



Oxton St Saviour's CE Aided Primary School
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5th October 2021

Dear Year 1-6 Parents,

Does your child love science? Would they like to join a science club after school? Myself, Miss Milburn and Mr Purslow will be running the club on a series of Thursdays after October half-term. If successful, we hope to arrange this club again in the Spring. We will be using the CREST award (British Science Association) challenges as our main focus. These will be selected by our Year 5/6 science ambassadors.



The work carried out will contribute towards an award once 8 challenges have been completed. We aim to cover 4 in the club, leaving 4 to be done at home before next May. Each investigation will include information for parents and an activity card for children. (Please see example below).

Starting after the October half term, I will post investigations on the school website to be completed at home; the work carried out can be submitted to me by email: science@oxtonstsaviours.wirral.sch.uk. Please include your child's name and year group in the 'subject'.

Once all eight investigations are completed and work reviewed, we will submit an application for each child, to CREST, to gain their award. Those children who completed some investigations last year, can use those towards their award this year.

If you are interested in your child being involved in this science club, please email me at the above email before Friday 22nd October 2020.

Yours sincerely

Mrs Stewart





SUPERSTAR



A Hole in my Bucket

Organiser's Card



About the activity

This activity is designed to get children thinking about materials, liquids and testing methods.

Just like the song 'There's A Hole In My Bucket', the children are asked to find a way to plug the hole in a container to stop water pouring out.

Through this activity you will support your group to:

- Carry out their own tests to compare different sticky materials
- Observe, measure and record results carefully
- Respond creatively, writing new lyrics for a well-known song.

Kit list

- A selection of different materials for testing, eg: sticky tape, fabric, Blu-Tack, cotton wool, tissues, straws etc.
- Plastic containers with holes cut into the bottom
- Ruler
- Timers
- Washing up bowls or containers
- Measuring jugs
- Scissors
- Plastic aprons
- Paper towels



What to do

1. Introduce the activity using the song 'There's a Hole in my Bucket', ask them if they think they can help Liza and Henry by finding out the best way to fix the hole in their bucket.
2. Give out activity cards and equipment to the children.
3. Explain that they will be using the equipment provided to test the best way to stop a leak.
4. Encourage children to discuss their ideas and how to carry out their investigations. Prompt questions:
 - What materials will they test?
 - How will they cover the leaky hole?
 - How will they make sure their test is fair?
 - How will they record their results?
5. Support children to conduct their tests and make their own records of their results. They could also take photographs or make drawings.
6. Ask the children to present their findings to the rest of the group, they can be as creative in their presentation as they want - the activity card suggests they could re-write the words to the song, using their findings.



Discuss

Children may have difficulty keeping some tests fair, e.g. how to compare sticky tape with glue or Blu-Tack etc. The following prompts will help them to think about how to keep their tests fair.

Make sure they place a bowl under the bucket or cup to collect the leaking water.

If they use just one bucket for all of the tests, it must be dried thoroughly after each test. A new material might not stick properly to a wet surface and results will be inaccurate. If they succeed in stopping the leak, they will need a new bucket!

Keywords

- Observation
- Measurement
- Volume

Watch out!

Cut holes in buckets, cups or clean yoghurt pots before any tests begin and check that there are no rough edges around the hole.

When using water, make sure you have paper towels handy to mop up spills, especially on the floor.





CREST
AWARDS

SUPERSTAR

A Hole in my Bucket

Activity Card

Do you know the tune to this well-known song?

If not, see if you can find out about it.

There's a hole in my bucket, dear Liza, dear Liza

There's a hole in my bucket, dear Liza,
a hole.

Then mend it dear Henry, dear Henry, dear Henry

Then mend it dear Henry, dear Henry mend it.

With what shall I mend it, dear Liza? ...

With a straw, dear Henry ...

The straw is too long ...

Then cut it ...

With what shall I cut it? ...

With a knife ...

The knife is too blunt ...

Then sharpen it ...

With what shall I sharpen it? ...

With a stone ...

The stone is too dry ...

Then wet it ...

With what shall I wet it? ...

With some water ...

With what shall I fetch it? ...

With a bucket ...

BUT THERE'S A

HOLE IN MY BUCKET!



Your challenge

Liza and Henry need your help. Can you find something that will stop Henry's bucket from leaking?

Liza suggests using straw to fix the hole. Do you think that would work well?

What about sticky materials? Would any of them be better for mending the hole in Henry's bucket?

Do some tests to find out the best method of fixing a leak!

Discuss

- Which materials will you test?
- How many different materials will you compare?
- Does it matter how you use your material to fill the hole?
- What will you need to observe or measure in your tests?



Getting started

We are going to use clean plastic drinking cups, with the same sized holes cut in the bottom of each, then try out our ideas.

Some of your fellow investigators have some ideas!

"I think we should try to fix the hole, then put water in and just watch what happens."

"We could do some timing to find out how long it is before the water starts to leak out."

"Let's measure how much water leaks out in 2 minutes. We could put marks up the side of the 'buckets' to help us."

What do you think? Do you have another idea?

Test your ideas

You could use a table like this to record your findings:

Material	How much water leaked through?
Blu-Tack	
Sticky tape	
Glue	
Chewing gum	
Straw	

Share your ideas

Were there any problems with your tests? How could you improve them?

How easy did you think it was to keep your tests fair? Why?

Which material should Liza and Henry use to fix a hole in their bucket?

On which side of the hole should they stick it?

Why have you chosen this material?

Why not re-write the words to the song to include what you have found out?