



Work for Year 5: Oak Class (Mrs Parkhurst and Mrs Smith.)

Friday 5th June – Friday 19th June 2020

Eureka! Archimedes was the greatest scientist and mathematician ... ever!

All work should be completed in your homework books or new book I have given you.

See also www.crowmoorschool.co.uk

Oak Class Page Homework for regular updates. We will update the homework tasks fortnightly.

Reading	Spellings	Writing/History/Science link	Grammar and Punctuation
<p>1. Make sure you choose a book you can enjoy and then record daily in your reading diary.</p> <p>Example: The non-fiction information about Archimedes is excellent. I really enjoyed reading all about his inventions.</p> <p>It is science time... this plan is all about an Ancient Greek scientist called Archimedes.</p> <p>I have included a non-fiction text about Archimedes below. I have also suggested some other books which may interest you- I suggest you may find some online too. There is a short video which you can watch on You Tube which is really helpful. Here is the link: https://www.youtube.com/watch?v=sw66gzBD9fE</p> <p>There are lots of others but this is a good one to follow.</p>	<p>You have a Year 5 and 6 spelling list:</p> <ol style="list-style-type: none"> 1. Select 10 spellings to learn each week. Use the Look, say, cover, write and check method to learn them. 2. Write a sentence using each word. 3. Write a definition for each of your 10 words in the same way we would do in class. <p>Continue onto the next list of 10 over the next two weeks.</p>	<p>Please continue to keep a diary daily, you should include the following:</p> <ol style="list-style-type: none"> 1. Date in full Friday 15th May 2020. 2. Climate: Temperature, weather 3. Something you have done this week.  <p>Please read the non-fiction text about Archimedes below.</p>	<p>In your diary and non-fiction information sheet and conversation make sure you use your Year 5 grammar and punctuation, you have a sheet to help you in your homework book.</p> <p>Continue here: BBC Bitesize Primary is a good website to practice grammar exercises online. https://www.bbc.co.uk/bitesize/levels/br9wmn</p> <ol style="list-style-type: none"> 1. Inverted commas 2. Brackets 3. Synonyms

<p>Remember you can still find things to read on the following:</p> <ol style="list-style-type: none"> 1. Ebooks are available on the following website: https://www.oxfordowl.co.uk/for-home/find-a-book/library-page/ 2. BBC Audio Books are free to listen to at the moment so you might like to listen to one of the following: Life on Earth: Sir David Attenborough The Railway Children The Wind In The Willows Alice In Wonderland The website is as follows: https://www.bbc.co.uk/sounds/category/audiobooks?page=3&sort=latest 		<ol style="list-style-type: none"> 1. I would like you to write your own information sheet about Archimedes: you can use the information to help you. 2. Imagine you are going to meet Archimedes. You are going to interview him for a television documentary. Write down your interview: remember how we set out speech and how we use synonyms. You could start like this: <i>I began by introducing myself to Archimedes, "Hello, my name is Jayne. Thank you for agreeing to meet with me today." Archimedes replied, "Yes! Yes... please get on with it, I have lots of things/interventions to think about today!" "Ok, so how were you inspired to come up with the test to find out if the crown was, indeed, gold?" I asked quickly. Archimedes began to explain, "Well it goes like this..."</i> 	
<p>Maths</p>	<p>Science/Theme/ Ancient Greece</p>	<p>Art/ Design and Technology</p>	<p>Message from Mrs.P.</p>
<ol style="list-style-type: none"> 1. Continue to learn your tables I have attached some "Times Tables Challenge" Grids on our 	<ul style="list-style-type: none"> • Test out the law of buoyancy (or Archimedes' Principle) for yourself! See below for ideas. 	<ul style="list-style-type: none"> • Make an Archimedes' Screw of your own using a plastic tube or bottle and some cardboard 	<p>These are ideas of activities for you to do. I am hoping to call some of you again over the next few weeks to see how you are. As always remember you can only do your best: just keep dipping in and out of the learning</p>

Homework section. There are also "Times Tables Challenges" on our Class Page too.

2. Some of you have used "Mathletics" but keep going. Go back and revise +, -, X and ÷.

I have left each section open so that you can choose where you think you need to practice.

You could try out some of Archimedes theories if you are brave enough: have a look at the video link above.

BBC Bitesize Primary

<https://www.bbc.co.uk/bitesize/levels/zbr9wmn> is a good website to practice your themes are:

1. Perimeter
2. Area
3. Volume

The answers to Arithmetic Paper 5 were on the last page.

I have put Arithmetic Paper 6 up next. Remember to do it in your books.

You could choose a number of waterproof items and place them in a bucket of water to see how much water is displaced. Does the amount of water displaced amount to the volume of the object you have used.

Make a table of objects, their volume and the water displaced when they are submerged in the bucket.

Object	Volume	Displaced water from full bucket	Equal
Coke bottle	1 litre	1000mls	✓
Mug	500mls		
Tin can	125mls		
Stone	50g		

I would do my table like this, you may add more objects if you want. You can use labels on the objects to find out their weights or volumes. Measure the water in a kitchen measuring jug as it flows out of the bucket. Perhaps set this up in the garden or the bath. Have fun and make sure you mop up!

Extension:

If you have enjoyed finding out about Archimedes, you could find out about another famous Ancient Greek scientist. Create a profile of them and add a timeline too.

You will need to watch the video to make this.

<https://www.youtube.com/watch?v=PszGCm1PqSo>

Or...

Archimedes' Screw



The Archimedes was a great scientist. One of his main inventions is the screw pump which is still used in the middle east. This device is used to lift water from irrigation canals and the rivers onto the dry fields.

You will need

- Clean plastic bottle(2l)
- Plastic tube
- Double sided tape
- Ink
- Water
- 2 Bowls

- 1 Cut the top and bottom of a 2 lit soft drink PET bottle.
- 2 Cut a strip of double sided tape of the same length as the bottle and stick it along side the bottle. This gives the bottle the extra grip required.
- 3 Twist a length of plastic tube around the bottle.
- 4 Stick another piece of tape over the tube and bottle, to keep the tube in place.
- 5 Put a few drops of colour ink into a bowl of water.
- 6 Place one end of the bottle in the coloured water so that one end of the tube is submerged in the water.
- 7 Make sure that the opposite end is pointing towards an empty bowl.
- 8 Twist the bottle around the bowl of coloured water.

You will see that the water slowly starts to travel through the pipe into the empty bowl.
The empty bowl gradually fills up with coloured water.

You could record what you do in photos, or even make your own video which we can share when we eventually come back to school or you could send it to me via email.

Plus you can use this device to move "Cheerios" out of a cereal bowl or even "Smarties!"

tasks. Don't worry, don't get anxious and stressed just have a go! Make sure you enjoy what you do.

I have been very lucky to see some great work from some of you, I have sent emails back to you, FANTASTIC! I have kept an eye on "Mathletics," some of you have done a lot. I will print out the certificates and pop them in your drawers so that they will be there when you finally return to school.

If you want to send something for me to see you can send it via

admin@crowmoorschool.co.uk

<http://crowmoorschool.co.uk/>

Next week it is all change in school as some of the Year 6 and Year 1 come back. They will be working in small "Bubbles," just another word for a small group. As you pass school you may notice lots of signs and arrows and posters to help everyone know where they can go and where they should stand.

This week I have finished writing your reports. In my own time I have started to read one of my favourite books: "Jane Eyre" by Charlotte Bronte. This was the first book I read at secondary school- so that was a long time ago and I wanted to re-read it.

So for now, take care, with best wishes,
Mrs.P. xxx

New Curriculum Spelling List Years 5 and 6

accommodate
accompany
according
achieve
aggressive
amateur
ancient
apparent
appreciate
attached
available
average
awkward
bargain
bruise
category
cemetery
committee
communicate
community
competition

conscience
conscious
controversy
convenience
correspond
criticise
curiosity
definite
desperate
determined
develop
dictionary
disastrous
embarrass
environment
equip
equipped
equipment
especially
exaggerate
excellent

existence
explanation
familiar
foreign
forty
frequently
government
guarantee
harass
hindrance
identity
immediate
immediately
individual
interfere
interrupt
language
leisure
lightning
marvellous
mischievous

muscle
necessary
neighbour
nuisance
occupy
occur
opportunity
parliament
persuade
physical
prejudice
privilege
profession
programme
pronunciation
queue
recognise
recommend
relevant
restaurant
rhyme

rhythm
sacrifice
secretary
shoulder
signature
sincere
sincerely
soldier
stomach
sufficient
suggest
symbol
system
temperature
thorough
twelfth
variety
vegetable
vehicle
yacht

Archimedes: A Famous Greek Scientist.



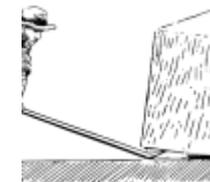
Archimedes was **one of the most famous scientists in Ancient Greece**. He was perhaps best known for being a great mathematician. Despite being recognised today for his understanding of mathematics and physics, he was more acknowledged in his own time for the contribution he made to creating war machines to help protect his home in Syracuse from the Romans.

1. It is believed Archimedes was born 287 BC in Syracuse in Sicily, but we don't know his exact birth date.
2. **Archimedes was killed by a Roman soldier** when the Romans were conquering Syracuse.
3. Archimedes didn't invent the simple machine called the lever, but **he helped explain how the lever works**.
4. A biography on Archimedes was written by a friend of his, Heracleides, but this was later lost.
5. A lot of the information we have about Archimedes is anecdotal, which means that it is probably based in truth but has been added to with lots of details over thousands of years. For example, the story that Archimedes made an exciting discovery while soaking in his bath tub and ran through the streets naked shouting "Eureka!" ("I have found it!" in Greek) is probably not true!
6. As a way to honour Archimedes, a crater of the moon has been named after him.
7. Archimedes was so far ahead of his time in mathematics, it took a further 1800 years before his work was fully understood by Sir Isaac Newton.
8. Archimedes is credited with inventing the **Archimedes screw**, a simple machine for moving water that is still used today.
9. Archimedes was behind the understanding of the **formula of density**.
10. It is said that Archimedes enjoyed teasing other mathematicians, giving them the answer to a complex question but not helping them to understand how he had worked it out.

- Much of the work Archimedes did was based around understanding and explaining how and why things worked.
- He was the first recognised scientist to apply the use of physics to solve pure mathematical problems such as the explanation of **the law of the lever**.
- Devices created by Archimedes are still in use today. For example, the **Archimedes Screw** pulls water from the ground very easily and efficiently.
- According to one story told about Archimedes, King Hieron II of the city-state of Syracuse was worried makers of his crown were not using solid gold to manufacture it but replacing some of the gold with less valuable material such as silver. The king asked Archimedes to find a way to discover if this was true. Archimedes is said to have come up with the way to **work out density of material** while he was taking a bath (not quite the bath tubs we have now, more a wooden tub!) as the displacement of the water in his bath helped the theory come to him. **He is said to have jumped out shouting 'Eureka!' and running the streets in excitement!**
- Archimedes is also credited with discovering a very accurate estimate for **the value of pi** in advanced mathematics.
- Cranes used today and complex pulley system are a direct result of the work Archimedes did with **levers and pulleys**.
- Another quote attributed to Archimedes is: "**Give me but one firm spot on which to stand, and I will move the earth.**" He was explaining the power of levers.

Can you identify the following images in the gallery below?

- Mathematical sign for pi
- The moment Archimedes' realised he could tell if the king's crown was solid gold
- The principle of the lever
- The Archimedean Screw



- Archimedes was one of **the greatest scientists in the Ancient world**. He had a number of strings to his bow. Most commonly known these days for his **advanced mathematics**, he was also recognised as a **weapons designer, engineer, inventor, astronomer** (his father was also an astronomer), **physicist and round scientist**.



Though Archimedes was very interested in mechanics (and his work on simple machines suggests this), he didn't feel it was important enough to write about and all the books we know he wrote were about scientific theory, not its practical application.

Some of his most famous achievements include:

- A physical principle now known as the **Archimedes' principle**, which explains why heavy objects like ships float in water.
- Archimedes also offered mathematicians the most precise value of the unknown entity **pi** (the symbol used in maths to represent the ratio of a circle's circumference to its diameter, π).

- His work to help understand the concept of **volume and surface area of a sphere** proved he was years ahead of his time.
- The **Archimedes Screw** is thought to have been introduced to Egypt by Archimedes, though we do not know if he invented it. The "screw pump" moves water by turning a screw-shaped surface inside a pipe. This very simple machine works very well and is still commonly used today.

Physics: The general analysis of nature, conducted in order to understand how the universe behaves.

Density: The mass of a substance per unit volume

Pi: π is a Greek letter but used to represent a mathematical constant, the ratio of a circle's circumference to its diameter.

Here are some books you may like to read for more information about Archimedes:

