

Monday 10th January 2022

I can order the verses of a poem.



# We've been invaded!

Monday 10th January 2022

I can order the verses of a poem.



#### Work together to order the verses to form a poem.

One day, long ago I cast my boat from shore I left in search of treasure It was to be a mighty fine adventure I was sure, And with a yo hohoho It'was a pirate's life for me.

Finally, our journey was at an end, At X marks the spot we were famished With one last effort we dug down deep Alas! the treasure... It has vanished. Next, the sea grew dark and stormy I rocked and shivered atop the bow, Were the seas alive with monsters? Waiting to strike at me NOW! And with a yo hohoho It'was the pirate's life for me.

Luckily, the sea went calm again And on the surface I spied a bottle What was inside? A treasure map! We set off for 'X' full throttle. And with a <u>yo hohoho</u> It'was a pirate's life for me. Many days later, we reached our destination ready to find our loot. "To the boats men!" we jumped ashore Kicking off with a sturdy boot. And with a yo hohoho It'was the pirate's life for me. First, I came across an island, stretching wide as the eye could see Were there to be danger, peril? Or maybe treasure just for me? And with a <u>yo hohoho</u> It'was the pirate's life for me. Monday 10th January 2022

I can order the verses of a poem.

What's the theme of the poem?



#### How would you describe the style of the poem?

What times table do you find hard?

https://www.online-stopwatch.com/

Grab some paper and a pencil and use the stopwatch to see

how long it takes you to write down the times table.







© White Rose Maths 2020

#### Consolidate 2, 4 and 8 times-tables

c) 7 × 8

d) 12 × 2

g) 4 × 9

h) 10 × 8



A paper clip is 3 cm long. Work out the missing numbers. a) What is the total length of 2 paper clips? 3 cm d) 8 × × 8 = 16 = 0 a) b) What is the total length of 4 paper clips? = 64 b)4 × = 20 e) 2 × 4 × c) What is the total length of 8 paper clips? c) 24 = × 2 f) 40 = × 5 × Work out the multiplications. Work out the value of each shape. b) 1 × 4 a) 1 × 2 c) 1 × 8 2 × 2 2 × 4 2 × 8 + 🛑 = 16 3 x 2  $3 \times 4$ 3 x 8 × 🔨 = 32 4 × 2  $4 \times 4$ 4 × 8 5 x 8 5 x 2  $5 \times 4$ × 1 = What do you notice? Work out the multiplications. Tennis balls come in packets of 2, 4 and 8 Rosie buys 5 of each different size pack. a) 6 × 4 e) 8 × 4 How many tennis balls does she buy altogether? b) 2 × 10 f) 2 × 11 Show your workings.

© White Rose Maths 2020

Monday 10th January 2022 I can explore scientific properties.

# Can you walk on custard?

https://www.youtube.com/watch?v=Iz9KnPZWOgs&ab\_channe I=Brainiac





#### <u>Monday 10th January 2022</u> <u>I can explore scientific properties.</u>

#### The Science

The slime is a non-Newtonian liquid which means it is different to 'normal' liquids. It gets thicker when it is pushed or pressed down. The cornflour is not actually dissolved in the water so when pressure is put on the mixture, the water molecules are pushed away. Other non-Newtonian liquids react in different ways to pressure. Tomato ketchup gets runnier if you shake it. If you whip cream for a long time, it gets thicker and thicker.

Task: Create a poster explaining what you have watched.

If you have the ingredients at home, ask a parent/guardian's permission before making it as it can be messy

#### Monday 10th January 2022

#### I can explore scientific properties.



#### Method:

- 1. Pour the cornflour into the bowl.
- 2. Pour the water in, mixing slowly as you go. Keep adding more water until the mixture becomes thick (and hardens when you tap on it).
- 3. Add a few drops of food colouring to make your slime the colour you want it.
- 4. Put your hands in the slime and experiment with handling it.
- 5. What happens when you pick the slime up, squeeze it or even punch or slap it?
- 6. Do you think it is a solid or a liquid?
- 7. How is it different to water?



## An introduction to... Non-Newtonian Liquids

twinkl

#### Sir Isaac Newton

Sir Isaac Newton is best remembered for his work on our understanding of gravity but among other things, he also studied liquids and worked out predictable properties for them.

#### Sir Isaac Newton

He realised that most liquids flow in the same way (also called viscosity) unless they are either pressurised, heated or cooled until they become a gas or a solid 0  $\bigcirc$ 

#### Sir Isaac Newton

 In addition, putting them under stress e.g. hitting them with a hammers does not change their structure in any way. (Although it may cause splashing!)





These 'strange' liquids respond in a different way to stress and make changes in their 'flow' (viscosity). Different liquids respond in different ways.

0

0

• Here are some different ways that non-Newtonian liquids can behave when they are Flows mor pictely. Mide Et Cots Sover time.



Behaviour Flows less freely when 'stressed' over time.



• Cream, the more you whip it, the less like liquid it gets.

Behaviour Flows more freely when 'stressed'.



Tomato Ketchup



#### **Cornflour Slime!**

Behaviour Flows less freely when 'stressed'.

# Cornflour Slime!

How to make cornflour slime: You will need (approx.): 240ml of water 230g of cornflour A few drops of food colouring (optional)





Mix the ingredients together in a large bowl and then experiment!

## Cornflour Slime!

What happens when you try to grab a handful of slime?



What happens when you push down hard on it?

What happens when you spread it thinly on a plate and hit it with your hand?

What happens when you let go?

# Cornflour Slime!

What would happen if you did the same thing with water?



Do you think you would be able to walk on it if you had enough of it?

Why do you think it behaves in this way?

What do you think would happen if you tried to dive into a pool of it?

## How Does It Work?

• The mix of cornflour and water is actually a 'suspension' meaning that the cornflour and water are not actually mixed into each other. If the suspension was left for long enough, clear water would rise to the top and the heavier cornflour would sink to the bottom.



#### How Does It Work?

• When pressure is put on the slime mixture, the water molecules flow away from the surface leaving big clumps of cornflour molecules to give the liquid its firmness.



#### How Does It Work?

When the pressure is released, the water flows back in to the spaces and the liquid flows freely once more.



#### What Else Can You Find out About?



#### What Else Can You Find out About?

What other non-Newtonian liquids there are;

What practical applications there are for knowledge of non-Newtonian liquids;

What the slowest flowing liquid is;

Why cornflour slime is called oobleck in the USA.

