

Year 6

BE AWESOME • BE BRAVE

• BE KIND • BE CREATIVE

BE YOU

BE HONEST • BE HUMBLE •

BE THANKFUL • BE FEARLESS

Dear year 6,

Hope you all are keeping busy and staying safe. Wow, we cannot believe we have 4 weeks left until the summer holidays. Your health and wellbeing are very important, if you are not doing so already, follow Joe Wick's workout routine every morning at 9am- https://www.youtube.com/results?search_query=joe+wicks. Make it a fun filled competition, get the whole family to join in.

Quite 'me time' is necessary, meditation, reading and yoga will help you strengthen your mind. Check out Mrs Khan's videos to help you. <https://www.youtube.com/watch?v=51DoLlooYVc>

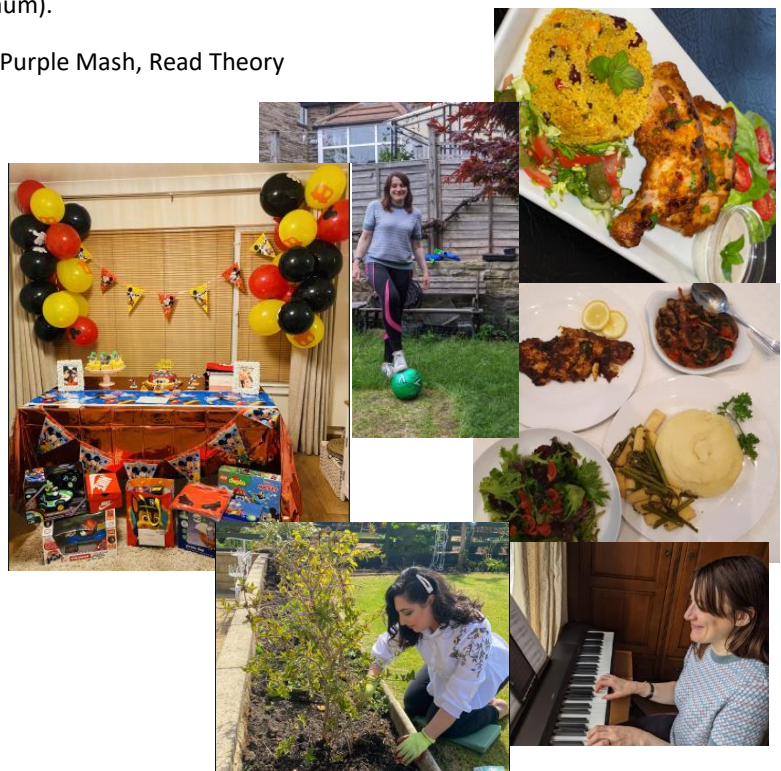
<https://www.youtube.com/watch?v=j6GliOtlwal>

You are allowed one form of exercise outside the house, so make the most of it. Ride your scooter/bike, jogging/running or take a walk. Remember if there are other people out, who do not live in your house, make sure you are at a distance from them (2 metres minimum).

Home learning: Timetables Rockstar, Khan Academy, Purple Mash, Read Theory

Whilst we have been in lockdown our year 6 teachers have been learning some new skills and polishing existing ones. We would really like to see what new skills you have been learning during your time at home, if you can send us some pictures on homelearning@greenlane.ngfl.ac.uk.

Miss Lancaster has been spending some time reading, which gives her that quite 'me time'. Miss Ajaib is completing an online course and is working very hard at home, learning lots of new things. Wow, Mrs Haworth is learning some new tunes on her piano and her son is perfecting her football skills- we can't wait to hear Mrs Haworth play! Mr Hussain has been busy in the kitchen, working on eating healthy and beautifully presenting his food. Mrs Khan has been busy practising her gardening skills and decorating the house for birthdays.



Quote of the week- Share this with your family, talk about what message does the quote give us. Draw a picture to summarise this quote.

"Happiness
is not something
ready made.
It comes from
your own
actions."

- 14th Dalai Lama

Problem of the week (answer will be in next week's learning pack).

A man lives in the penthouse of an apartment building. Every morning he takes the elevator down to the lobby and leaves the building. Upon his return, however, he can only travel halfway up in the lift and has to walk the rest of the way - unless it's raining. What is the explanation for this?

Currency

Each country has its own currency. This is the system of money it uses. The currency used in the UK is called pound sterling. Find out the currency of the following countries:

| Country | Currency |
|-----------|----------|
| France | |
| USA | |
| China | |
| Uganda | |
| Australia | |

Locate each country on a world map. Which continent is each part of? Choose another country from the map and find out its currency.



Source: Nathan Hughes Hamilton

Locate Antarctica. Why does Antarctica not have an official currency?



Money Box Design

A money box is a place where we keep our money. It stores it until we are ready to spend it or put it somewhere else, like a bank account so we can continue to save.

- Do you have a money box, or have you seen one before?

Draw a money box design. Think about:

- Will you have a coin slot?
- How will you get the money out of your money box?
- What colours, shapes, patterns will you use?



How will you make your money box?
Paint, draw, glue?

What materials will you use? E.g.
card, old containers or boxes?

Make your money box and use it to look after your money!



'Superhero' face mask covers

Marvel comics artist, Will Sliney, has created a collection of 'superhero' face mask covers for children who will fly with EasyJet. The illustrator, who has worked on Spider-Man and Star Wars comics, said "Flying with face masks is going to be a new experience for everyone, especially young children, so I hope these fun designs, inspired by comic book characters, help to encourage kids to wear their masks onboard. I have used a combination of a lion animal character and a futuristic pilot to create a set of mask covers to bring out the inner superhero in all young flyers." Everyone flying with EasyJet will need to wear a face mask when they restart flights, so EasyJet is making thousands of the items, worn over the top of the passengers' own face masks available.



Pictured: The face masks created by Irish illustrator, Will Sliney, taken from his Twitter page.

Spiny seahorse returns



Pictured: A Spiny Seahorse. Source: jidanchaomian.

The Seahorse Trust, a marine conservation charity, has discovered, during a survey dive, that the endangered spiny seahorse has recolonised its former stronghold of Studland Bay in Dorset. The Trust found the largest number of spiny seahorses that it has seen on a dive since they began to do them in 2008. The monitoring dive recorded 16 seahorses including pregnant males and a juvenile that had been born this year. No seahorses have been seen at the site for the last two years. Neil Garrick-Maidment, founder of the Seahorse Trust, believes this is due to lockdown measures reducing the amount of people, boat traffic, noise and anchors. He said, "We have seen so many seahorses because the food chain has recovered, giving seahorses plenty of food to eat and, crucially, somewhere to hide."



Incredible pool discovered

Explorers have discovered a mysterious underground pool, over 200 metres below the ground. The wondrous cave pool was found in the unexplored Lechuguilla Cave in Carlsbad Caverns National Park. The National Park in New Mexico has more than 119 known caves, all formed when sulfuric acid dissolved limestone. The geoscientists on the expedition found an isolated pool made of white frosted rock filled with a strange glowing milky-blue substance. The pool appears to be completely pristine and to have been untouched by humans for thousands of years. Max Wisshak, who led the expedition wrote: "The edges beneath this pool appear to be 'pool fingers', which could be bacterial colonies that have evolved entirely without human presence."



Pictured: The untouched pool photograph from the Carlsbad Caverns National Park Twitter page.

Your thoughts on the news...

Not all the time because some people want fame and make up interesting articles that aren't always true but is very catchy.

Autumn - Age 10



You should never believe what you hear from the news, in fact you should never believe the internet either unless you have proof of what you have heard. Never force yourself to not believe it either. Believe what you want to believe, and make sure no-one changes that.

Mohammad Anjam - Age 12

Sometimes we should because it is always true unless it is fake news.

Alex - Age 7

What was your opinion on this week's news? Visit our discussion area, found here:

www.picture-news.co.uk/discuss to share your thoughts!

Not always, as some is fake and there are ways to check if it isn't or is.

James Ashworth - Age 8

I think...



YOUR COMMENTS

Share your thoughts on our online discussion board:
www.picture-news.co.uk/discuss

Email: help@picture-news.co.uk Tweet: @HelpPicture
or post to: Unit 3, Phoenix Business Park, Ripon, North Yorks, HG4 1NS

Look at this week's picture.

I can see _____

I like _____

I don't like _____

What is happening this week? Describe it using pictures, words or sentences.

How does this week's story make you feel?

I feel _____

I feel like this because _____



- I think
- I feel
- I prefer
- I know
- I believe
- The best thing about
- The worst thing about

Where is it happening? Can you locate it on a map?

What is your opinion?

What is happening this week? Can you describe it in your own words?

Where is it happening? Can you locate it on a map?

How do you think the people involved in the story feel?

What do you think about this week's story? How does it make you feel?

Have you ever experienced anything like this or come across anything like this before? When was it? Where was it?

I think
I feel
I prefer
I know
I believe
The best thing about
The worst thing about

How does it make me feel?

| sad | angry | happy | confused | excited | worried | shocked |
|--------------|--------------|------------|---------------|--------------|--------------|--------------|
| despondent | aggrieved | beaming | addled | animated | agitated | astonished |
| disconsolate | annoyed | buoyant | baffled | elevated | anxious | astounded |
| dismal | discontented | cheery | bemused | enlivened | apprehensive | disconcerted |
| doleful | disgruntled | contented | bewildered | enthusiastic | concerned | distressed |
| downhearted | distressed | delighted | disorientated | exhilarated | disquieted | dumbfounded |
| forlorn | exasperated | enraptured | indistinct | exuberant | distraught | horrified |
| gloomy | frustrated | gleeful | muddled | thrilled | distressed | staggered |
| melancholic | indignant | glowing | mystified | | disturbed | startled |
| miserable | offended | joyful | perplexed | | fretful | stunned |
| woeful | outraged | | puzzled | | perturbed | surprised |
| wretched | resentful | | | | troubled | |
| | vexed | | | | uneasy | |



Can you describe how somebody with a different opinion to yours might feel?

What have you learned from this week's story?

Do you want to do anything about it? What could you do?
Make a plan!



Analyse the two poems below and answer the questions.

1. Can you identify a line in each poem that shows the use of the first person?
2. What have these writers chosen to personify? How do you know?
3. Which poem is your favourite? Why?
4. If you could personify the wind and the rain again, how might you change your own interpretation?

Windsong

I am the seed
that grew the tree
that gave the wood
to make the page
to fill the book
with poetry.

Judith Nicholls

I Am the Rain

I am the rain
I like to play games
like sometimes
I pretend
I'm going
to fall
Man that's the time
I don't come at all

Like sometimes
I get these laughing stitches
up my sides
rushing people in
and out
with the clothesline
I just love drip
dropping
down collars
and spines
Maybe it's a shame
but it's the only way
I get some fame

Grace Nichols

Task 5: Look at the two poems for this lesson:

'What is Green?' by Mary O'Neill and 'What is Pink?' by Christina Rossetti. What colours can you identify in the poems?

Which is your favourite piece of imagery in each poem?

Which line do you think is most effective in each poem?

Can you identify any lines that evoke objects, feelings or particular settings?

Task 6: Now it's your turn! Write a sentence that includes or evokes your chosen colour. When you're finished, read it out to the class so that we can guess which colour you have chosen and how successful your imagery is.

Extension Task: Write a whole poem of your own which evokes your chosen colour.

What is Green?

Green is the grass
And the leaves of trees
Green is the smell
Of a country breeze ...

Green is a coolness
You get in the shade
Of the tall old woods
Where the moss is made.

Green is a flutter
That comes in Spring
When frost melts out
Of everything.
Green is a grasshopper
Green is jade
Green is hiding
In the shade –
Green is an olive
And a pickle.
The sound of green
Is a water-trickle.
Green is the world
After the rain
Bathed and beautiful
Again ...

Green is the meadow,
Green is the fuzz
That covers up
Where winter was.
Green is ivy and
Honeysuckle vine.
Green is yours
Green is mine ...

Mary O'Neill

What is pink? A rose is pink
By the fountain's brink.
What is red? A poppy's red
In its barley bed.
What is blue? The sky is blue
Where the clouds float through.
What is white? A swan is white
Sailing in the light.
What is yellow? Pears are yellow,
Rich and ripe and mellow.
What is green? The grass is green,
With small flowers between.
What is violet? Clouds are violet
In the summer twilight.
What is orange? Why, an orange,
Just an orange!

Christina Rossetti

Past Perfect

We use the past perfect when we are already talking about the past and we want to talk about an earlier past.

Example:

He had finished his dinner.

Activity 1

Make sentences using the past perfect after when.

1. Jan finished her dinner. Then she sat down to watch TV.

When Jan had finished her dinner, she sat down to watch TV.

2. George ate all the chocolate biscuits. Then he started eating the lemon ones.

3. I turned off the lights. Then I went to bed.

4. Lizzie did her homework. Then she went out to play.

5. Our class got off the bus. Then we walked into the museum.

6. Tim and Tom took the dog for a walk. Then they ate lunch.

Activity 2

Fill in the missing words.

1. I couldn't get in the house because I _____ my keys.

2. The garden was wet because it _____.

3. I knew I _____ that man somewhere before.

4. The fridge was full of food because Mum _____ the shopping.

5. Tom was in prison because he _____ some money.

6. Amy didn't play netball on Monday because she _____ her arm at the weekend.

Activity 3

Create your own sentences starting with word after.

Examples:

After Ann had brushed her hair, she got dressed.

After Tom had gone running, he had a shower.

Adverbs used with a Verb

Some adverbs usually go with the verb.

How often:

always often usually sometimes ever hardly ever never

How certain:

certainly definitely probably

Other:

already also just still even only

Activity 1

Put the adverbs in the correct places.

E.g. I speak French, but people know that I'm English. (*often; always*)

I often speak French, but people always know that I'm English.

1. Jake eats fish. He eats fish for breakfast. (*always; even*)

2. Ann plays tennis, but she plays in the evenings. (*often; only*)

3. My mum is asleep. I think she is ill. (*still; probably*)

4. Ed does his homework. He forgot it today. (*usually; just*)

Activity 2

Put the adverbs in the correct places.

1. Do you play cards? (*often*)

2. Have you been to Spain? (*ever*)

3. Are you happy? (*always*)

4. Is Amy ill? (*still*)

Activity 3

Write some sentences about your hobbies, likes and dislikes using some of these adverbs.

E.g. I **usually** play football on a Thursday.

I have **never** ridden a skateboard.

Making Inferences

When things are not explained literally in a text, you can use clues to reach a logical conclusion. This is called inference.

Read the short story then answer the questions in full sentences.

The Wind in the Willows The River Bank (Adapted)

...As he sat on the grass and looked across the river, a dark hole in the bank opposite, just above the water's edge, caught his eye. Dreamily, he fell to considering what a nice snug dwelling-place it would make for an animal with few wants. He was fond of a bijou riverside residence, above flood level and remote from noise and dust. As he gazed, something bright and small seemed to twinkle down in the heart of it, vanished, then twinkled once more like a tiny star. But it could hardly be a star in such an unlikely situation; and it was too glittering and small for a glow-worm. Then, as he looked, it winked at him, and so declared itself to be an eye; a small face began gradually to grow up round it, like a frame round a picture.

A brown little face, with whiskers.

A grave, round face, with the same twinkle in its eye that had first attracted his notice.

Small, neat ears and thick, silky hair.

It was the Water Rat!

Then the two animals stood and regarded each other cautiously.

"Hullo, Mole!" said the Water Rat.

"Hullo, Rat!" said the Mole.

"Would you like to come over?" enquired the Rat presently.

"Oh, it's all very well to talk," said the Mole, rather sulkily, he being new to a river and riverside life and its ways.

The Rat said nothing, but stooped and unfastened a rope and hauled on it; then lightly stepped into a little boat which the Mole had not observed. It was painted blue outside and white within, and was just the size for two animals; and the Mole's whole heart went out to it at once, even though he did not yet fully understand its uses.

Questions

1. How do you think Mole felt as he saw something move on the opposite bank?

2. Why did the animals 'regard each other cautiously?'

3. Why did Rat wait until 'presently' to invite Mole to the other side of the bank?

4. What do you think the Mole was feeling when he saw Rat's boat? How do you know?

5. When the Mole and Rat got back to Rat's home, what do you think they might do?
Give reasons for your opinion.

I can use image prompts to write a short story.

Skills I will focus on today:

Use the picture below to write a short story using a genre of your choice:

Key Words

beautiful fantastic
lovely green leafy
noisy crowded lively
fun entertaining busy
enjoyable relaxing
wonderful pleasant



Plan:

Published piece.





Partitioning is a way of working out maths problems that involve large numbers by splitting them into smaller units so they're easier to work with. EG: Seven million, five hundred thousand and seventy-two (7, 500, 072). Sometimes, you are given the number which is partially partitioned: EG: $5178923 = 5,000,000 + \dots + 70,000 + \dots + 900 + 20 + 3$ (The digit 1 is in the hundred thousands column so this would be 100,000. The digit 8 is in the thousands column so this would be 8,000). Commas are usually used to separate larger numbers (often punctuated after every three digits).

YOUR TURN:

- | | |
|----------------------------------------------------------|---------------------------------------|
| 1) $8892 = 8,000 + \dots + 90 + \dots$ | 6) $450,245 = ?$ |
| 2) $94,634 = ?$ | 7) $342 = ?$ |
| 3) $342,789 = ?$ | 8) $311,569 = ?$ |
| 4) $1,034,237 = ?$ | 9) $76,341 = ?$ |
| 5) $40,058 = ?$ | 10) $9,994,276 = ?$ |

| | | | | | | | | |
|--------|------|-----|----|---|---|----------------|-----------------|------------------|
| 10 000 | 1000 | 100 | 10 | 1 | ● | $\frac{1}{10}$ | $\frac{1}{100}$ | $\frac{1}{1000}$ |
| | | | | | ● | | | |

Multiplying

X 10
X 100
X 1000

digits move LEFT 1 space
digits move LEFT 2 spaces
digits move LEFT 3 spaces



Dividing

÷ 10
÷ 100
÷ 1000

digits move RIGHT 1 space
digits move RIGHT 2 spaces
digits move RIGHT 3 spaces



REMEMBER! When you multiply digits in any multiple of 10 (e.g. 10, 100 or 1000) move left; when you divide, your digits move right. Multiplying makes the number larger (multiplying by 10 means it is ten times larger). Dividing makes the number smaller (dividing by 100 means it is hundred times smaller). The distance they move depends on the amount of zeros in your number. If you are multiplying by 100 they move left 2 spaces because 100 has 2 zeros. The decimal point does not move. EG: $27.9 \div 10 = 2.79$ $27.9 \div 100 = 0.279$ $27.9 \div 1000 = 0.0279$ If you are multiplying by 200 etc, then you can follow the rule by multiplying by 100 first and then multiply your answer by 2. EG: $34.5 \times 200 = 34.5 \times 100 = 345$ (then multiply your answer by 2) $345 \times 2 = 690$. This can also be achieved by multiplying by 2 first and then multiplying by 100.

YOUR TURN:

- | | |
|--------------------------------|------------------------|
| 1) $56563 + 6529 = ?$ | 6) $0.645 + 0.2 = ?$ |
| 2) $67865 + 77453 = ?$ | 7) $23 + 3.45 = ?$ |
| 3) $56344 + 12876 + 34667 = ?$ | 8) $126.9 + 4.599 = ?$ |
| 4) $99231 + 44538 + 51221 = ?$ | 9) $244.8 + 3.258 = ?$ |
| 5) $876546 + 345897 = ?$ | 10) $56.31 + 0.3 = ?$ |

YOUR TURN:

- | | |
|--------------------------|---------------------------|
| 1) $6.9 \div 10 = ?$ | 6) $0.6 \times 200 = ?$ |
| 2) $567 \times 1000 = ?$ | 7) $24 \div 200 = ?$ |
| 3) $45.9 \div 100 = ?$ | 8) $126.9 \times 300 = ?$ |
| 4) $0.9 \times 10 = ?$ | 9) $244.8 \div 300 = ?$ |
| 5) $50 \div 100 = ?$ | 10) $56 \times 500 = ?$ |

YOUR TURN:

- | | |
|--------------------------------|------------------------|
| 1) $56563 - 6529 = ?$ | 6) $0.645 - 0.2 = ?$ |
| 2) $67865 - 57453 = ?$ | 7) $23 - 3.45 = ?$ |
| 3) $56344 - 12876 - 34667 = ?$ | 8) $126.9 - 4.599 = ?$ |
| 4) $99231 - 44538 - 51221 = ?$ | 9) $244.8 - 3.258 = ?$ |
| 5) $876546 - 345897 = ?$ | 10) $56.31 - 0.3 = ?$ |

YOUR TURN:

- | | |
|---------------------------|------------------------------------|
| 1) $\dots + 422 = 730$ | 6) $409 + \dots = 56032$ |
| 2) $\dots + 1309 = 1320$ | 7) $3954 - \dots = 2000$ |
| 3) $\dots - 568 = 23401$ | 8) $1,324,455 + \dots = 2,000,000$ |
| 4) $\dots - 8032 = 54555$ | 9) $98543 - \dots = 23335$ |
| 5) $608 + \dots = 6006$ | 10) $\dots + \dots = 3450$ |

1. Use the clues to work out the mystery number.

It is greater than 10

It is NOT over 25

It is NOT an even number

It is NOT a prime number

It is a factor of 60

What is the mystery number?

2. Here is a square number.

1225

What is the difference between the next square number after this and the one before?

3. A sequence of numbers goes up in 6's.

Here is part of the sequence

..., **115, 121, 127, 133, ...**

What is the first number above 500 in this sequence?

You must explain your answer.

Microwave brownies...

- 50g butter
- 65g unsweetened cocoa powder
- 200g sugar
- 2 eggs
- 1 teaspoon vanilla extract
- 100g plain flour

Method

Prep:5min › Cook:5min › Extra time:10min cooling › Ready in:20min

1. Melt the butter in high for about 30 to 40 seconds. Add the sugar, cocoa and vanilla in that order and mix well.
2. Add the eggs, slightly whipping after each one. Add the flour and mix well.
3. Grease a microwave safe dish and spoon in the brownie mixture. Cook on high for 4 to 5 minutes (the more powerful your microwave the less time it takes). Let rest for 10 minutes before cutting.

Tip

When you take the brownies from the oven the centre will look undone, but it keeps cooking when resting. And if you leave them overnight in the fridge, the next day they will be even more consistent.

Substitution

This recipe also works well with 3 eggs, 100g butter, 65g to 125g of flour, 45g to 65g cocoa. So, don't worry if you don't have enough of any of the ingredients, but make sure not to change more than one amount at a time!



Don't forget to share pictures of you baking! Send them to:

homelearning@greenlane.ngfl.ac.uk

Word of the Day:**kip**Word Class
(noun / verb)

Pronunciation / Syllables

*(kip)***Definition:**

Kip is sleep.

Julia needed a quick kip after her lunch.

Phrases:*a short kip**was kipping**kipped on the***Challenge:**

Write a compound sentence using 'and'.

Morphology**Synonym :**sleep
snooze**Antonym :****Prefix :****Suffix :**-ing
-ed**Word of the Day:****lurgy**Word Class
(noun)

Pronunciation / Syllables

*(lur-gy)***Definition:** Informal or slang word for germs or unknown illness.

Paul was off school today because he had the lurgy.

Phrases:*caught the lurgy from**has the lurgy**errrr...the lurgy***Challenge:**

Write a compound sentence using 'and'.

Morphology**Synonym :**bug
illness**Antonym :****Prefix :****Suffix :****Word of the Day:****nitwit**Word Class
(noun)

Pronunciation / Syllables

*(nit-wit)***Definition:** If you refer to someone as a nitwit, you think they are stupid or silly.

Nelson felt like a nitwit after spilling milk on his lunch.

Phrases:*you nitwit**always a nitwit**a complete nitwit***Challenge:**

Write a compound sentence using 'and'.

Morphology**Synonym :**

fool

Antonym :**Prefix :****Suffix :**

Word of the Day:**strop**Word Class
(noun / verb)

Pronunciation / Syllables

(strop)

Definition:

Someone having a strop is misbehaving, sulking or losing their temper. Usually if they have not got their own way.

Ruma **stropped** into the classroom.

Phrases:

had a strop because was stropping around the a meltdown and strop

Challenge:

Write a compound sentence using 'and'.

Morphology**Synonym :****Antonym :****Prefix :****Suffix :**

-ing
-ed

Word of the Day:**hankering**Word Class
(noun / verb)

Pronunciation / Syllables (han-ker-ing)

Definition: A hankering for something is a desire or longing for it, often tasty food and drink.

Tilly had a **hankering** for cake and custard.

Phrases:

was hankering for hankered for a hankers for a

Challenge:

Write a compound sentence.

Morphology**Synonym :****Antonym :****Prefix :****Suffix :**

crave
long for

Word of the Day:**fluke**Word Class
(noun)

Pronunciation / Syllables

(fluke)

Definition:

If you say that something good is a fluke, you mean that it happened accidentally rather than by being planned or arranged.

John's goal was a total **fluke**, everyone knew he was **flukey**.

Phrases:

a total fluke you're so flukey

Challenge:

Write a compound sentence.

Morphology**Synonym :****Antonym :****Prefix :****Suffix :**

chance

intentional

-y

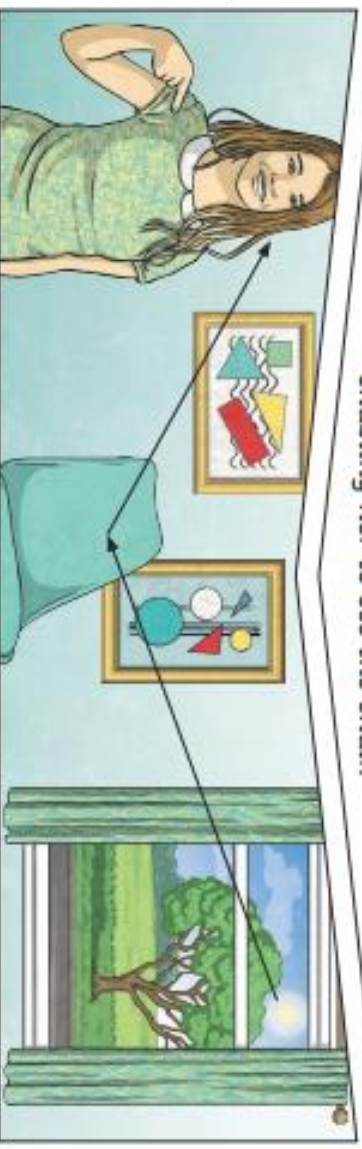
Key Vocabulary

| | |
|------------------------------|-----------------------------------------------------------------------------------------------------------------|
| light | A form of energy that travels in a wave from a source. |
| light source | An object that makes its own light . |
| reflection | Reflection is when light bounces off a surface, changing the direction of a ray of light . |
| incident ray | A ray of light that hits a surface. |
| reflected ray | A ray of light that has bounced back after hitting a surface. |
| the law of reflection | The law states that the angle of the incident ray is equal to the angle of the reflected ray . |

Key Knowledge

We need **light** to be able to see things. **Light** waves travel out from sources of **light** in straight lines. These lines are often called rays or beams of **light**.

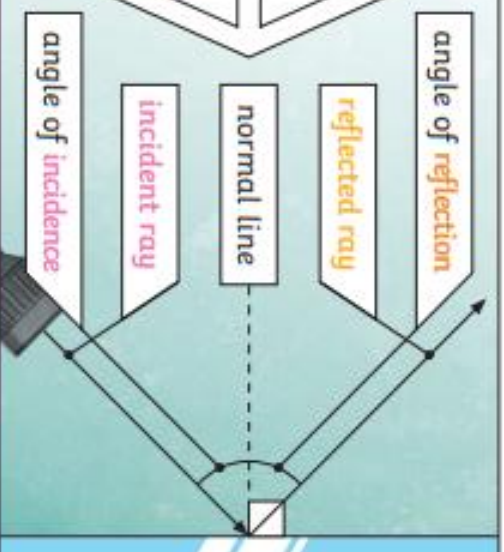
Light from the sun travels in a straight line and hits the chair. The **light** ray is then **reflected** off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.



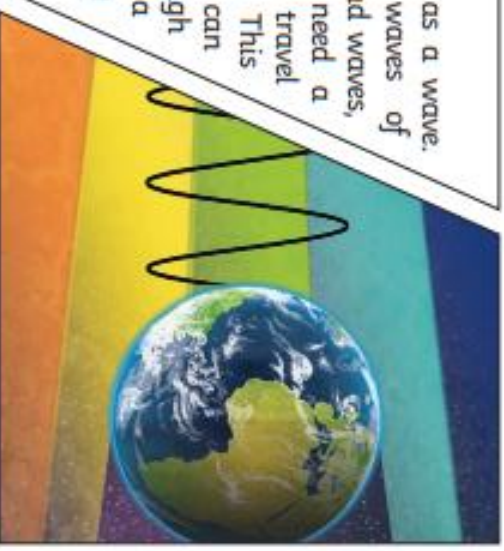
The law of reflection states that the angle of incidence is equal to the angle of reflection. Whenever **light** is reflected from a surface, it obeys this law.

The angle of reflection is the angle between the normal line and the **reflected ray** of **light**.

The angle of incidence is the angle between the normal line and the **incident ray** of **light**.



Light travels as a wave. But unlike waves of water or sound waves, it does not need a medium to travel through. This means **light** can travel through a vacuum - a completely airless space.



Key Vocabulary

| | |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| refraction | This is when light bends as it passes from one medium to another. E.g. Light bends when it moves from air into water. |
| visible spectrum | Light that is visible to the human eye. It is made up of a colour spectrum. |
| prism | A prism is a solid 3D shape with flat sides. The two ends are an equal shape and size. A transparent prism separates out visible light into all the colours of the spectrum. |
| shadow | An area of darkness where light has been blocked. |
| transparent | Describes objects that let light travel through them easily, meaning you can see through the object. |
| translucent | Describes objects that things let some light through, but scatters the light so we can't see through them properly. |
| opaque | Describes objects that do not let any light pass through them. |

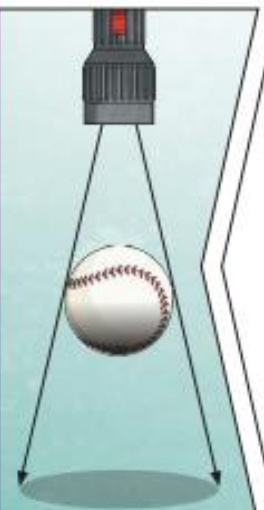
To look at all the planning resources linked to the Light unit, [click here](#).

Key Knowledge

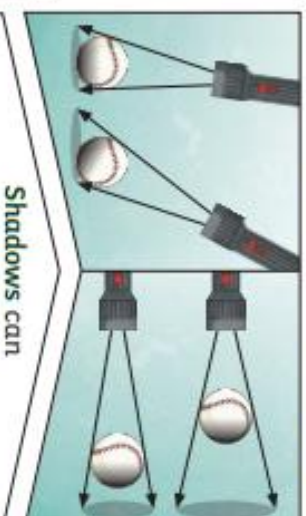


The spoon in this water looks as if it is bent. This is because **light** bends when it moves from air to water. When **light** bends in this way, it is called **refraction**.

A shadow is always the same shape as the object that casts it. This is because when an **opaque** object is in the path of **light** travelling from a **light source**, it will block the **light** rays that hit it, while the rest of the **light** can continue travelling.



Isaac Newton shone a **light** through a transparent **prism**, separating out **light** into the colours of the rainbow (red, orange, yellow, green, blue, indigo and violet) - the colours of the spectrum. All the colours together merge and make visible **light**.



Shadows can also be elongated or shortened depending on the angle of the **light source**. A **shadow** is also larger when the object is closer to the **light source**. This is because it blocks more of the **light**.

Using the knowledge organiser above, create a mind map about what you have learnt about Light.

What I know
about light.

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 Bit

Things like salt, sugar and coffee dissolve in water. They are soluble. They usually dissolve faster and better in hot water. Pepper and sand are insoluble, they will not dissolve even in hot water.

For Older Children

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.

Science Investigation Plan

| | | |
|---------------|-------------------|-------------------|
| Aim | Prediction | Fair Test |
| Method | Results | Equipment |
| | | Conclusion |

Quote of the Day

Be the change you want to see in the world.

— Mahatma Gandhi

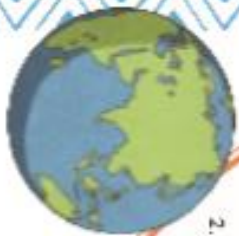
Friday

Date: _____

Goals for Today

Write these at the start of each day. You do not need to come back to them and reflect on them at the end of the day.

1. _____
2. _____
3. _____
4. _____
5. _____



Change the World

What big change would you like to see in the world?

What could you do to help to make that change happen?

Things I Am Grateful for Today

1. _____
2. _____
3. _____



The Best Thing That Happened Today

Complete this at the end of the day!

Large rectangular area with a green woven border for writing the best thing that happened today.

What Am I Worried About?

Why Do I Feel This Way?

How Can I Ease This Worry?

Rate the Day



Please circle or tick the statements you think about yourself.

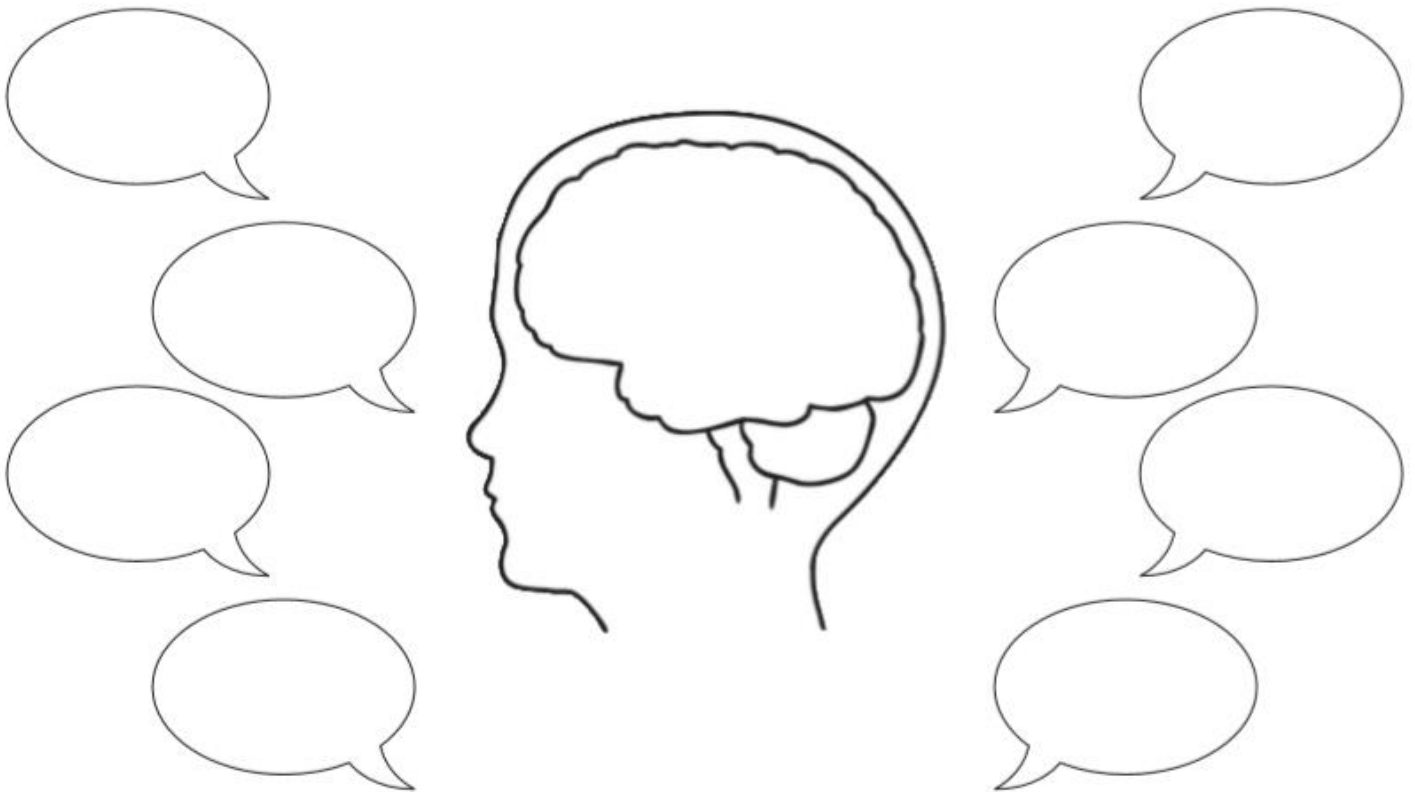
- I am kind
- I am helpful
- I don't say how I feel
- I cause trouble
- I am angry
- I get others into trouble
- I can be trusted
- I am good fun to be with
- I am hardworking



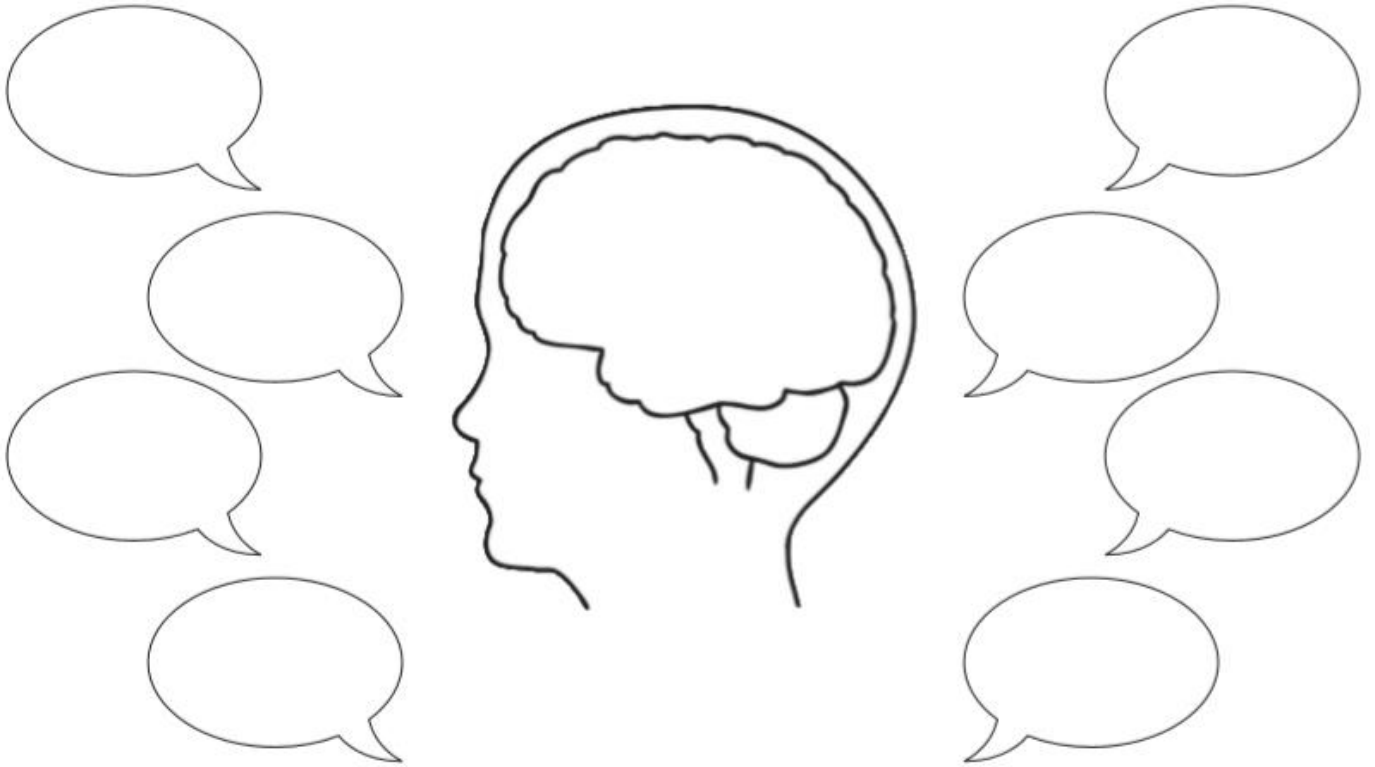
- I am clever
- I don't listen
- I have lots of friends
- I follow the rules
- I am good at sport
- I copy what others do
- I know what I want to do
- I don't care about my education
- I am cool

How Do People See Me and What Do They Think of Me?

Now, let's think about what your friends might say about you. You can use some ideas from the previous activity, but try to think of your own as well.



Finally, let's think about what you think your teachers might say about you.



What Are My Best Qualities?

Each one of us is different.

You are a very special, unique person with many special, positive qualities.

Can you list as many of these as you can below?

There are a few examples to get you started. If you are struggling, ask the adult you are with. Try your best to do this on your own though.

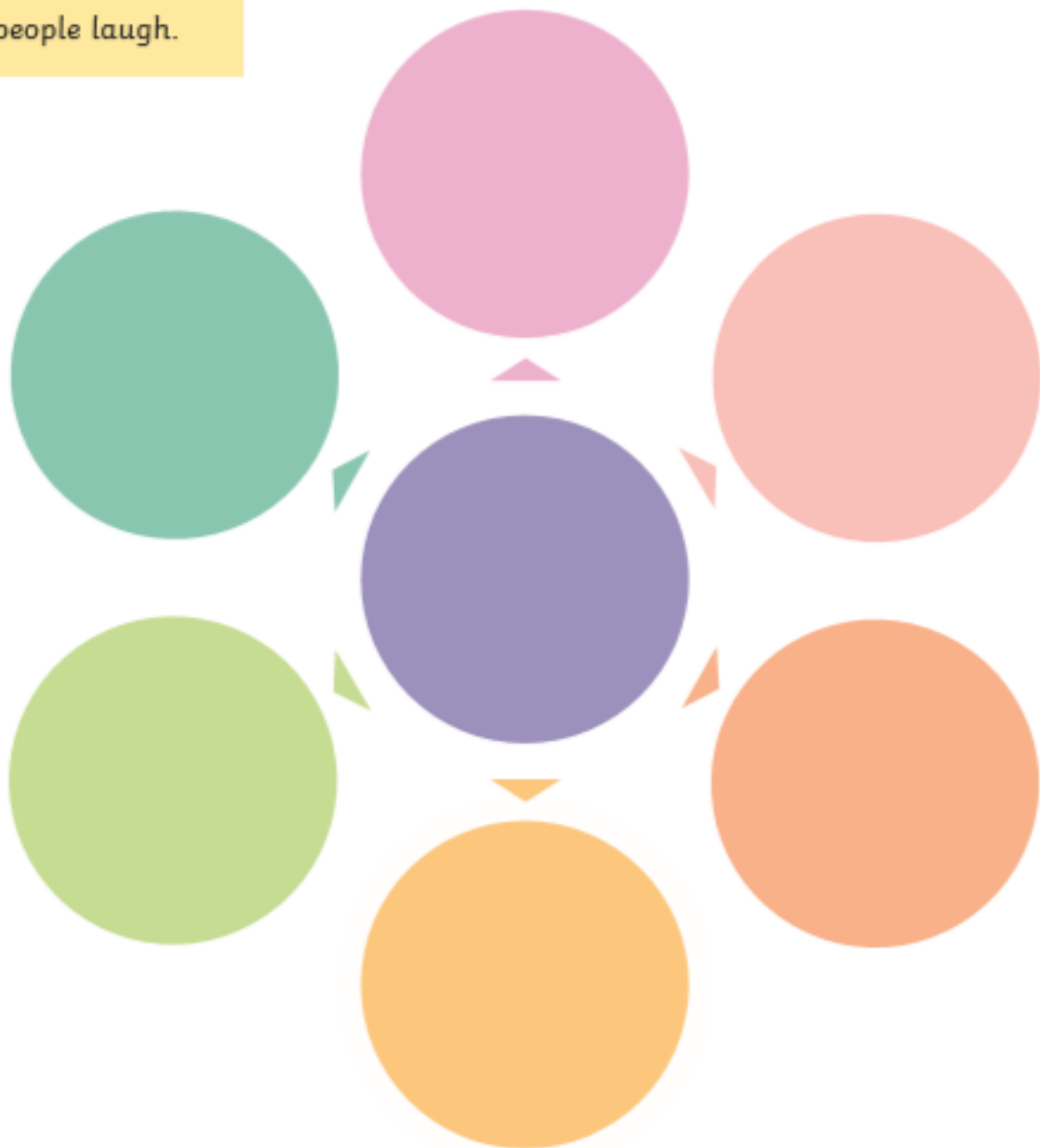
Write all those wonderful qualities down and be proud of who you are!

Examples:

I am honest.

I am brave.

I make people laugh.



Use this time before Year 7 to have a go at things.

TASK:

- Identify three things that you say you 'can't do'. Write them down.

- 1.
- 2.
- 3.

- Now write each thing down using a growth mindset approach. For example, 'I can't do maths' turns into, 'I am going to practise the things in maths that I can't do yet'.

- 1.
- 2.
- 3.

- Think of something you've always wanted to get better at. Write it down. How could you practise that thing now?

New school

Write down three things that you are really excited about doing in secondary school.

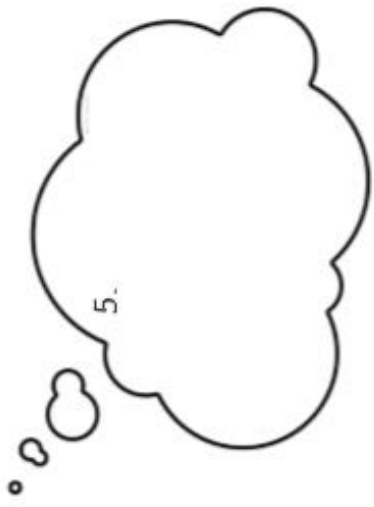
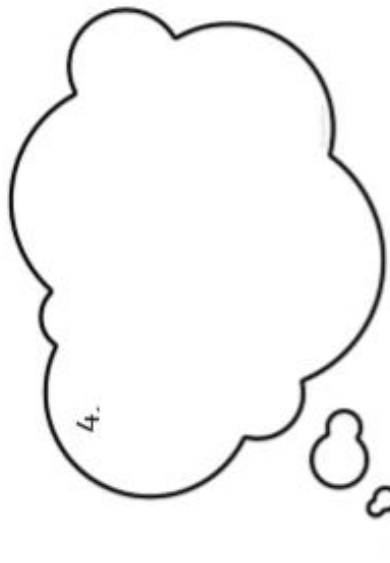
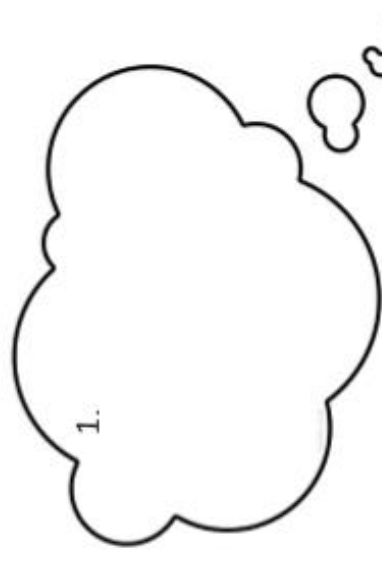
Write down three worries you have about secondary school. Speak to someone you trust about your worries to help you feel better.

1.

2.

3.

My Top Five Worries





You're

a

star



Famous Characters Wordsearch

Find all the words in the puzzle. When you have found all the words, look at the first two lines. Can you spot a phrase about reading, using letters that haven't already been used?

R E A D I N N G I S D R E A R A N M I N G D E H C W I T H Y
 O U R E Y E A S O P E N Q E S A R I G J A Y S O H L L E P Q
 T Y M R W L P V E W D Z G L M N S A F V A Q U O A E F E D Y
 E L Y A W B R J F H G N A N X U B L I B E T O P R F K J R Y
 X H E R Y E E N A J A N I W X O U D E X W E H E L J S U J U
 S E B E J Y T X H R Z T I H Z P C D P F A A D H I N F S A J
 N L U F P O E W G E E O Q E X O C O O D H D O T E S B Y Y T
 A J G Y J P P E M H O X D T P F H R O F S L O E B S U A Z M
 L B U X T U N A T H D H W P F G R O S I N O W I U X M J N E
 N S Z L L O F S B G Y C E H M P I T K A R W A N C H F E X Q
 U U H C I X H E M Z M R V E F I S H V V A K M N K K B F P H
 R E L M F E N L F M F H O R E E T Y W B E X M I E A Y U A Z
 N E R Y F U T Y G I R I R G L L O O N B E O E W T K W N U Z
 N E T V O C G C E P P Y X H P I P H O J N E D K T F O V X A
 H R D T F S F L A B C E M A R Z H J W Z I W Y L P E Z U O Q
 M O D J O Z D L W P F R A M A A E J D O R P J N R V E F P G
 C A T N L P G M N B U R R L M B R W T Q E X F W F P R X O A
 Y A T A A N Y D M U C L Z E S E R N M A H N I Q R O G G X I
 F Q P I H Y O R N Y Z J E T S T O J B E T P T W D R I Y G E
 L A B T L W E T R J T H M T I H B E U G A T N O M O E M O R
 J H E K A D W E P A Z W M H M B I O L V C Z B M B E S E V R
 N I Q Q Z I A G D K H D O D V E N R B R J A B B L X U X E Y
 A L I C E I N W O N D E R L A N D O Q D G C U F T O X V R P
 F M O H W N N H O D E L Q L U N M E Y G X G J D T Y D G U D
 M K X A M Q S I O R S W R V L E N O I B A L P J U E C G C H
 E N Q I Y Z J Z P O M E L B K T T N W N O A C P I F E W A I
 W N Z Q F W X D F R K W L E I W S O D S I I Z K S Y Y H S A
 L J L O G D A J N R O J O R V N M A H S I V A H S S I M A Y
 B T W N P O J O F Q O U B O P O L R F F P Y N A C U V P L C
 Z H P L F Z R X X X Z Y F B D F P B B V L K V Q H J S V T E

ALICE IN WONDERLAND
 ASLAN
 CAPTAIN HOOK
 CATHERINE EARNSHAW
 CHARLIE BUCKET
 CHRISTOPHER ROBIN
 DAVID COPPERFIELD

DOROTHY
 ELIZABETH BENNET
 EMMA WOODHOUSE
 FRODO BAGGINS
 GANDALF
 HAMLET

HARRY POTTER
 HERMIONE GRANGER
 JANE EYRE
 JULIET CAPULET
 MATILDA WORMWOOD
 MISS HAVISHAM

MISS MARPLE
 PETER PAN
 ROMEO MONTAGUE
 THE TINMAN
 VERUCA SALT
 WINNIE THE POOH

Answers

1. How do you think Mole felt as he saw something move on the opposite bank?
I think Mole would feel curious and interested by the movement on the opposite bank. The author uses words like 'dreamily' when Mole was thinking that it would be a lovely place to live and 'twinkling' to describe its appearance. He does not seem afraid or anxious at all.
2. Why did the animals 'regard each other cautiously?'
The animals had not met before and eying each other cautiously would be their way to check to see if they were a friend or an enemy to each other.
3. Why did Rat wait until 'presently' to invite Mole to the other side of the bank?
The Rat was going to wait until he was sure the Mole was not an enemy before inviting him over to the other side of the bank. 'Presently' is a way of saying that he did not rush into things, but waited until he was sure that Mole would not be a threat.
4. What do you think the Mole was feeling when he saw Rat's boat? How do you know?
I think the Mole fell in love with the boat as soon as he saw it because it says 'his whole heart went out to it at once' even though he did not really know what it was for.
5. When the Mole and Rat got back to Rat's home, what do you think they might do? Give reasons for your opinion.
I think that Rat and Mole would get to know each other when they arrived at Rat's home. If Rat did not want to be friendly, he would not have invited Mole and offered to help him get across the river. If Mole did not want to be friendly, he would have declined the offer to visit Rat's home.

Maths answers:

- 1) $8,000 + 800 + 90 + 2$
- 2) $90,000 + 4,000 + 600 + 30 + 4$
- 3) $300,000 + 40,000 + 2,000 + 700 + 80 + 9$
- 4) $1,000,000 + 30,000 + 4,000 + 200 + 30 + 7$
- 5) $40,000 + 500 + 8$
- 6) $400,000 + 50,000 + 200 + 40 + 5$
- 7) $300 + 40 + 2$
- 8) $300,000 + 10,000 + 1,000 + 500 + 60 + 9$
- 9) $70,000 + 6,000 + 300 + 40 + 1$
- 10) $9,000,000 + 900,000 + 90,000 + 4,000 + 200 + 70 + 6$

- 1) 63,092
- 2) 145,318
- 3) 103,887
- 4) 194,990
- 5) 1,222,443
- 6) 0.845
- 7) 26.45
- 8) 131.499
- 9) 248.058
- 10) 56.61

- 1) 50,034
- 2) 10,412
- 3) 8,801
- 4) 3,472
- 5) 530,649
- 6) 0.445
- 7) 19.55
- 8) 122.301
- 9) 241.542
- 10) 56.01

- 1) 0.69
- 2) 567,000
- 3) 0.459
- 4) 9
- 5) 0.50
- 6) 120
- 7) 0.12
- 8) 38,070
- 9) 0.816
- 10) 28,000

- 1) 308
- 2) 11
- 3) 23,969
- 4) 62,587
- 5) 5,398
- 6) 55,623
- 7) 1,954
- 8) 675,545
- 9) 75,208
- 10) Combination of numbers. Example: $3,000 + 450 = 3,450$

1. Use the clues to work out the mystery number.

It is greater than 10

It is NOT over 25

It is NOT an even number

It is NOT a prime number

It is a factor of 60

What is the mystery number?



The number is 15.

2. Here is a square number.

1225

What is the difference between the next square number after this and the one before?

The square root of 1225 is 35.

$$34^2 = 1156$$

$$36^2 = 1296$$

$$1296 - 1156 = 140$$

The difference is 140.

Famous Characters Wordsearch **Answers**

Find all the words in the puzzle. When you have found all the words, look at the first two lines. Can you spot a phrase about reading, using letters that haven't already been used?

R E A D I N G I S D R E A R A M M I N G D E H C W I T H Y
 O U R E Y E A S O P E N Q E S A R I G J A Y S O H L L E P Q
 T Y M R W L P V E W D Z G L M N S A F Y A Q U O A E F E D Y
 E L Y A W B R J F H G M A M X U B L I B E T O P R F K J R Y
 X H E R Y E E N A J A M I W X O U D E X W E H E L J S U J U
 S E B E J Y T X H R Z T I H Z P C D P F A A D H I N F S A J
 N L U F P O E W G E E O Q E X O C O O D H D O T E S B Y Y T
 A J G Y J P P E M H O X D T P F H R O F S L O E B S U A Z M
 L B U X T U N A T H D H W P F G R O S I N O W I U X M J N E
 N S Z L L O F S B G Y C E H M P T K A R W A N C H F E X Q
 U U H C I X H E M Z M R V E F I S H V V A K M N K K B F P H
 R E L M F E N L F M P H O R E E T Y W B E X M I E A Y U A Z
 N E R Y F U T Y G I R I R G L L O O N B E O E W T K W N U Z
 N E T V O C G C E P P Y X H P I P H O J N E D K T F O V X A
 H R D T F S F L A B C E M A R Z H J W Z I W Y L P E Z U O Q
 M O D J O Z D L W P F R A M A A E J D O R P J N R V E F P G
 C A T N L R G M N B U R R L M B R W T Q E X F W F P R X O A
 Y A T A A N Y D M U C L Z E S E R N M A H N I Q R O G G X I
 F Q P I H Y O R N Y Z J E T S T O J B E T P T W D R I Y G E
 L A B T L W E T R J T H M K H B E U G A T N O M O E M O R
 J H E K A D W E P A Z W M H M B O L V C Z B M B E S E Y R
 N I Q Q Z I A G D K N D O D V E N R B R J A B B L X U X E Y
 A L I C E I N W O N D E R L A N D O Q D G C U F T O X V R P
 F M O H W N N H O D E L Q L U N M E Y G X G J D T Y D G U D
 M K X A M Q S I O R S W R V L E N O I B A L P J U E C G C H
 E N Q I Y Z J Z P O M E L B K T T N W M O A C P I F E W A I
 W N Z Q F W X D F R K W L E I W S O D S I I Z K S Y Y H S A
 L J L O G D A J N R O J O R V N M A H S I V A H S S I M A Y
 B T W N P O J O F Q O U B O P O L R F F P Y N A C U V P L C
 Z H P L F Z R X X X Z Y F B D F P B B V L K V Q H J S V T E

- | | | | |
|---------------------|------------------|------------------|-----------------|
| ALICE IN WONDERLAND | DOROTHY | HARRY POTTER | MISS MARPLE |
| ASLAN | ELIZABETH BENNET | HERMIONE GRANGER | PETER PAN |
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| CHARLIE BUCKET | GANDALF | MATILDA WORMWOOD | VERUCA SALT |
| CHRISTOPHER ROBIN | HAMLET | MISS HAVISHAM | WINNIE THE POOH |
| DAVID COPPERFIELD | | | |

R E A D I N G I S D R E A M M I N G W I T H Y
O U R E Y E A S O P E N Q E S A R I G J A Y S O H L L E P Q
T Y M R W L P V E W D Z G L M N S A F Y A Q U O A E F E D Y
E L Y A W B R J F H G M A M X U B L I B E T O P R F K J R Y
X H E R Y E E N A J A M I W X O U D E X W E H E L J S U J U
S E B E J Y T X H R Z T I H Z P C D P F A A D H I N F S A J
N L U F P O E W G E E O Q E X O C O O D H D O T E S B Y Y T
A J G Y J P P E M H O X D T P F H R O F S L O E B S U A Z M
L B U X T U N A T H D H W P F G R O S I N O W I U X M J N E
N S Z L L O F S B G Y C E H M P T K A R W A N C H F E X Q
U U H C I X H E M Z M R V E F I S H V V A K M N K K B F P H
R E L M F E N L F M P H O R E E T Y W B E X M I E A Y U A Z
N E R Y F U T Y G I R I R G L L O O N B E O E W T K W N U Z
N E T V O C G C E P P Y X H P I P H O J N E D K T F O V X A
H R D T F S F L A B C E M A R Z H J W Z I W Y L P E Z U O Q
M O D J O Z D L W P F R A M A A E J D O R P J N R V E F P G
C A T N L R G M N B U R R L M B R W T Q E X F W F P R X O A
Y A T A A N Y D M U C L Z E S E R N M A H N I Q R O G G X I
F Q P I H Y O R N Y Z J E T S T O J B E T P T W D R I Y G E
L A B T L W E T R J T H M K H B E U G A T N O M O E M O R
J H E K A D W E P A Z W M H M B O L V C Z B M B E S E Y R
N I Q Q Z I A G D K N D O D V E N R B R J A B B L X U X E Y
A L I C E I N W O N D E R L A N D O Q D G C U F T O X V R P
F M O H W N N H O D E L Q L U N M E Y G X G J D T Y D G U D
M K X A M Q S I O R S W R V L E N O I B A L P J U E C G C H
E N Q I Y Z J Z P O M E L B K T T N W M O A C P I F E W A I
W N Z Q F W X D F R K W L E I W S O D S I I Z K S Y Y H S A
L J L O G D A J N R O J O R V N M A H S I V A H S S I M A Y
B T W N P O J O F Q O U B O P O L R F F P Y N A C U V P L C
Z H P L F Z R X X X Z Y F B D F P B B V L K V Q H J S V T E

R E A D I N G I S D R E A M M I N G W I T H Y
O U R E Y E A S O P E N Q E S A R I G J A Y S O H L L E P Q