Heathfield Primary and Nursery School
Year 6
Home Learning Pack 8

English

Week 1

Monday	Tuesday	Wednesday	Thursday	Friday
Reading comprehension  Read the news report from *The Week Junior*. Write a summary of the most important information in this article. What could be the headline for this news report? Read other newspaper articles: *First News 1* and *First News 2* and answer the questions attached	**Features of a news report** Look at this video reminding us of the features of a news report https://www.bbc.co.uk/bitesize/topics/z2yycdm/articles/z2gk9qt Remember the 5ws Who? What? Where? When? Why? Look back at the reports from yesterday's lesson and write down the 5 ws from each story	**Direct and reported speech** Look at these video clips to revise how to use direct and reported speech https://www.bbc.co.uk/bitesize/articles/zmy8qnb Now turn these sentences into direct speech – remember your speech punctuation **1.** *The boy said that he had seen a young woman running away from the area.* **2.** *The police officer said that there must have been over 15 000 people at the demonstration* **3.** *A bystander said that she'd seen the boy fall over* **4.** *He said that he had been protesting peacefully* **5.** *She said that she was sorry for the trouble that she'd caused*	**Plan a news report** Watch Balraj's Story: https://www.bbc.co.uk/newsround/49613514  Plan a news report about his experience (or you can use another example that you know about of someone experiencing racism if you prefer) **Bronze:** Include all of the key information using the 5 ws **Silver:** Include the key features of a news report **Gold:** Include correctly punctuated quotes and a concluding paragraph	**Publish your news report** Plan your layout carefully Remember that newspapers write in columns which fit neatly around the headline and the picture. Use your neatest handwriting, or you could write it on a computer if you have access to one. You can use a photo or draw a picture.  **Bronze:** use your neatest handwriting **Silver:** Use an eye-catching headline and photo with caption **Gold:** Think carefully about the layout of your article using columns
Things to help you:	**Things to help you:**	**Things to help you:**	**Things to help you:**	**Things to help you:**
Use look cover write check to practise spelling any unfamiliar words Use a dictionary to check the meanings of unfamiliar words https://kids.britannica.com/kids/browse/dictionary		Try to use synonyms for 'said' e.g. *added, replied, insisted, described, reported, explained*	Remember to use the 5 ws and to include the following: Headline Byline (the writer's name) Photo with caption Factual information Quotes (with correct punctuation) A concluding paragraph	Look at the example of a template attached to help you with your layout

week 1 - Monday

News Report – The Week Junior

On 7 June, thousands of people protested in the UK calling for an end to racism. Racism is when people are treated badly or unfairly because of their race. It is when actions and words are used to discriminate against people because of the colour of their skin, their culture or their ethnic background. In Bristol, England, a statue of a 17th century slave trader was pulled down.

Why are people protesting?

On 25 May, a black man called George Floyd died shortly after he was arrested by a white police officer in Minneapolis, US. In a video of the arrest, the officer is seen putting his knee on Floyd's neck. Floyd could be heard saying he couldn't breathe. The officer has been charged with murder. Many people believe Floyd's death was racist. It is not the first time a black person has died as a result of police violence. This has led to worldwide protests.

What happened in the UK?

In the UK, around 137,000 people demonstrated in cities including Bristol, Cardiff, Glasgow and London. In Bristol, protesters pulled down a statue of Edward Colston,

week 1 - Monday

a 17th century slave trader, rolled it along the street and pushed it into the harbour.

Who was Edward Colston?

Colston was born in Bristol in 1636. In 1680, he joined a company that forcibly took people from Africa and sold them as slaves in the Caribbean and in North and South America. There, they were made to work in terrible conditions. Britain was the biggest slave-trading country from 1640 until 1807, when it became illegal.

What was the reaction?

Bristol's mayor Marvin Rees, whose father was Jamaican, said he felt no "sense of loss" at the statue's removal, but said he did not support criminal damage. UK Prime Minister Boris Johnson said it was a criminal act. In London, a statue of a slave trader, Robert Milligan, was removed by the authorities, and protests were held in Oxford, demanding that a statue of the 19th century figure Cecil Rhodes be taken down. Rhodes held racist views.

Is there racism in the UK today?

Racism still exists in the UK. Black people in England and Wales are 9.5 times more likely to be stopped and searched by police than a white person, and black people are five times more likely to have force used against them by police. Many people believe there is inequality in education, health and at work. One London protester said, "People out here showing support is a great step... but there is still so much more to be done. People still need to educate themselves."

If you're upset by this story

If you're feeling worried or scared by the events described in this report, talk to your parents or another adult you trust. For some advice on dealing with your feelings, visit theweekjunior.co.uk/TWJ-Protests

Week 1 – Monday

First news 1

US PROTESTS SPREAD WORLDWIDE

An anti-racism protest in Minneapolis, where George Floyd died

US PROTESTS SPREAD WORLDWIDE

ANTI-RACISM protests have been taking place across America and around the world following the death of George Floyd in Minneapolis, USA, after he was held down by police officers.

During his arrest on 25 May, George Floyd, who was black, died after white police officer Derek Chauvin knelt on his neck. The officer has since been charged with murder, while three other police officers involved in the arrest have lost their jobs.

Protests against police violence and racism then began in Minneapolis, before quickly spreading across the world. People took to the streets to campaign against the police using unnecessary force against black people in the US, united by the words 'Black lives matter'.

Human rights experts at the United Nations issued a statement saying, "Many in the United States and abroad are finally acknowledging that the problem is not a few bad apples, but instead the problem is the very way that economic, political and social life are structured."

There have been protests following police attacks on unarmed black people in the US before, such as those in Los Angeles after Rodney King was attacked in 1991. However, the way this current protest has spread around the world suggests that the calls for change in America may be too loud to ignore this time.

week 1 – Monday

First news 2

UK PROTESTS

TENS of thousands of people have taken part in protests across the UK to get their voices heard about racism, following George Floyd's death.

There were demonstrations big and small in towns and cities throughout the country, after a week in which people ignored calls from politicians to avoid mass protests because of coronavirus social distancing.

Demonstrators took to the streets in Edinburgh, Cardiff, Sheffield, Newcastle, Carlisle, Bristol, Dumfries, Derby, Chester, Wolverhampton, Middlesbrough, Lytham and Wrexham, among others. Most of the protests were peaceful but a small number of people became violent.

In London, crowds gathered at the US embassy to support protesters in America. It was a peaceful gathering of mainly young demonstrators from all ethnic backgrounds.

Daniel Oderinde, 23, said he had never seen protests like these in the UK before, where "white people and black come together in support of the struggles that we've been going through. If I can share that message and we can come together as one, then I can be part of something monumental."

An anti-racism protest was also held in Parliament Square in Westminster, where the statue of WW2 prime minister Winston Churchill was covered in graffiti.

Thousands on the streets of Manchester knelt in protest, and were joined by former footballer Rio Ferdinand, his wife Kate and their three children.

People gathered at Nottingham Forest's football ground, chanting: "Enough is enough."

Many more people took part in virtual protests. The #BlackLivesMatter movement said 22,000 people from across the world had joined an online protest to show their support. Apollo Sankara of BLM London said of the protests: "This isn't just a moment, this is a movement."

An image of the Peterborough artist Nathan Murdoch's work has been shared globally

week 1 – Monday

Comprehension questions

*These questions are about **First News 1***

1. Whose death sparked the protests against police brutality in America?
2. Why does the article suggest that 'calls for change in America may be too loud to ignore this time'?
3. What was the Metropolitan Police Commissioner concerned about?
4. Who did Lewis Hamilton praise?
5. What did Anthony Joshua compare racism to?

*These questions are about **First News 2***

6. Were the protests in the UK mainly peaceful or mainly violent?
7. Who did Daniel Oderinde say had come together to protest?
8. Who joined the protests in Manchester?
9. How many people joined protests online?
10. Why do you think that Nathan Murdoch's artwork has been so popular?

*This question is about **The Week Junior***

11. Why do you think the news report highlights the fact that the Bristol Mayor is of Jamaican origin, and yet, does not make any mention of the fact that Boris Johnson is white?

Week 1 – Friday

Headline

Friday 17th July, 2020

By-line

Picture

Caption

Heathfield Primary and Nursery School
Year 6
Home Learning Pack 8

English

Week 2

Monday	Tuesday	Wednesday	Thursday	Friday
Reading Read Black Lives Matter: An Introduction Write down any words you don't understand, look them up and use them in a sentence. Make a poster to summarise and show the five most important things that you have learnt from this introduction. 	**Book review** Watch the reading of the American children's book: https://www.youtube.com/watch?v=Pi7_Ps6Jf7Y  Write a review of the book – make sure you answer the following questions: What is it about? Who are the main characters? What are they like? What happens in the story? What message do you think the author is trying to give the reader? Who is this book suitable for? Did you think it was a good book? Why?	**Plan a speech** Use what you have learnt over the last two weeks to plan a speech about the importance of racial equality. Points you could consider: What is the Black Lives Matter movement? What started the protests in the US? What has been happening in the UK? What needs to be done to change? Use bullet points to list the key information you will include in each paragraph	**Write out your speech in full** Open with a introduction and finish with a conclusion. Remember to vary sentence openers and lengths of sentences. Use punctuation for effect. Use features of persuasive language mentioned below to help make your point **Bronze**: Include all the key information **Silver:** Include factual information and statistics to support your argument **Gold**: Include persuasive features e.g. rhetorical questions and emotive language	**Perform your speech** Practise reading your speech aloud until you feel confident in your delivery Read it out to your family and discuss afterwards - Do they have any comments or questions? Maybe you could video your performance to show to your teacher **Bronze:** Read aloud to an audience **Silver:** Read slowly and clearly, maintaining eye contact **Gold:** Read expressively, showing the audience that you care about your subject 
Things to help you:	Things to help you:	Things to help you:	Things to help you:	Things to help you:
Well done. Talk to a grown-up about three things that you have learnt today. https://kids.britannica.com/kids/browse/dictionary	Watch the reading of the book with an adult and discuss it afterwards Did you have any questions?	Look at this speech by a young black year 8 boy to get some ideas https://www.youtube.com/watch?v=A7EZWBIPUUQ	Include features of persuasive writing : Facts/statistics Rhetorical questions e.g. 'How can we call it a fair society when racism still exists?' 'Emotive language e.g. 'brutal murder'	**Tips for reading aloud:** Take your time and speak clearly. Try to keep your head up and make eye contact with your audience

Week 2 - Monday

Protesters hurl Edward Colston's statue into Bristol Harbour

WHO WAS EDWARD COLSTON? (1636-1721)

In Bristol, the statue of a slave trader, Edward Colston, was pulled down. His name is seen across Bristol, with streets and buildings named after the 17th-century merchant and slave trader. His statue on Colston Avenue was a protected listed structure and has stood there since 1895, but it was toppled by protesters last weekend and dumped in Bristol Harbour.

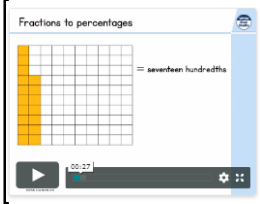
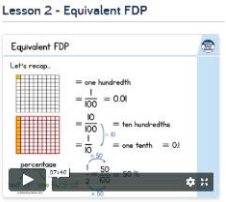
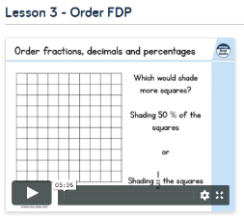
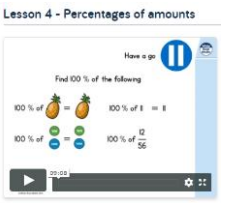
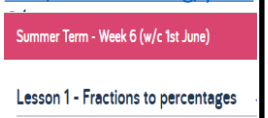
His memory has been argued about for years, with some in Bristol saying you can't change history, while others campaigned successfully for his name to be removed from streets, schools and venues. The Labour Mayor of Bristol said the Edward Colston statue was an "insult" to black people.

- Colston was born into a wealthy Bristol merchant's family and, although he lived in London for many years, he was always closely associated with the city.
- By 1672 he was running his own business in London, trading in slaves, cloth, wine and sugar.
- Colston's ships took about 80,000 men, women and children from Africa to the Americas between 1672 and 1689.
- He donated to churches and hospitals in Bristol, also founding two almshouses (houses provided by a charity) and a school.
- Colston also lent money to the Bristol corporation and was a city MP for a short time.

Heathfield Primary and Nursery School
Year 6
Home Learning Pack 8

Maths

Week 1

Monday	Tuesday	Wednesday	Thursday	Friday
Fractions and percentages Watch video (summer term wk 6, lesson 1)  **Bronze:** Convert fractions to percentages where denominator is 10 or 100. **Silver:** Convert fractions to percentages, where the denominator is a factor of 100. **Gold:** Find matching fraction and percentage combinations, where the denominator is not always a factor of 100.	**Equivalent FDP** (fractions, decimals,percentages) Watch video (summer term wk 6, lesson 2)  **Bronze:** Find equivalent fractions, decimals and percentages using hundredths, tenths, quarters and halves which may need to be simplified. **Silver:** Find equivalent fractions, decimals and percentages using fifths, eighths, tenths, hundredths, quarters and halves which may need to be simplified. **Gold:** Explain which statement is correct. Using fifths, eighths, tenths, hundredths, twentieths.	**Order FDP** Watch video (summer term wk 6, lesson 3)  **Bronze**: Order FDP using percentages and decimals that are multiples of 5, fractions that are tenths, quarters and halves and whole number percentages. **Silver:** Order FDP using any percentage and decimal number, and any proper fraction. May include the use of percentages equivalent to eighths with 1 decimal place. **Gold:** Explain a mistake using any percentage, decimal number and any proper fractions, including the use of percentages with 1 decimal place.	**Percentages of Amounts** Watch video (summer term wk 6, lesson 4)  **Bronze**: Find the percentage of an amount including multiples of 10%. No conversions. **Silver:** Find the percentage of an amount including any multiple of 5% and 10%, with some multiples of 1%. Some conversions. **Gold**: Solve problems and explain reasoning	**Friday investigation**  Look at the prison cells investigation attached. How will you tackle it? Does it help to represent it with a diagram? Can you see any patterns? Can you make any predictions? What would happen if there were 20 cells and 20 guards? Or 100?
Things to help you:	Things to help you:	Things to help you:	Things to help you:	Things to help you:
https://whiterosemaths.com/homelearning/year- 	https://whiterosemaths.com/homelearning/year-6/	https://whiterosemaths.com/homelearning/year-6/	https://whiterosemaths.com/homelearning/year-6/	

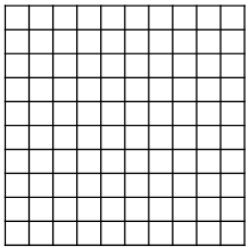
Week 1 Monday

Bronze

1a. Match equivalent fractions to the correct percentages.

$\frac{5}{10}$	$\frac{90}{100}$	50%
$\frac{9}{10}$	$\frac{30}{100}$	20%
$\frac{2}{10}$	$\frac{50}{100}$	30%
$\frac{3}{10}$	$\frac{20}{100}$	90%

2a. Shade the squares to show $\frac{4}{10}$ and write as a percentage.



3a. Competitors in a singing competition need more than 50% to get to the final. What percentage did each child score?

Emily	$\frac{7}{10}$
Charlie	$\frac{10}{100}$
Zara	$\frac{40}{100}$

Who gets to the final?

4a. True or false?

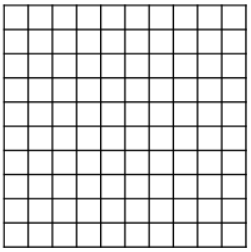
$\frac{6}{10}$ is equivalent to 50%.

Silver

5a. Match equivalent fractions to the correct percentages.

$\frac{3}{5}$	$\frac{5}{100}$	20%
$\frac{26}{50}$	$\frac{60}{100}$	52%
$\frac{1}{20}$	$\frac{20}{100}$	5%
$\frac{5}{25}$	$\frac{52}{100}$	60%

6a. Shade the squares to show $\frac{6}{20}$ and write as a percentage.



7a. Competitors in a gym competition need more than 75% to get to the final. What percentage did each child score?

Ava-Lily	$\frac{38}{50}$
Tyrese	$\frac{8}{20}$
Rochelle	$\frac{18}{25}$

Who gets to the final?

8a. True or false?

$\frac{7}{25}$ is equivalent to 28%.

Gold

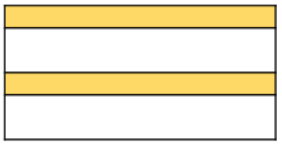
7a. Marie says,

I scored 29/40 on the first test and 19/35 on the second test. I scored 65% altogether.

Is she correct? Convince me.

8a. In this diagram, each shaded part is $\frac{3}{15}$ of the area of the rectangle.

The two white parts are equal.



What percentage is one of the white areas?

9a. Issa has converted a fraction into a percentage.
He says,

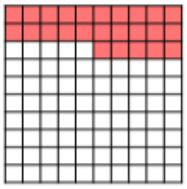
My numerator contains a 2 and my denominator contains a 3. My percentage is equal to or >60%.

What could his fraction and percentage combinations be? Find four examples each with a different denominator.

Week 1 Tuesday

Bronze

1a. Use the shaded part of the 100 square to write an equivalent fraction, decimal and percentage.



2a. Fill in the missing numbers.

$\frac{\square}{10} = \square = 90\%$

3a. Convert the following decimals to their equivalent percentages and fractions.

Display each fraction in its simplest form.

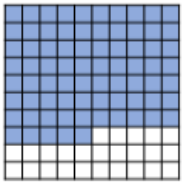
A. 0.1

B. 0.5

C. 0.25

Silver

5a. Use the shaded part of the 100 square to write an equivalent fraction, decimal and percentage.



6a. Fill in the missing numbers.

$\frac{\square}{5} = \square = 60\%$

7a. Convert the following decimals to their equivalent percentages and fractions.

Display each fraction in its simplest form.

A. 0.125

B. 0.2

C. 0.6

Gold

7a. Safeeyah says,

Six fortieths of my cake has been eaten so there is 0.85 or 85% left.

Do you agree?

Explain why.

8a. Jack scored 60% on his music exam.

Scarlett scored 26 out of 40.

Isaac expresses his result as a decimal, which is 0.65.

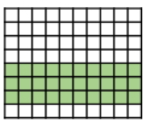
Who scored the highest?

Show your working out.

9a. James thinks that 30% of the squares are shaded.

Sam thinks that $\frac{3}{10}$ of the squares are shaded.

Adam thinks that 0.375 of the squares are shaded.



Who is correct? Explain your answer.

Week 1 Wednesday

Bronze

1a. Frankie wants to compare her spelling scores for the last 4 weeks.

Week 1	Week 2	Week 3	Week 4
75%	0.55	65%	$\frac{4}{10}$

Put her scores in ascending order.

2a. Complete the comparison statements below using the <, > or = symbol.

A. 35% ☐ $\frac{2}{4}$

B. 75% ☐ 0.6

3a. Which percentage is needed to complete the sequence below?

0.05 ? 0.45 $\frac{5}{10}$

75% 30% 100%

Silver

5a. Rita wants to compare her arithmetic scores for the last 4 weeks.

Week 1	Week 2	Week 3	Week 4
62%	0.71	0.8	$\frac{5}{8}$

Put her scores in ascending order.

6a. Complete the comparison statements below using the <, > or = symbol.

A. 0.85 ☐ $\frac{7}{8}$

B. 62.5% ☐ $\frac{5}{8}$

7a. Which percentage is needed to complete the sequence below?

0.09 ? 0.35 $\frac{8}{12}$

8% 5% 23%

Gold

7a. Hannah has put these fractions, decimals and percentages in order from largest to smallest.

0.781 $\frac{3}{8}$ [splat] 0.373

She has spilt paint on a percentage to 1 decimal place.

What could it be? Explain your answer.

8a. Complete the calculation using a decimal and a percentage.

$\frac{14}{16}$ > 82.1% < ☐ > ☐

Find 3 possibilities.

9a. Suzanne says,

If I use 30 sheets of paper in a pack of 80, and Jim uses 37.5%, Jim will use more because his percentage is greater than the number of sheets that I will use.

What mistake has been made? Explain your answer.

Week 1 Thursday

Bronze

1a. Complete the table below.

	10%	20%	30%
80			
120			
150			

VF

2a. Find 60% of the following amounts.

A. 140 B. 70 C. 60 D. 190

VF

3a. Use <, > or = to complete the comparison statement.

A. 80% of 80 ☐ 70% of 60

B. 90% of 40 ☐ 30% of 70

VF

Silver

5a. Complete the table below.

	8%	10%	16%
150			
8m			
350			

VF

6a. Find 45% of the following amounts.

A. 340 B. 6m 20cm C. 120 D. 280

VF

7a. Use <, > or = to complete the comparison statement.

A. 55% of £80 ☐ 40% of £60

B. 65% of £120 ☐ 85% of £60

VF

Gold

7a. Dylan wants to raise £485 for charity. He hopes to raise 50% of that total at an art exhibition. This is what people gave:

Person	Amount given
Ruby Dealer	25% of £335
Liv Decadent-Lee	1% of £4,540
Max Profits	10% of £1,196

How much money did he raise at the party? Did he reach 50% of £485?

PS

8a. Cal and Eva are trying to get the smallest answer. They can only change one part of the calculation below.

25% of 2.35km = 587.5m

- Cal says, "I will find 25% of 1.67km to make the smaller answer."
- Eva says, "I will find 1% of 2.35km to make the smaller answer."

Who has made the smallest answer?

PS

9a. Layla tried to calculate 50% of 9.4m in cm but she has got the answer wrong.

She says,

To find 50% of 9.4m in cm, I divided 94cm by 2 and got 47cm as an answer.

Explain Layla's mistake.

R

Week 1 - Answers

Monday

Bronze

Developing

1a. $\frac{5}{10} = \frac{50}{100} = 50\%$, $\frac{9}{10} = \frac{90}{100} = 90\%$, $\frac{2}{10} = \frac{20}{100} = 20\%$, $\frac{3}{10} = \frac{30}{100} = 30\%$

2a. 40 squares shaded = 40%

3a. Emily = 70%; Charlie = 10%; Zara = 40%; Emily reaches the final.

4a. False, $\frac{6}{10}$ is 60%.

Silver

Expected

5a. $\frac{3}{5} = \frac{60}{100} = 60\%$, $\frac{26}{50} = \frac{52}{100} = 52\%$, $\frac{1}{20} = \frac{5}{100} = 5\%$, $\frac{5}{25} = \frac{20}{100} = 20\%$

6a. 30 squares shaded = 30%

7a. Ava-Lily = 76%; Tyrese = 40%; Rochelle = 72%; Ava-Lily reaches the final.

8a. True

Gold

Greater Depth

7a. Marie is incorrect. She scored 48/75 in total which equals 64%.

8a. 30%

9a. Various answers, for example:

$\frac{21}{35}$ and 60%, $\frac{21}{30}$ and 70%,

$\frac{24}{32}$ and 75%, $\frac{27}{36}$ and 75%

Tuesday

Bronze

Developing

1a. $\frac{1}{4}$, 0.25, 25%

2a. $\frac{9}{10}$, 0.9

3a. A. $\frac{1}{10}$, 10%

B. $\frac{1}{2}$, 50%

C. $\frac{1}{4}$, 25%

Silver

Expected

5a. $\frac{3}{4}$, 0.75, 75%

6a. $\frac{3}{5}$, 0.6

7a. A. $\frac{1}{8}$, 12.5%

B. $\frac{1}{5}$, 20%

C. $\frac{3}{5}$, 60%

Gold

Greater Depth

7a. Yes, there will be $\frac{17}{20}$ left which is equivalent to 0.85 and 85%. This is because $\frac{6}{40} = \frac{3}{20}$.

8a. Jack: 60% = 0.6 and $\frac{3}{5}$. Scarlett: $\frac{26}{40} = \frac{13}{20}$, 0.65 and 65%. Isaac: 0.65 = 65% and $\frac{13}{20}$. Scarlett and Isaac both scored the highest.

9a. Adam is correct. 30 out of 80 squares are shaded, which is equivalent to 0.375, 37.5% and $\frac{3}{8}$.

Wednesday

Bronze

Developing

1a. week 4, week 2, week 3, week 1; $\frac{4}{10}$, 0.55, 65%, 75%

2a. A. <; B. >

3a. 30%

4a. 45% < 0.5 < $\frac{3}{4}$

Silver

Expected

5a. week 1, week 4, week 2, week 3; 62%, $\frac{5}{8}$, 0.71, 0.8

6a. A. <; B. =

7a. 23%

8a. 0.6 > $\frac{3}{8}$ > 20%

Gold

Greater Depth

7a. Her percentage must be 37.4% because $\frac{3}{8}$ is equal to 0.375 and 37.4% would be equal to 0.374, which is the only percentage to 1 decimal place that is still larger than 0.373.

8a. Various answers, for example:
0.9 and 75%, 0.85 and 45%, 95% and 0.7.

9a. Various answers, for example:
Both Suzanne and Jim will have used the same number of sheets because 37.5% of 80 is equal to 30 sheets of paper. This can be worked out by dividing 30 by 80. Suzanne has assumed that percentages directly relate to the number of sheets used, as if it was out of 100.

Wednesday

Bronze

Developing

1a.

	10%	20%	30%
80	8	16	24
120	12	24	36
150	15	30	45

2a. A. 84; B. 42; C. 36; D. 114

3a. A. >; B. >

4a. Highest = A; Lowest = B

Silver

Expected

5a.

	8%	10%	16%
150	12	15	24
8m	64cm	80cm	128cm
350	28	35	56

6a. A. 153; B. 2m 79cm; C. 54; D. 126

7a. A. >; B. >

8a. Highest = C; Lowest = B

Gold

Greater Depth

7a. £248.75. Yes, wanted to raise £242.50

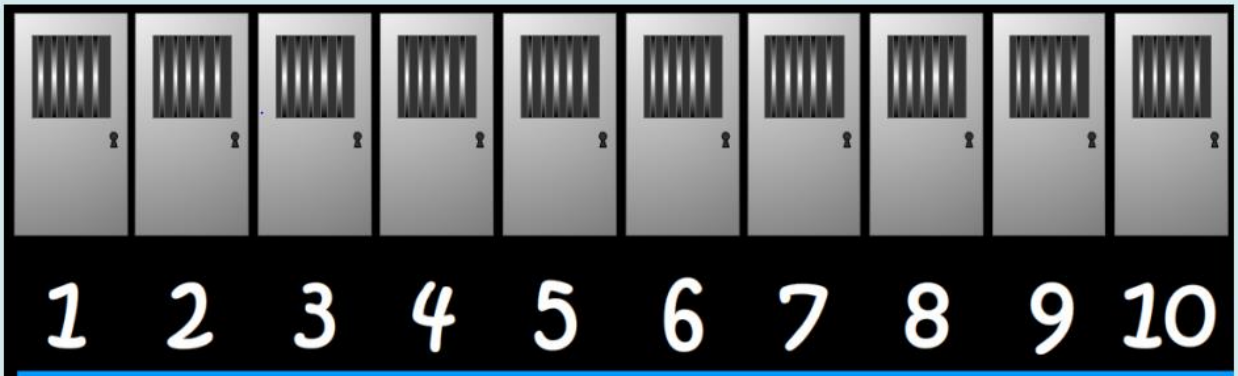
8a. Eva has made the smallest number as 1% of 2.35km = 23.5m. Cal has made 417.5m.

9a. Layla should have calculated 940cm ÷ 2 = 470cm.

Friday maths investigations

Week 1

Prison cells investigation



"There are 10 locked cells with 10 prisoners ... one in each cell. There are also 10 guards, who are due to go off duty.
As they leave, they depart in a very "strange way".
Guard number one goes to every cell (every multiple of one) and unlocks it.
Guard number two goes to every second cell (every multiple of two) and locks it.
Guard number three goes to every multiple of 3. If it is locked, he unlocks it and if it is unlocked, he locks it.
Guard number four ...etc.
After all 10 guards have left, which cells are left unlocked so that the prisoners are able to escape?"

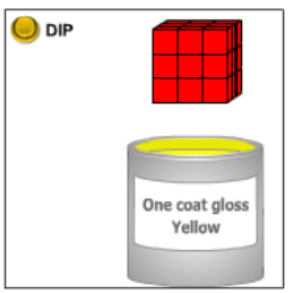
Week 2

Painted cube problem

Imagine a large cube made up from **27** small red cubes.

Imagine dipping the large cube into a pot of yellow paint so the whole outer surface is covered, and then breaking the cube up into its small cubes.

How many of the small cubes will have yellow paint on their faces?
Will they all look the same?

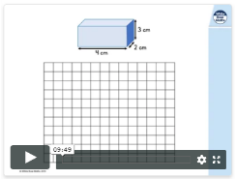
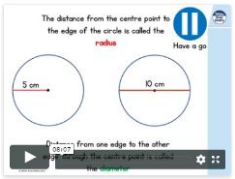
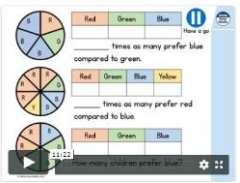
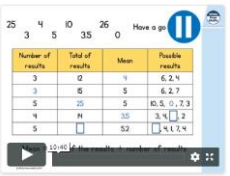
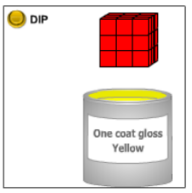


Now imagine doing the same with other cubes made up from small red cubes.
What can you say about the number of small cubes with yellow paint on?

Heathfield Primary and Nursery School
Year 6
Home Learning Pack 8

Maths

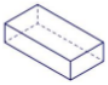
Week 2

Monday	Tuesday	Wednesday	Thursday	Friday
Draw nets of 3D shapes Watch video (summer term wk 12, lesson 1)  **Bronze:** investigate 3D shapes (simple cuboids and pyramids). **Silver:** Investigate 3D shapes (prisms, pyramids, truncated pyramids, cones and cylinders). **Gold:** Explain if a statement about a 3D shape (complex, compound shapes) is correct.	**Circles** Watch video (summer term wk 12, lesson 2)  **Bronze:** find the radius and diameter of circles, where the radius is directly divisible by 2. **Silver:** find the radius and diameter of circles, where the radius or diameter is not always a whole number. **Gold:** Solve problems and explain reasoning	**Read and interpret pie charts** Watch video (summer term wk 12, lesson 3)  **Bronze:** read and interpreting pie charts using halves and quarters, with numbers up to 12. **Silver:** read and interpreting pie charts using halves, quarters, eighths, thirds and sixths, with numbers up to 30 **Gold:** Explain reasoning	**The mean** Watch video (summer term wk 12, lesson 4)  **Bronze:** Calculate the mean of up to 5 whole numbers. **Silver :** Calculate the mean of up to 5 numbers including some decimal numbers **Gold**: Explain reasoning	**Friday investigation: The painted cube problem**  Look at the painted cube problem investigation attached. How will you tackle it? Does it help to represent it with a diagram? Can you see any patterns? Can you make any predictions about different sized cubes ?
Things to help you:	Things to help you:	Things to help you:	Things to help you:	Things to help you:
https://whiterosemaths.com/homelearning/year-6/	https://whiterosemaths.com/homelearning/year-6/	https://whiterosemaths.com/homelearning/year-6/	https://whiterosemaths.com/homelearning/year-6/	

Week 2 Monday

Bronze

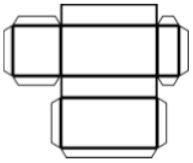
1a. Which of the 2D shapes is not a face of this cuboid?



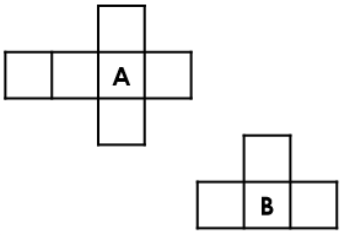
Triangle
Rectangle

2a. List which 2D shapes (and how many of each) you would need to use to make a net of this 3D shape.

3a. This net would make a cuboid; true or false?



4a. Which of these nets would make a cube? Which would not?



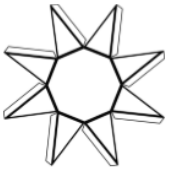
Silver

5a. Which of the 2D shapes is not a face of this truncated pyramid?

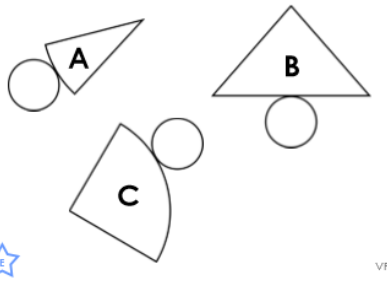
Trapezium
Square
Parallelogram

6a. List which 2D shapes (and how many of each) you would need to use to make a net of this 3D shape.

7a. This net would make an octagonal-based pyramid; true or false?

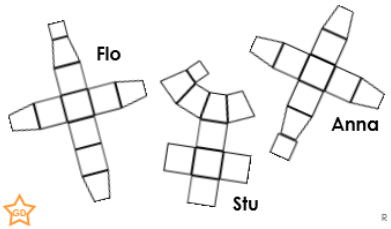


8a. Which of these nets would make a cone? Which would not?

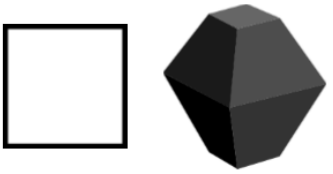


Gold

7a. Flo, Anna and Stu have made nets of a cube with a truncated square-based pyramid on top. Check which nets would work and explain any mistakes which have been made.



8a. Nicki has only drawn the base for a net of this 3D shape. Complete the net for her.



9a. Rohit is thinking about 3D shapes.

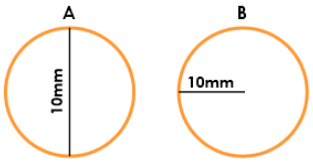
I will always need eight isosceles triangles to make an octahedron.

Is he correct? Explain your answer.

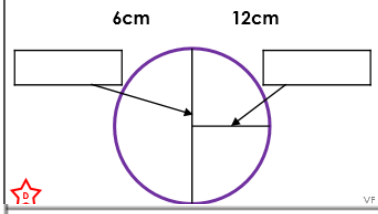
Week 2 Tuesday

Bronze

1a. Tick the circle which has a radius of 10mm.



2a. Use the measurements below to label the radius and diameter.

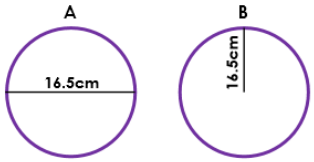


3a. Match each diameter to its radius.

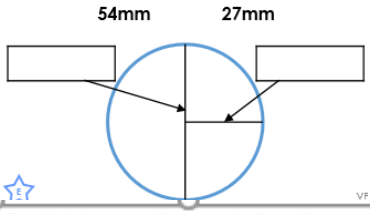
16m	4m
8m	8m
4m	7m
14m	2m

Silver

5a. Tick the circle which has a radius of 16.5cm.



6a. Use the measurements below to label the radius and diameter.



7a. Match each diameter to its radius.

91m	43.5m
87m	37.5m
63m	45.5m
75m	31.5m

Gold

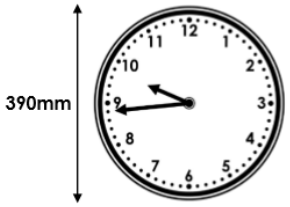
7a. Grace says,

If the radius of a circle is 795mm then the diameter must be 15.9cm.

Is she correct?

Explain your answer.

8a. Find the radius of the clock face in cm.



Explain how you know.

Diagram not to scale

9a. The diameter of each cellophane wrapper needs to be 39mm larger than the diameter of the trinket.

Trinket Radius	Cellophane Diameter	Number per metre
1.2cm		
3.6cm		
4.9cm		

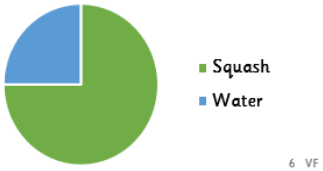
If the cellophane is 1m wide, calculate the number of trinket wrappers that can fit on one row.

Week 2 Wednesday

Bronze

1a. What sized fraction of this pie chart represents people who chose squash?

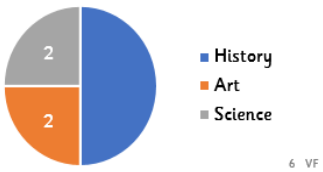
Favourite drink



6 VF

2a. This pie chart shows the votes of 8 people. Find the missing value.

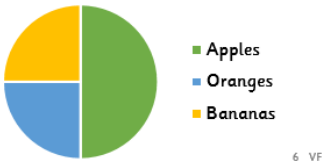
Favourite school subject



6 VF

1b. What sized fraction of this pie chart represents people who chose oranges?

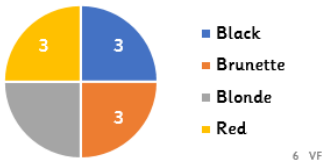
Favourite fruit



6 VF

2b. This pie chart shows the hair colour of 12 people. Find the missing value.

Hair colour

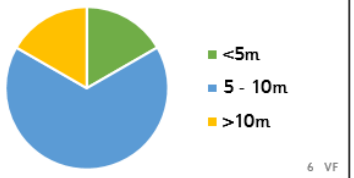


6 VF

Silver

5a. What sized fraction of this pie chart represents people who threw <5m?

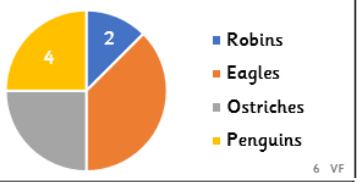
Throw distance



6 VF

6a. This pie chart shows the votes of 16 people. Find the missing values.

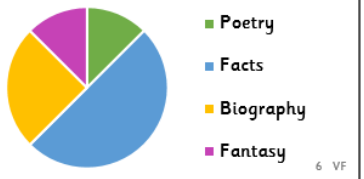
Favourite bird



6 VF

5b. What sized fraction of this pie chart represents people who chose fantasy?

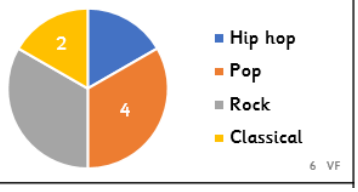
Favourite book type



6 VF

6b. This pie chart shows the votes of 12 people. Find the missing values.

Favourite music



6 VF

Gold

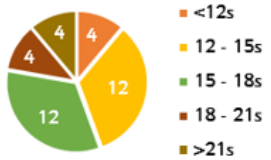
8a. Bret has forgotten what fraction of the pie chart should be given to 'Europe'. Can you work out the fraction from the information below?

Europe	?
North America	4
South America	24
Asia	16
Oceania	12
Total	96 people

6 PS

9a. Imagine a pie chart with the same proportions as the one below was drawn for a survey of 54 people. Would the '<12s' category have 6 people in it? Explain your answer.

Time taken to run 100m (36 people)



6 R

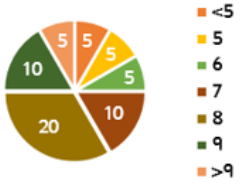
8b. Asher has forgotten what fraction of the pie chart should be given to '2000s'. Can you work out the fraction from the information below?

1970s	21
1980s	7
1990s	14
2000s	?
2010s	7
Total	63 people

6 PS

9b. Imagine a pie chart with the same proportions as the one below was drawn for a survey of 36 people. Would the '5' category have 4 people in it? Explain your answer.

Number of hours asleep (60 people)



6 R

Week 2 - Thursday

Bronze

1a. Calculate the mean of these numbers.

8 | 9 | 1 | 2 | 5

2a. Tick the correct mean of these children's test scores.

13 17 12 18

13 | 14 | 15

3a. True or false? The mean of these numbers is 8.

6 | 8 | 4 | 7 | 5

4a. Four friends want to share out their sweets equally. They have 8, 4, 7 and 9 sweets.

What is the mean amount of sweets?

Silver

5a. Calculate the mean of these numbers.

7.3 | 12 | 13.4 | 8 | 6 | 25.3

6a. Tick the correct mean of these children's test scores.

23 21 19 30 27

20 | 24 | 23

7b. True or false? The mean of these numbers is 19.

24.7 | 33 | 8.8 | 12.6 | 25 | 15.9

8b. The table below shows how much six friends spent on sweets.

Leon	£1.64
Alice	£0.65
Chloe	£2.33
Noah	£1.62
Jamie	£3.25
Samantha	£2.51

What is the mean amount they spent?

Gold

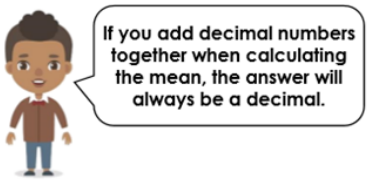
7a. Caroline knows that the mean of her cards is 109.25

She spilled paint on three of her cards. What could the missing numbers be?

8a. Five friends are trying to find their mean weight. Sam is 3.5kg heavier than Colton. Colton is 5.2kg lighter than Bryce. Bryce is 1.4kg heavier than Jovan who is 75.8kg. Lewis is 5.8kg lighter than Jovan.

What is their mean weight?

9a. Darren says,



Do you agree with Darren? Why?

Week 2 – Answers

Monday

Bronze

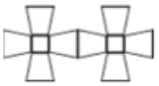
Developing
1a. Triangle
2a. 3 squares or rectangles, 2 triangles
3a. False
4a. Net A would make a cube. Net B would not make a cube.

Silver

Expected
5a. Parallelogram
6a. 1 rectangle, 2 circles
7a. True
8a. Net C would make a cone. Nets A and B would not make a cone.

Gold

Greater Depth
7a. Flo's net would not work. It has an extra square between one of the trapeziums and another square. Stu's net would work. Anna's net would not work. Her smallest square is too big. It needs to have sides equal in length to the shortest sides of the trapeziums.
8a. Various possible answers, for example:



9a. Rohit is wrong. It is also possible for equilateral triangles to be used.

Tuesday

Bronze

Developing
1a. B
2a. Diameter – 12cm, Radius – 6cm
3a. 16m and 8m, 8m and 4m, 4m and 2m, 14m and 7m

Silver

Expected
5a. B
6a. Diameter – 54mm, Radius – 27mm
7a. 91m and 45.5m, 87m and 43.5m, 63m and 31.5m, 75m and 37.5m

Gold

Greater Depth
7a. Grace is not correct because she has converted the units incorrectly. The diameter would be 159cm.
8a. The radius is 19.5cm because it is half of the diameter which is 390mm.
9a. 6.3cm, 15; 11.1cm, 9; 13.7cm, 7

Wednesday

Bronze

Developing

1a. $\frac{3}{4}$

1b. $\frac{1}{4}$

2a. 4 people.

2b. 3 people.

Silver

Expected

5a. $\frac{1}{6}$

5b. $\frac{1}{8}$

6a. Eagles: 6 people; Ostriches: 4 people.

6b. Hip hop: 2 people; Rock: 4 people.

Gold

Greater Depth

8a. 40 people = $\frac{5}{12}$

8b. 14 people = $\frac{2}{9}$

9a. Yes, it would. The '<12s' category in the chart of 36 people was selected 4 times. 4 out of 36 people is one ninth. One ninth of 54 (for the second chart) is 6 people.

9b. No, it would not. The '5' category in the chart of 60 people was selected 5 times. 5 out of 60 people is one twelfth. One twelfth of 36 (for the second chart) is 3 people, not 4.

Thursday

Bronze

Developing

1a. 5

2a. 15

3a. False (6)

4a. 7

Silver

Expected

5a. 12

6a. 24

7a. True

8a. 51kg

Gold

Greater Depth

7a. Any three numbers with a sum of 219.7

8a. 75.8kg + 77.2kg + 72kg + 75.5kg + 70kg = 370.5kg; 370.5kg ÷ 5 = 74.1kg

9a. Darren is incorrect. Decimal numbers when added together can give a whole number answer, which can then give a whole or decimal answer when divided.

Heathfield Primary and Nursery School
Year 6
Home Learning Pack 6

Topic

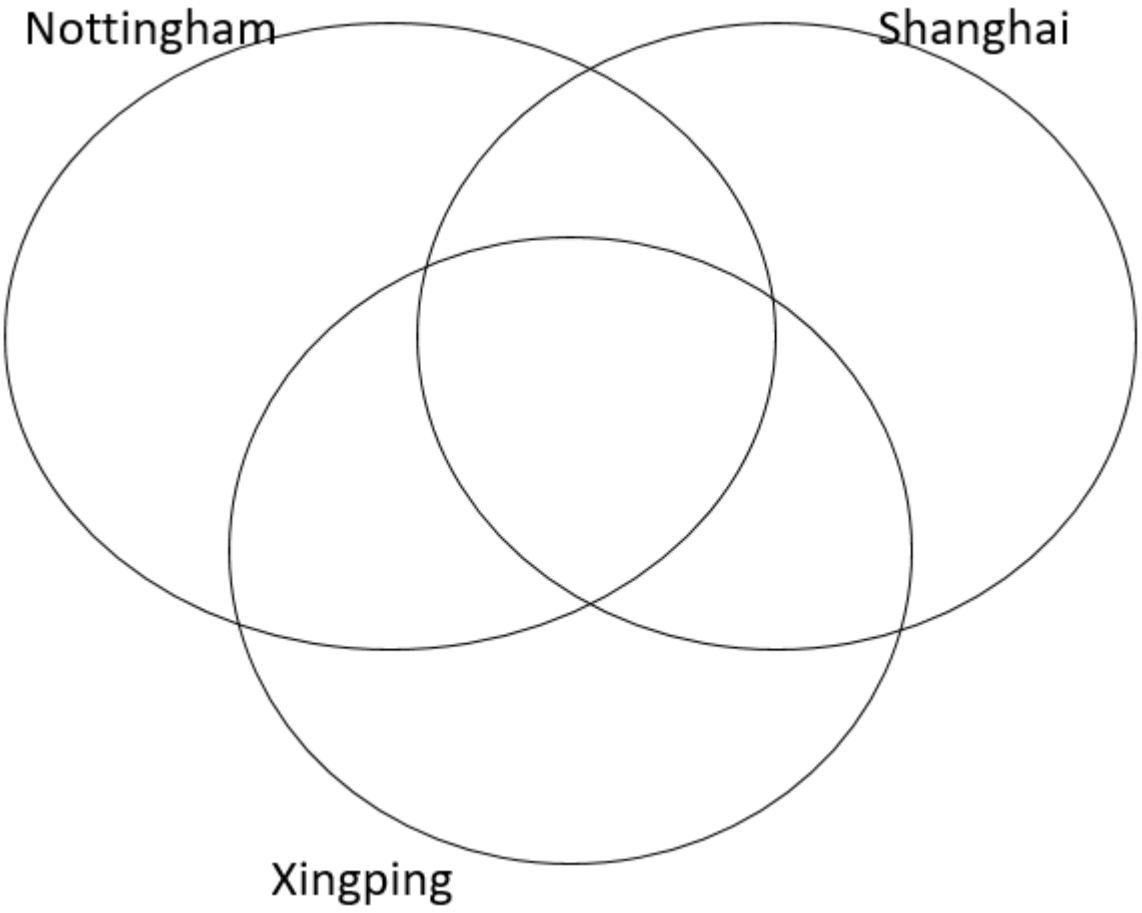
Week 1

Monday	Tuesday	Wednesday	Thursday	Friday
PSHE **Are videogames bad for you?** Have you been spending a lot more time online playing video games during lockdown? Is this bad for you? Do your parents agree?  Debate this question with someone in your household. Look at the information below first - it's always best to have all the facts before getting in to a debate! You can vote at the end. How did you vote? Did you change your vote after looking at the evidence? Did you manage to persuade someone else to change their mind?	**Geography** Watch the following videos about Juewen's life in the busy city of Shanghai –  https://www.bbc.co.uk/teach/class-clips-video/geography-a-child-led-introduction-to-the-chinese-city-of-shanghai/zdrtvk7 …and Zhao Zhenhui's life on an island near Xingping  https://www.bbc.co.uk/teach/class-clips-video/geography-a-child-led-tour-of-xingping-in-guangxi-province-of-china/zbbcd6f Make a Venn diagram like the one on the next slide to show the similarities and differences between the lives of these children, and your life in Nottingham	**Art** **Takashi Murakami** Look at this exhibition of the work of well-known Japanese pop artist Takashi Murakami *'The Octopus Eats Its Own Leg'* https://www.tes.com/lessons/PbIJsIXQOs-6Ow/artist-takashi-murakami  What does the title mean? Who are Mr Dob and Kaikai and Kiki, and what do they mean to Murakami? Are there any other motifs which we see in his work? Do you like or dislike his work? Explain why? Practise drawing a smiling daisy in Murakami's style. can you come up with characters or motifs of your own?	**Science** **Dissolving**  Try the experiment on slide 3 to investigate which substances will dissolve in water What did you find out? Use the headings below to record your findings	**Computing** **Coding** Choose one of the 'Hour of Code' activities by clicking on the link below https://code.org/hourofcode/overview 
Things to help you:	Things to help you:	Things to help you:	Things to help you:	Things to help you:
https://classroom.thenational.academy/lessons/is-gaming-good-for-you-primary/activities/1		**Motif** – an image, idea or pattern that we see over and over again in an artistic work	Aim – What do you want to find out? Equipment – what do you need? Prediction - What do you think will happen Method – What do you do? Results - What happens? Conclusion – Why did it happen?	

Week 1 Tuesday
Geography

Make a Venn diagram like this one to show the similarities and differences between Shanghai, Xingping and Nottingham.

Where the circles intersect, write the facts that apply to both places. Write any features that apply to all three places in the middle section



Week 1 – Thursday
Science

Dissolving

Which solids dissolve in water?

You Will Need

- Water (hot and cold)
- Transparent Containers
- Substances to try and dissolve; sand, sugar, salt, coffee etc

Method

1. Add a teaspoon of whichever solid you are testing to a glass of cold water and a glass of hot water, stir and observe the difference.
2. Look to see if the solid dissolves in the hot water and cold water and if one is better than the other.
3. Can you design a chart to record your observation?

The science!

Everything is made of particles which are always moving. When a soluble solid (solute) is mixed with the right liquid (solvent), it forms a solution. This process is called dissolving.

Two things that affect the speed at which the solid dissolves are temperature and the size of the grains of the solid. Caster sugar which is made of fine particles will dissolve quickly, but bigger sugar particles will take longer.

Solids dissolve faster in hot water as in hot water the water molecules are moving faster, so bump into the solid more often which increases the rate of reaction.

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Topic

Week 2				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Music **Beatboxing**! Listen to this 8 year old beatbox sensation from the Philippines https://www.youtube.com/watch?v=GOIDN2CMIWw  Now have a go at some of the sounds - all you need is your voice and… a **LOT** of practice! Don't expect to be able to do all 10 straight away – she has been doing this for years! Maybe try putting 3 or 4 sounds together to begin with and concentrate on the rhythm	**History** **Historical figures from Nottingham** Last week we looked at George Africanus – Nottingham's first black entrepreneur. Research the following people from Nottingham's history: - Ada Lovelace - Watson Fothergill - Viv Anderson - George Green - William Booth - Lord Byron Put these people in order on a timeline (also include George Africanus) showing dates pf birth and death. Write a sentence explaining why each person was important. Choose the person you find most interesting and write a short paragraph about their lives	D&T **Chinese junks** Find out a little bit about Chinese junk boats  https://www.dkfindout.com/uk/history/ancient-china/chinese-junk/ Design (and build if you have the materials) a boat made of cardboard that will float, but will also hold a 1kg weight (a bag of sugar) Can you design and make sails for your boat?	**MFL** – Revise some of your Spanish vocabulary and then Describe your town or city in Spanish https://classroom.thenational.academy/lessons/to-be-able-to-describe-what-there-is-in-your-town-or-city-in-spanish-89c42d/activities/2  Try the quiz at the end to see how well you remember what you have learned.	**Computing** **Coding** Choose one of the 'Hour of Code' activities by clicking on the link below https://code.org/hourofcode/overview 
Things to help you:	Things to help you:	Things to help you:	Things to help you:	Things to help you:
Try each sound one at a time – pause the video and practise before you move on to the next one.	http://www.bbc.co.uk/history/historic_figures/garvey_marcus.shtml	https://www.youtube.com/watch?v=H_scnWnN1Fg&feature=youtu.be Cardboard Duct tape or pva glue (or both if you have them!)	https://kids.kiddle.co/Michael_Jordan Teach someone in your household to tell the time in Spanish It's one of the best ways for you to learn it!	

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Physical & Wellbeing

Week 1 – Gymnastics

Monday	Tuesday	Wednesday	Thursday	Friday
Monday Movers **Gymnastic shapes** Learn how to perform these gymnastic shapes: Straight , Straddle, Pike, Tuck, Dish, Arch  **Well-being** Try this mindful seeing exercise to help you really take notice. https://annakaharris.com/mindful-seeing/ You'll need to find a small stone or rock to use a s a focus for this activity before you begin	**Tuesday Challenge** **One foot balances** Can you hold these balances for 5 seconds: Stork Stand, Arabesque, Y balance, T balance  **Well-being** Silent disco – put on headphones and dance to your favourite tunes! This is even more fun if you can persuade your family to join in 	**Wednesday Workout** **Jumping** Use some of the shapes you practised on Monday to try these jumps: Stretch Jump, Tuck Jump, Star Jump, Straddle Jump, Pike Jump, Half Turn Jump  **Well-being** Imagine you're an ant. Draw something in your house from that perspective	**Thursday Thinking** **Rolling** Make sure you have a safe space to try out these rolls: Rock and Roll, Teddy Bear Roll, Dish–arch roll, Forward Roll  **Well-being** Take notice of what's around you - write down: 5 things you can see 4 things you can touch 3 things you can hear 2 things you can smell 1 thing you can taste	**Friday Fun** **Routines** Create a 60 second routine that includes some of the moves that you have learned this week and perform it to someone in your family. Please only include moves to match capability. Please do NOT attempt any moves that cannot be done safely. **Well-being** Make a video of your routine and send it to someone close to you who you haven't seen for a while
Things to help you:	Things to help you:	Things to help you:	Things to help you:	Things to help you:
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Physical & Wellbeing

Week 2 - Netball

Monday	Tuesday	Wednesday	Thursday	Friday
Monday Movers **Dance Mat** How quickly can you move to touch the objects at the corners of your mat?  **Well-being** Do something nice for someone in your family when they are not expecting it – maybe give them a hug, help with the housework or give them a compliment. How does it make you feel?	**Tuesday Challenge** **Ball Challenges** How many times can you pass the ball from hand to hand or round your waist in 30 seconds?  **Well-being** Try this mindful hearing exercise when you need to relax https://annakaharris.com/mindful-hearing/	**Wednesday Workout** **Active Wordsearch** Look at the Netball word search, find the words linked to Netball and complete the exercises linked to the words. As you perform the exercise, rather than counting 1, 2, 3 etc. count each rep in multiples of 3 (3, 6, 9, 12 etc.) **Well-being** Make bubbles**!** Use washing up liquid, shower gel, washing gel or shampoo (with grown-ups permission) to make bubbles. Make your own wands using paperclips, straws, pipe cleaners, metal hangers.	**Thursday Thinking** **The court is lava.** Get from one side of the room/garden to the other. Try and not touch the lava on the floor! Think what you can use to get to other side **Well-being** Draw a zentangle hand  Just draw around your own hand and then just lose yourself in filling it in with as many different patterns as you can think of	**Friday Fun** **Move the ball** Move the ball 12 times; Around the waist and Around the legs.(Look at the video below to see how) Next, using two objects, hold one item in each hand and throw the item in your right hand in an arc (rainbow) to your left hand. When the item is at the top of the arc, throw the one in your left hand to your right hand. Repeat **Well-being** Draw the happiest time that you've had in the past year. Now draw something in the future that you're looking forward to
Things to help you:	Things to help you:	Things to help you:	Things to help you:	Things to help you:
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