

**ExxonMobil**

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February 2021 – Spring Term

**#SolveItWithSTEM@Home**

**Infant and Primary Activity Pack**

*Friday 26<sup>th</sup> February 2021*

# Welcome back everyone...



Hello everybody – back to schooling this week, whether it be at home or in the classroom. We hope you had a lovely half term break last week!

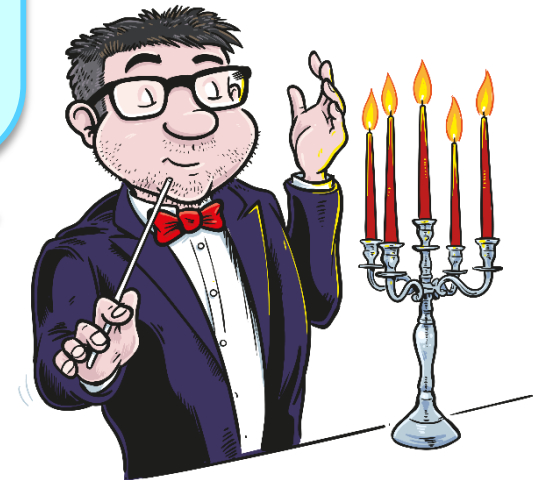
Eddie and I have some sad news...due to the schools reopening on Monday 8<sup>th</sup> March, next week (w/e Friday 5<sup>th</sup> March) will be our last week whilst we take a break!...

Can you guess what the theme is this week from what Eddie is doing?...

...this week it is **Sound!** I am currently serenading the candles with my classical music.

Take a look to see what we have in store for you.

As always, remember to share these packs with your family and friends online – just visit [www.fawleyonline.org.uk](http://www.fawleyonline.org.uk)





# Activity: Xylophone Water Jars

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

## Supplies Needed:

- 4 empty and clean glasses
- 4 different colours of food colouring
- Water
- Wooden spoon

## What to Do:

1. Fill each jar with varying amounts of water.
2. Add a few drops of food colouring to each jar – ensuring you use a different colour each time.
3. Using a wooden spoon to act like a drum stick, gently tap the outside of each jar.

***What sounds are being made? Which jars have the highest or lowest pitch? Why do some jars emit a lower sound, while others are higher?***

***Play around with the water levels in each jar and experiment with pitch!***

Musical instruments are so much fun to make! This sound activity teaches children how varying levels of water in containers change the pitch of the sound created.



There is a video on the BBC Bitesize website where they use a piece of string to identify the different pitches...why not take a look?  
[Making sounds with different pitches - KS2 Science - BBC Bitesize](#)

# Experiment: See Sound

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

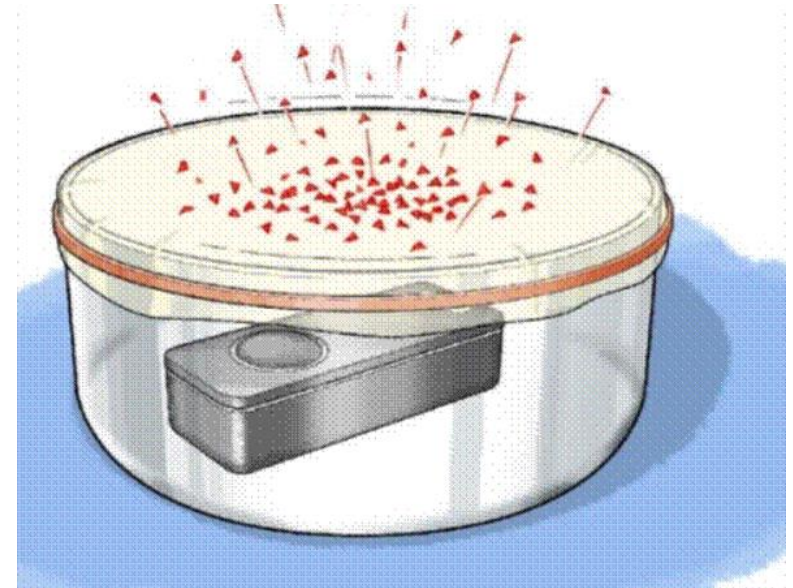
## Supplies Needed:

- Empty clear mixing bowl
- Plastic wrap (cling film)
- Large rubber band
- Salt crystals or sugar crystals
- Something to make sound with (e.g. saucepan and a spoon or a speaker)

## What to Do:

- Wrap a sheet of plastic wrap over the mixing bowl so that it's taut, and secure with the large rubber band. Be sure that the plastic wrap is tight and does not sag.
- Place a few of the salt crystals on the top of the plastic wrap – making sure they are in the middle of the wrap.
- Using a saucepan or speaker get close to the salt crystals and make some noise loudly!  
***What happens to the crystals? Do they move?***
- If you have one, experiment with a speaker! If you have a wireless speaker, place this inside the bowl. Try louder and softer sounds to watch the salt crystals react to the sound vibrations!
- You can also speak closely to the salt crystals and see the crystals move, this is actually the ***sound vibrations***. Try different sounds see how the crystals come to life!

Sound vibrations travel through air, water, and even solid objects, but it's not possible to see the waves. What if we could see the waves in another way? This science of sound experiment makes sound more visible by forcing objects to react to the sound vibrations.



# Quiz time!: Sound waves

How much do you know about sound? Test your knowledge of this form of energy in the below sound quiz!  
Answers will be provided in next weeks pack.

1. Which unit is sound frequency measured in?

- Amps
- Joules
- Hertz
- Heinz

2. Which unit is the intensity (loudness) of a sound measured in?

- Decibels
- Crucibles
- Multiples
- Degrees

3. When a sound wave hits your ear, it makes the air in your ear vibrate. These vibrations cause what part of your body to vibrate?

- Your auditory nerve
- Your ear drum
- Your aorta
- Your retina

4. Which travels fastest, light or sound?

- Light travels faster than sound
- Light and sound travel at the same speed
- Sounds always travels faster than light
- Sound sometimes travels faster than light

5. Why does a guitar produce a lower pitch when you do not press any fingers against a string while plucking it?

- A shorter string produces a lower pitch
- A shorter string produces a louder sound
- A longer string produces a higher pitch
- A longer string produces a lower pitch

6. What can sound travel through?

- Air
- Water
- Walls
- All of the above

7. When something vibrates quickly, it makes high frequency waves. You hear this as what kind of sound?

- A high pitch
- A low pitch
- A medium pitch
- A G sharp

8. Sound waves can be reflected, transmitted or what else?

- Bounced
- Deflected
- Transcribed
- Absorbed

9. Which musical instruments produce lower pitches?

- Shorter or thinner instruments
- Larger or thicker instruments
- Brass instruments
- Woodwind instruments

10. Sound waves can be reflected off solid objects. When this happens, what do we hear?

- Music
- An echo
- Thunder
- No sound

We hope you enjoyed this week's activities.

As schools are planning to reopen on Monday 8<sup>th</sup> March,  
next week's pack will be our last pack.....

Best wishes

The ExxonMobil Fawley #SolveItWithSTEM Team!

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