 = ☐

b) Shade 0.2 of the hundred square.



Complete the sentence.

☐ parts out of ☐ are shaded.

Write 0.2 as a fraction in its simplest form.

0.2 = ☐

3

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

0.2	0.2	0.2	0.2	0.2

Use the bar models to fill in the missing numbers.

$0.2 = \frac{\square}{10} = \frac{1}{\square}$

$0.4 = \frac{\square}{10} = \frac{2}{\square}$

$\frac{\square}{\square} = \frac{\square}{10} = \frac{4}{5}$

4 Fill in the missing numbers.

a) $0.54 = \frac{\square}{100} = \frac{\square}{50}$

b) $0.6 = \frac{\square}{10} = \frac{\square}{5}$

c) $0.3 = \frac{\square}{10} = \frac{\square}{100}$

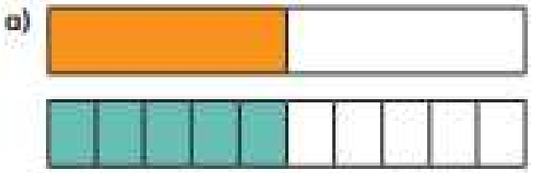
d) $\frac{\square}{\square} = \frac{9}{100}$

e) $\frac{\square}{\square} = \frac{9}{10}$

f) $\frac{21}{50} = \frac{\square}{100} = \frac{\square}{\square}$

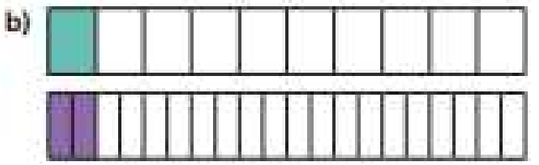
5 Use the bar models to fill in the missing numbers.

a)



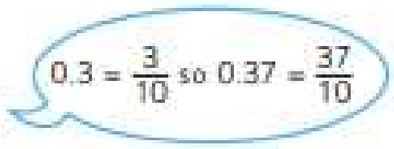
$\frac{1}{2} = \frac{\square}{10} = \frac{\square}{\square}$

b)



$\frac{\square}{\square} = \frac{\square}{10} = \frac{\square}{20}$

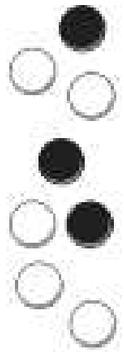
6



Draw a diagram to show that Ron is wrong.

Ratio and fractions

1 Here are some counters.



Complete the sentences to describe the counters.

a) There are ☐ counters altogether.

b) There are ☐ white counters.

c) There are ☐ black counters.

d) 3 out of the 8 counters are _____

e) ☐ out of the 8 counters are white.

2 Here are some animals.

Complete the sentences.

For every ☐ cows there are ☐ sheep.

The ratio of cows to sheep is ☐ to ☐

☐ of the animals are cows.

☐ of the animals are sheep.

3 Part of the bar has been shaded.

a) What fraction of the bar is shaded? ☐

b) What fraction of the bar is not shaded? ☐

c) Write the ratio of shaded to non-shaded parts. ☐ to ☐

d) Write the ratio of non-shaded to shaded parts. ☐ to ☐

4 Here are some shapes.

a) What fraction of the shapes are circles? ☐

b) What fraction of the shapes are stars? ☐

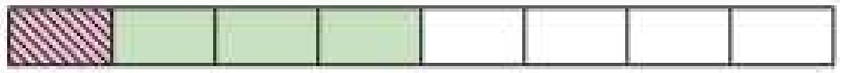
c) What is the ratio of stars to circles? ☐ to ☐

d) What is the ratio of circles to stars? ☐ to ☐

Can you find a different answer to each of these questions?

Compare with a partner.

5 The bar model shows the ratio 1 to 3 to 4



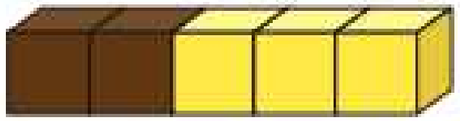
Talk to a partner about how it shows this.

a) What fraction of the bar is striped?

b) What fraction of the bar is fully shaded?

c) What fraction of the bar is blank?

6



The fraction of brown cubes is $\frac{2}{3}$ because the ratio of brown to yellow is 2 to 3

Jack

Rosie

The fraction of brown cubes is $\frac{2}{5}$

Who is correct? _____

Explain your answer.

_____

_____

7 Scott draws a bar and divides it into 8 equal parts.

He shades 25% of the bar.

What is the ratio of shaded to non-shaded parts? ☐ to ☐

8 A pencil case contains felt tips and pencils.

$\frac{3}{8}$ of the contents are pencils.

What is the ratio of felt tips to pencils? ☐ to ☐

9 Ron has some limes and strawberries.

The ratio of strawberries to limes is 5 to 1

a) How do you know he has more strawberries than limes?

_____

b) What fraction of the fruits are strawberries?

c) What fraction of the fruits are limes?