

we are trying to find the best conditions for making CO_2 with yeast and sugar.

Mr Warburton wants to create a new floaty loaf but needs our help with the production. Choose a variable to change - easy one is water temperature/could do amount of sugar

make a prediction on their slice of bread - link back to previous learning about plants which need water, food and light. sugar is the yeast's food. plants grow better in the spring/summer when it is warmer.

discuss how we would make the loaf floaty - more bubbles so more CO_2 from the yeast 'eating' the sugar

we basically want the balloon to be as big as possible. they can measure it using string around the biggest part of the balloon

roles for kids - jobs they need to have to stop them fighting! for example results recorder, measurement taker, yeast adder, sugar adder, balloon person etc!

record their results in their work book

please keep the bottles that you use if possible as other year groups will need them

LO: To plan and carry out a fair test

I know which variable changing and which I am keeping the same

I can take accurate measurements

I understand what my results mean

What did we do last lesson?



What happened and why?



Inside the bottle was warm water, yeast and sugar. Yeast is a fungus which is used in bread making. When yeast is added to water, the yeast 'wakes up' and begins to ferment or 'eat' the sugar we added. As the sugar is eaten, a waste product is produced. Can you remember what it was?

For the yeast to wake up and work it needs the same things a plant needs to grow. Can you remember what a plant needs?



Dear year 6,


I am sure you have heard and hopefully even eaten some of my delicious Warburtons bread. Maybe you had it as a sandwich or as part of a healthy breakfast. I am currently attempting to produce a brand new loaf which I have never manufactured before. It will be more luxurious than my other loaves and needs to be extra light and fluffy.

I heard that in year 6 you learn about micro-organisms and how they are used in food production. Yeast is a micro-organism which is very important in the bread making industry. Unfortunately, I have not got time to experiment with the recipe for my new loaf and I was hoping you could help. I need you to find out how to make the Light and Floaty Loafy live up to its name. Do you think you could help?

Many thanks,

Mr Warburton

How will we make sure the loaf is extra light and floaty?



What could we vary (change) to try and make the most bubbles?



Will all of these affect the amount of CO₂ produced?

Can you think of any others?



Fill in the question, circle the enquiry type, how they will measure the co2 and their role.

Will the amount of sugar/temperature affect the amount of carbon dioxide produced?



Our question is:



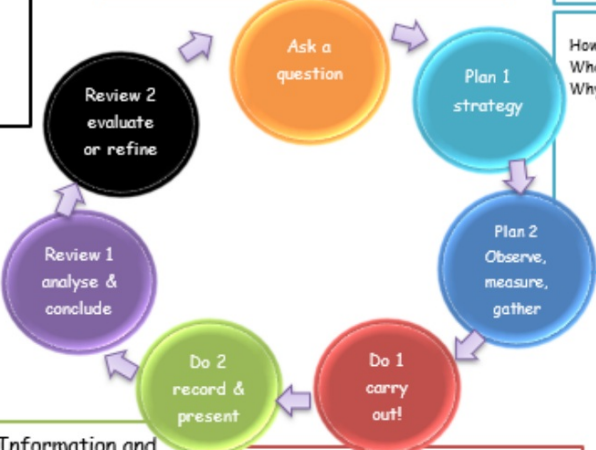
Plan

- How can you answer your question?
What type of enquiry should you use?
Why?
1. Exploring
 2. Research
 3. Observing over time
 4. Fair test/pattern seeking
 5. Sorting and classifying
 6. Designing and developing
 7. Using a model

How will you measure the amount of carbon dioxide produced?

Evaluate and Refine

Analyse and Conclude



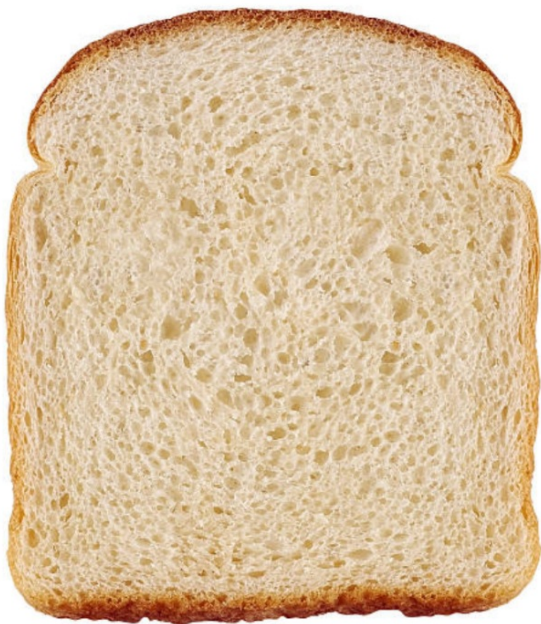
Present Information and Communicate

Carry out

What is your role?



Write your prediction on the slice of bread.



I predict that the most carbon dioxide will be produced when.....

I think this because.....

Have you agreed the temperatures you will use?

Have you agreed the amounts of sugar you are going to use?

What is your role ?
Write it on your circle plan

Draw into books

Carry out your investigation

HINT: It takes quite a while for the balloons to inflate so you may want to start all of your bottles off at the same time. Make sure the bottle is well sealed otherwise the CO₂ leaks out.

Have a couple of trays handy incase it spills.

By the end of the lesson you should have planned and carried out the investigation.

You should each have a results chart in your book

Teacher - take pics!