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January 2021 – Spring Term

**#SolveItWithSTEM@Home**

**Infant and Primary Activity Pack**

*Friday 29<sup>th</sup> January 2021*

# Welcome everyone!



Welcome to this week's pack everybody! For those of you who may not know me...I am Eddie and I am part of the Fawley STEM team. Last week we focussed on the **Weather and the Earth**...we hope you enjoyed the pack! This week, we are taking you through the world of **Food**.

We are surrounded by food everyday and it is a important we find the right balance of all the food groups within our daily diets.

You will have to excuse me... I had beans for my lunch...

...I'll take over from here Eddie. You will find all sorts of activities relating to food in this pack.

Did you know there are certain foods you can throw into your compost bin? This can include banana peels, apple cores and many more!

Anyway, enjoy the pack and remember to share them with your family and friends online – just visit [www.fawleyonline.org.uk](http://www.fawleyonline.org.uk)

See you soon...**Alice and Eddie**



# Activity: Fruit floating boats

(Make sure you have an adult help you with this activity)

This activity focusses on floating and sinking – you can take part in the activity and learn the difference between what floats and what sinks!

**Prediction time...can you predict which fruits will float and which will sink?**

## The items you will require include:

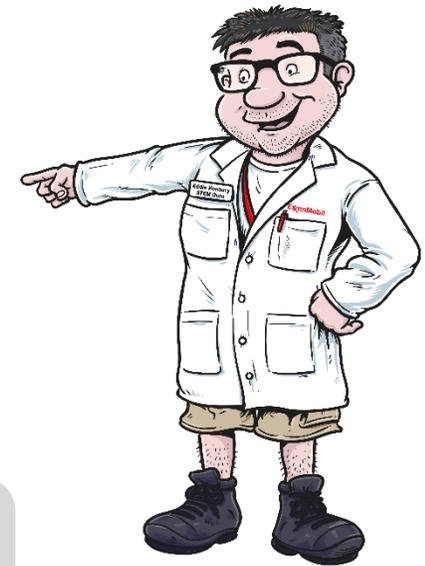
- 1 x lemon
- 1 x melon
- 1 x lime
- 1 x grape
- Cocktail sticks
- Paper to make the sails
- Double sided tape
- Play-doh

## How to make the fruity boat...

- Decide how big you want the boat to be – ensure an adult is present to slice the fruit up for you.
- The adult will need to hollow out the fruit (remove the inside of the fruit) with a spoon or knife. Little tip: to minimise waste...you can eat the scooped out fruit!
- If the skin is thick enough, insert the cocktail stick into the flesh or use some play-doh to keep it secure.
- Using paper and double sided tape, create a paper sail for your fruit. Add this onto the cocktail stick. Now see if your fruit boat floats.
- Try this experiment with all the fruits listed above.

**Which fruits ended up floating? Which fruits ended up sinking?  
Was your prediction correct?**

When something is in water, there are **two forces** acting on it. Its **weight** and the force of the water pushing up, **the upthrust**. If the weight is equal to or less than the upthrust, it floats. Things that float are **buoyant**. If the weight is greater than the upthrust, it sinks.



This page was inspired by the following websites:  
[Science Sparks – Fruity Lemon Boats](#)  
[What is buoyancy? – BBC Bitesize](#)  
[Floating Fruit Science Experiment](#)

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# Experiment: Cabbage and water movement

(Make sure you have an adult help you with this activity)

## Items Required:

- 1 cabbage (or celery) – long leafed is best
- 2 transparent containers
- Food colouring in several shades
- Water
- Knife

## Instructions:

- Slice the cabbage from the stalk with a knife – ensure an adult completes this part.
- Pour water into each container.
- Add a few drops of food colouring to each container. Use a different colour in each container.
- Now...just wait!

### How it works

Plants like cabbage and celery have tubes in them called xylem that allow them to pull water from the ground and move it up through their leaves. This is how plants “breathe.” So, when you put cabbage in water with food colouring in it, you’ll get to actually see the water’s movement from the stalk up through the leaves.

The cabbage (or celery) water movement experiment is very simple but demonstrates how plants work in a straightforward—and colourful—way.



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Year 1

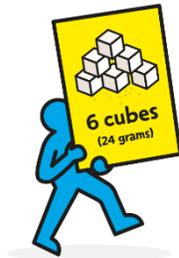
I found some great food related maths questions online! These were taken from [Sugar Smart World](#) on the PHE website... Why not give the next couple of pages a go and we will provide the answers next week! This page is aimed for students studying KS1 and the next page is for lower KS2...enjoy!

## How much is too much?

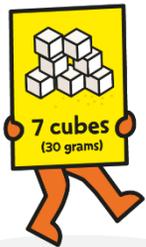
The maximum daily amounts of added sugar are:



for 4 to 6 years



for 7 to 10 years



for 11+ years

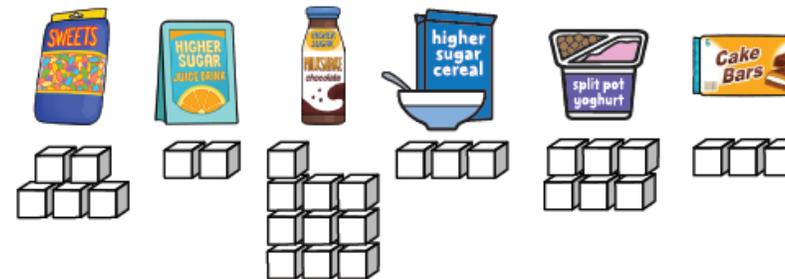
## Sugar Smart World report

### 1. Can you help Rocky the Ranger with his sugar sums?



Find out how many sugar cubes the people of Sugar Smart World are having for breakfast, lunch and pudding.

Breakfast		+		=	-----		
Lunch		+		=	-----		
Pudding		+		+		=	-----



### 2. Circle the healthier food and drink that you like.



Year 3



## Can you help the people of Sugar Smart World? Shanice the Sherriff needs your help!

1. Show her how many sugar cubes and grams of sugar each item contains.



			
<input type="text" value="3"/> sugar cubes	<input type="text" value="6"/> sugar cubes	<input type="text" value="9"/> sugar cubes	<input type="text" value=""/> sugar cubes
<input type="text" value=""/> grams of sugar	<input type="text" value=""/> grams of sugar	<input type="text" value=""/> grams of sugar	<input type="text" value="12"/> grams of sugar

1  
= 4 grams of sugar

2. Can you help Shanice with her sums?

An 8-year-old citizen showed Shanice how much sugar he has in a day from this food and drink:

Breakfast	Drinks
	
Yoghurts	Puddings
	

Work out the citizen's total:

- Daily sugar cubes?
- Sugar cubes over his daily maximum of 6 cubes?
- Daily grams of sugar?
- Weekly sugar cubes?

3. Can you help the citizen to reduce his daily sugar intake by making some swaps?

Circle the items that you would choose.

Breakfast			Drinks		
					
Porridge with berries	Wheat biscuit cereal	Shredded wholegrain wheat	Lower-fat milk	No added sugar juice drink	Water
Yoghurts			Puddings		
					
Plain natural yoghurt with fruit	Low fat, lower-sugar yoghurt	Plain natural yoghurt with berries	Fruit salad in juice	Lower-sugar rice pudding	Sugar free jelly

# Answers: w/e 22<sup>nd</sup> January 2021 STEM Pack

## Activity (Page 3) – Who said that?

“Hi there! You may see me swimming around the Arctic waters with my very large paws. They are slightly webbed so I can paddle! I have a white coat so I can hide from prey on the snow and ice. I have thick layers of fat and fur to keep me insulated against the cold.”

Who am I?

**Polar Bear**

Which pole do I live at?

**The North Pole**

“Good day to you – I huddle with my friends to escape the wind and to keep me warm. We take it in turns to protect the group. When I was an egg, my father would balance me on his feet and cover me with feathered skin to protect me from the elements. He done this for two months!”

Who am I?

**Penguin**

Which pole do I live at?

**The South Pole**

“Hello everybody...you may recognise me with wrinkled brown and pink skin. I have long whiskers which are very sensitive and help me find my favourite meals underwater. I have lots of blubber on my body which keeps me warm in the cold Arctic water. I have amazingly long tusks that help me break breathing holes into the ice from below.”

Who am I?

**Walrus**

Which pole do I live at?

**The North Pole**

“Hey, nice to meet you. My beautiful coat acts as effective winter camouflage, letting me hide from predators. When the seasons change, my coat changes to brown/grey. My thick tail helps me balance but it also provides a warm cover in the colder months.”

Who am I?

**Arctic Fox**

Which pole do I live at?

**The North Pole**

## Maths (Page 5) – Weather and Time

If it started raining at 12:00pm and it has been forecasted to rain for two hours, how long will it rain for? (Circle your answer)

**A) 120 minutes**

Match the times.

3 days of sunshine **is...72 hours**

5 hours of hailstorms **is...300 minutes**

2 minutes of strong winds **is...120 seconds**

If the sun was predicted to rise at 07:30am on Tuesday morning and predicted to set at 18:45pm in the evening – how long is the sun in the sky? (hours and minutes)

**11 hours and 15 minutes**

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We hope you enjoyed this week's activities.

Another pack will be on its way to you next week...

Best wishes

The ExxonMobil Fawley #SolveItWithSTEM Team!

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