

# Thursday Home Learning

Maths - Square and Cube numbers

Spelling - silent letters

English - Features of a setting  
description.

Science - Stephen Hawking

# Five in 5

1.  $56,434 + \underline{\hspace{2cm}} = 100,000$

2.  $965,432 - \underline{\hspace{2cm}} = 800,000$

3.  $2340 \times 10$

4.  $9870 \div 10 =$

5.  $\underline{\hspace{2cm}} = 760,000 + 3400 + 8$

# Today we are recapping square and cube numbers

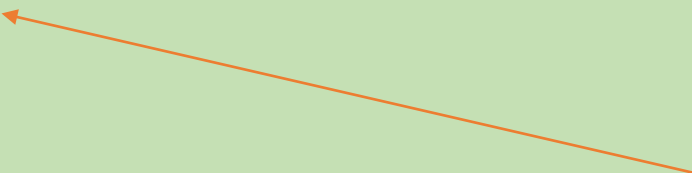
A square number is result of multiplying a number by itself

49 is a squared number because

$$7^2 \quad 7 \times 7 = 49$$

25 is a squared number because

$$5^2 \quad 5 \times 5 = 25$$



The small 2 next to a number means squared.

$$5 \text{ squared} = 25$$

In your books finish this to find  
the first 12 squared numbers

$$1^2 \quad 1 \times 1 = 1$$

$$2^2 \quad 2 \times 2 = 4$$

$$3^2 \quad 3 \times 3 = 9$$

$$4^2 \dots$$

Whitney thinks that  $4^2$  is equal to 16

Do you agree?

Convince me.

Amir thinks that  $6^2$  is equal to 12

Do you agree?

Explain what you have noticed.

# Cube numbers

Cube numbers are the result of multiplying a number by itself 3 times

8 is a cubed number because

$$2^3 = 2 \times 2 \times 2$$

27 is a cubed number because

$$3^3 = 3 \times 3 \times 3$$

# Your task

Find the first 10 squared numbers

$$1^3 = 1 \times 1 \times 1 = 1$$

$$2^3 = 2 \times 2 \times 2 = 8$$

$$3^3 = 3 \times 3 \times 3 = 27$$

$$4^3$$

# This weeks spellings:

doubt

lamb

debt

thumb

solemn

autumn

column

knight

knuckle

knot

[www.twinkl.co.uk](http://www.twinkl.co.uk)

d o u b t

l a m b

d e b t

t h u m b

s o l e m n

a u t u m n

c o l u m n

k n i g h t

k n u c k l e

k n o t



# Choose your own spelling activity!

Backwards write!

Quick write!

Rainbow write!

Pyramid write!

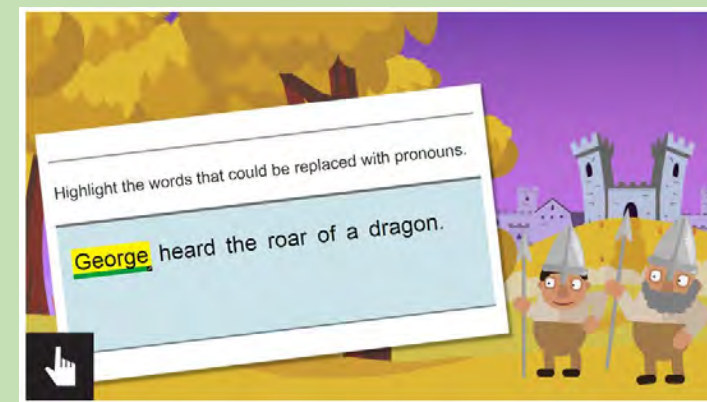
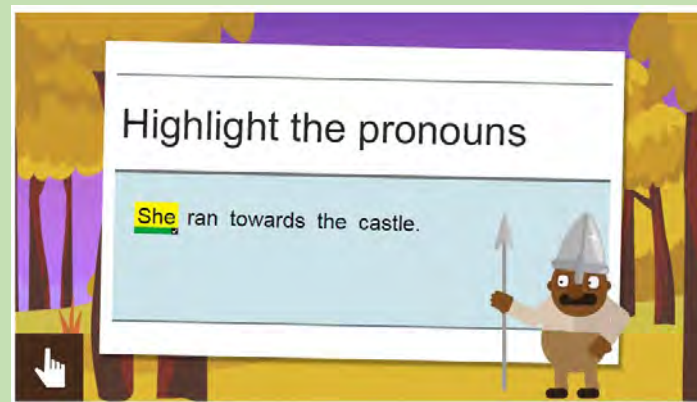
look, say, cover,  
write, check!

# Grammar and punctuation review.

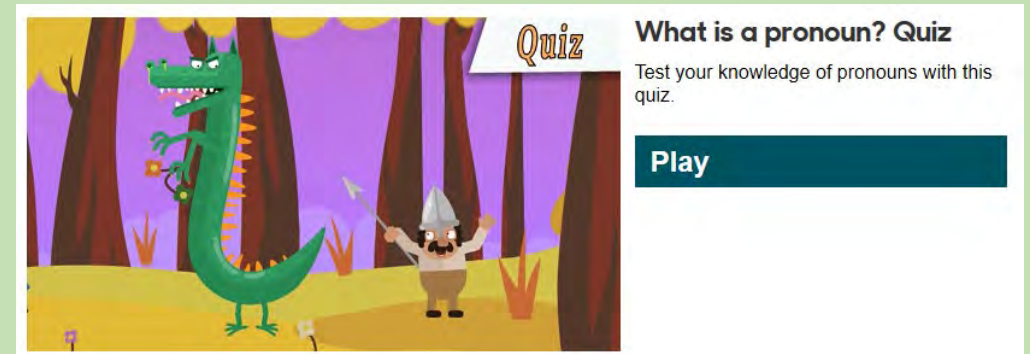
Click on the link below to review: What is a pronoun?

<https://www.bbc.co.uk/bitesize/topics/zwwp8mn/articles/z37xrwx>

Today: Watch the video, then complete the activity.



When you have completed the activities, try the quiz!



Click on the link below to access the video of The Black Hat that we looked at yesterday.

<https://www.literacyshed.com/blackhat.html#>

Watch the video again but pause it at 8 seconds, when you see the boy's home.

Today, we are going to look at an example description, to learn from its structure.

The trees in the forest seemed sad, as if they had long ago given up hope. Their leafy garments had left with the summer and, to them, it seemed like winter was here to stay. Their long bony fingers stretched out, almost as if attempting to touch the house.

It stood tall, its legs long and spindly, towering above the swamp. The hut's bright eyes shone into the night and, as the wind blew, it seemed to groan; complaining to the weather. The fireflies in the forest shone like miniature lanterns and the webs of hidden spiders hung like curtains from the mossy trees. Beams of sunlight struggled through the canopy, wrestling with the strong arms of the trees. Creepers hung from the branches and the mist was close to the ground.

The water around the feet of the strange dwelling grabbed lazily at its limbs, lily pads swam slowly across the face of the pond. Here and there splashes of colour peeked through the dense earthy undergrowth; fairy-tale toadstools working hard to be noticed and tiny crimson blooms reaching for the light. Dust danced through the air - the whole clearing its stage. An old owl, like a silent soldier, kept watch over the cottage, awaiting the return of its owner.

**This example includes:**

lots of personification (giving objects human qualities)

similes

noun openers (beginning the sentence with the noun instead of a determiner – Beams, Creepers, Dust)

expanded noun phrases

**Peacefully**, the vibrant sun began to set beneath the overgrowth. The last of the glimmering beams of gold were cast out across the silent, lonely pond with an abandoned fallen tree trunk its only friend. The pale blue sky with its soft clouds dancing gently, was now an exquisite shade of orange and pink, warming the cool air that softly whistled through the trees.

**Diamonds** glistened on the still water, which was shaded by overgrown pondweeds. Lily pads, gently resting on the crystallised water, were occupied by pond skaters, who glided contentedly around their habitat.

**Soon**, the last of the sun-drenched sky had faded; the darkness had prevailed.

**This example includes:**

expanded noun phrases

relative clauses

range of sentence openers (**adverb**, nouns, **time adverbial**)



The trees in the forest seemed sad, as if they had long ago given up hope. Their leafy garments had left with the summer and, to them, it seemed like winter was here to stay. Their long bony fingers stretched out, almost as if attempting to touch the house.

**Can you write 3 sentences about the trees in your image? Use the same sentence structure:**

Sentence 1: Start with an **expanded noun phrase**

Sentence 2: Start with Their

Sentence 3: Start with Their

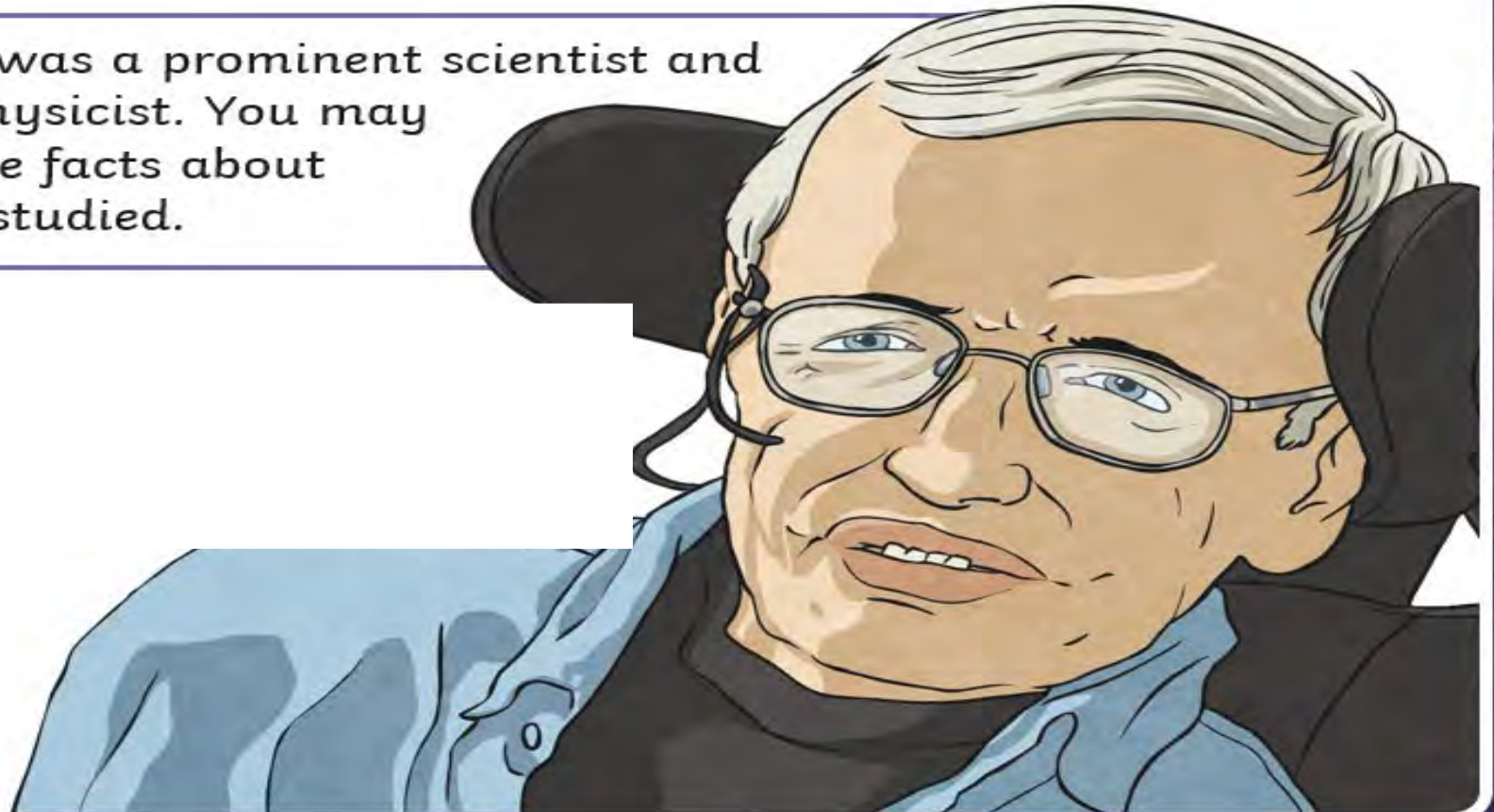
You could even use some personification like the example above – the trees seemed sad, long bony fingers etc.



# Stephen Hawking



Stephen Hawking was a prominent scientist and theoretical astrophysicist. You may already know some facts about him and what he studied.



# Hawking's Life

Stephen Hawking was born in Oxford on 8<sup>th</sup> January 1942. He grew up with his parents, his brother and sisters.

At school, Hawking enjoyed science and maths and he was nicknamed 'Einstein' by his friends. He wanted to study maths at the University of Oxford, but Oxford didn't offer a maths degree at that time. Instead, Hawking chose to study physics and chemistry.

Hawking found the work at university very easy. He joined the college boat club and was known as a daredevil because of the risks he took when rowing the boats.

After graduating from Oxford, Hawking studied for his PhD at the University of Cambridge.





# Hawking's Life

It was at Cambridge that Hawking first developed problems with his health. He became very clumsy, regularly falling or dropping things. His speech became slurred and hard to understand.

**ALS: A motor neurone disease that causes muscle weakness, paralysis and respiratory failure. It is a degenerative disease, which means it gets worse over time. There is no cure.**

He met and fell in love with Jane Wilde, and Hawking felt that he had something to live for.



# Hawking's Life

◆ Stephen Hawking lived a full life despite his disabilities.

◆ He used a wheelchair to move around and a computer with a voice synthesizer to talk.

◆ His condition did continue to deteriorate, though, and this renowned scientist sadly died on 14<sup>th</sup> March 2018, aged 76.





# Hawking's Life

◆ Stephen Hawking is remembered as one of the greatest scientists that ever lived.

◆ His theories, such as those concerning black holes, have changed the way we understand the universe.

◆ His many books have helped millions to understand difficult scientific concepts and he has inspired people around the world with his passion for science and his ability to overcome difficulties.



# Black Hole Theories

◆ Hawking developed theories about how black holes are formed, how they behave and where they can be found in the universe. This is one of his theories:

◆ A black hole is a place where gravity has got so strong that it pulls matter down into it and doesn't let any of this matter escape, not even light.

◆ Anything too close to a black hole will be sucked down into it and trapped forever.



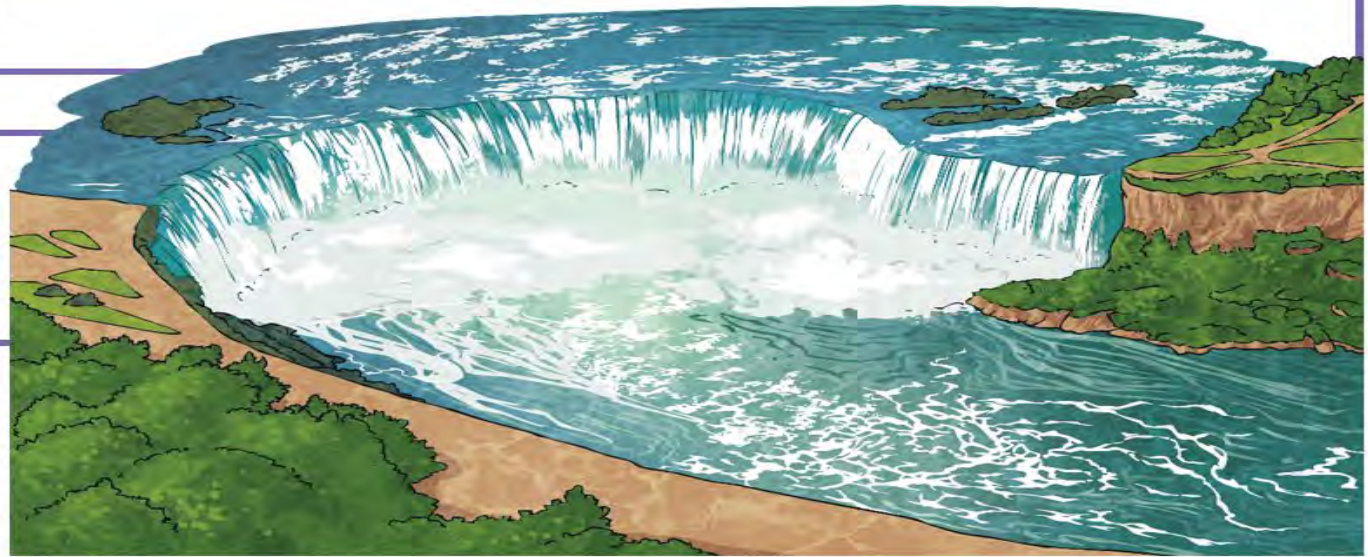


# Black Hole Theories

Imagine it is like a river with a waterfall.

If you are swimming in the river away from the waterfall, you may be able to swim away fast enough so that you don't go over the edge, but as you get nearer to the edge, you cannot swim fast enough to escape the current of the water.

You will be pulled over the edge of the waterfall.

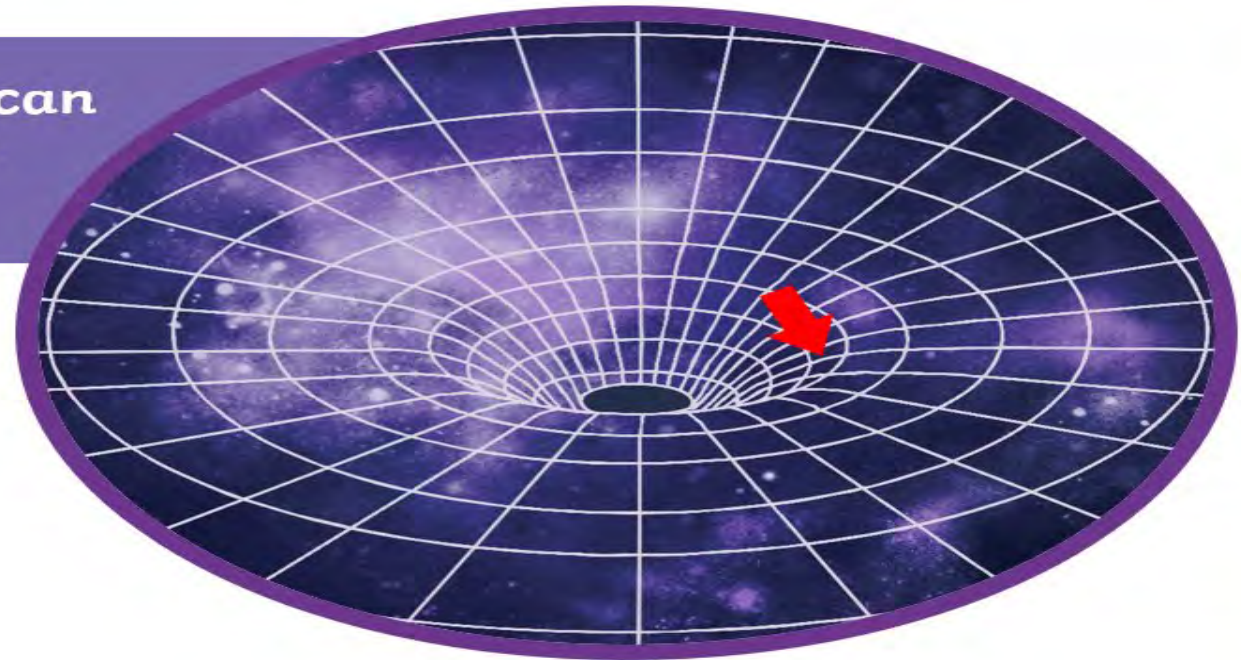




# Black Hole Theories

- ▶ This is how matter is pulled into a black hole.
- ▶ The edge of a black hole is called the event horizon.

- ▶ Past the event horizon, nothing can travel fast enough to escape the black hole.



In your book...

# Black Holes



Draw a diagram and add labels to explain what you already know about black holes.

Don't worry if you don't know much about them – just draw and label what you can.

## What Are Black Holes?

What do you already know about black holes? Think about what they look like, what they do and where they might be found.

Draw a diagram of what you think a black hole is like and add labels to describe it.

