

Year 4 Topic Learning for week beginning: Monday 11th January 2021

Information

This week there are 3 science lessons planned for you to enjoy. I understand that these may be tricky to do at home, so just try your best.

I will attach any worksheets you need at the end of this document and alongside, on the website, there will be PowerPoints available.

Monday's lesson is repeated from last Friday, so if you already printed and completed this last week, you do not need to do it again. We know lots of us needed to still do this.

Resources needed for science this week if you have these available - please do not go out and get these, stay safe. It doesn't matter if you are not able to complete everything.

- Plastic or paper straws and scissors.
- string & 2 paper cups to make a string telephone
- ringing alarm clock or alarm on a phone for an experiment to see how far away you can hear the alarm
- a music player - e.g. a phone or something else which can make a noise, different materials to wrap this up (tea towel, bubble wrap, tin foil, t-shirt etc) - an investigation to see if you can soundproof the music.
- Collect some recycling to create a junk modelled musical instrument (we will be doing this next week) but a heads up give you a good start at collecting things.

I would love to see a photo of your learning...perhaps you would like to send me a picture of your learning this week.

P.E.

Make sure you get outside for exercise as much as possible.

Joe Wicks is back as the nation's PE teacher on Mondays, Wednesdays and Fridays. You can also try some more online video workouts.

Look out for a challenge from Mr. Brown too...this will keep you fit and you'll have fun.

Lesson 1 - Monday - Science

To explore ways to change the pitch of a sound.

Please look back at the science video I made last week which is with our learning on the website. This will show you what to do today.

You can watch this video clip about how woodwind instruments make sounds.

[Music / Science KS2: How woodwind instruments make sound - BBC Teach](#)

Watch the PowerPoint which tells you about changing the pitch of a sound. Here are the links to the video clip in the PowerPoint

[What makes noise sound higher or lower? - KS2 Science - BBC Bitesize](#)

[Making sounds with different pitches - KS2 Science - BBC Bitesize](#)

Have fun making a reed straw - this is explained in the PowerPoint and on the worksheet as PanPipes.

Complete the worksheet with a drawing of your PanPipes and tell me how you made these. Or you can make a little poster explaining or take some photos. Rather than making a whole set of panpipes, you could make a low and a high one and explain the difference.

I hope you enjoy this. 😊

For more information on this lesson and adult, background notes, this can be accessed at:

Access this lesson using pin code: **CJ0715** at [Twinkl Go](#)

Lesson 2 -Tuesday - Science

To explain how different sounds travel.

1. Watch this clip:
[How distance from a sound source affects how loud it will seem - KS2 Science - BBC Bitesize](#)
2. Watch the attached PowerPoint which tells you about how sound travels.
3. It may be helpful to look back at this link which tells us about this and more fascinating facts which you may have watched last week.

Music / Science KS2: What is sound? - BBC

Teach

4. Cut and stick the pictures on the 'travelling sounds activity sheet'.
5. Try to carry out the investigation in the PowerPoint - if you can. Guess how far away you can hear a ringing alarm in your house.
6. Now see if you can make a string telephone to make sounds louder so it will travel further. Do not worry if you do not have anything to make this with at home - it does not matter.

How do brass instruments make a sound? Can you remember? Watch this link:

[Music / Science KS2: How brass instruments make sound - BBC Teach](#)

For more information on this lesson and adult, background notes, this can be accessed at:

Access this lesson using pin code: **CJ3859**
at [Twinkl Go](#)

Lesson 3 & 4 - Wednesday & Thursday - Science

We have allowed 2 days to cover this lesson or use Wednesday to finish of Tuesday's lesson and then do this lesson tomorrow.

To explain how different sounds travel and investigate ways to absorb sound.

1. Watch the PowerPoint. Look at the statements on the slide and decide if these are true or false.
2. Why would people need to absorb a sound? Look at the suggestions and ideas in the PowerPoint.
3. Look at the investigation and see if you are able to carry this out. We understand that this may be really tricky at home, so do not worry if you are unable to do this.
4. When you write your letter, use these words to help you:

Sound	vibrations	absorb
Hard	solid	energy
Through	soft	air

How do stringed instruments make a sound?

Watch this clip:

[Music / Science KS2: How string instruments make sound - BBC Teach](#)

For more information on this lesson and adult, background notes, this can be accessed at:

Access this lesson using pin code: **CJ8596**
at [Twinkl Go](#)



Straw Pan Pipes

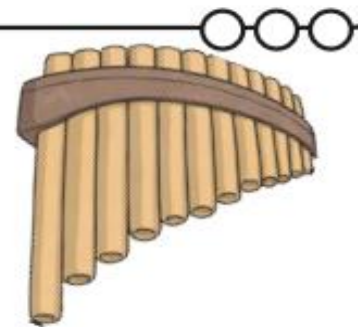
Use several straws to make a set of pan pipes! Each straw should play a different pitch when you blow into it.

Flatten the end 2cm of each straw, and cut a triangle in the end.

Prepare several straws like this, then think about how to change the pitch of the sound each straw makes. Stick or tie the straws together to make your set of pan pipes.

Blow hard through the triangle end of the straw to make a sound. You may have to try a few times to make the sound!

Draw a picture or stick a photo of your finished pan pipes in the box below.



Use these words to help you write your explanation:

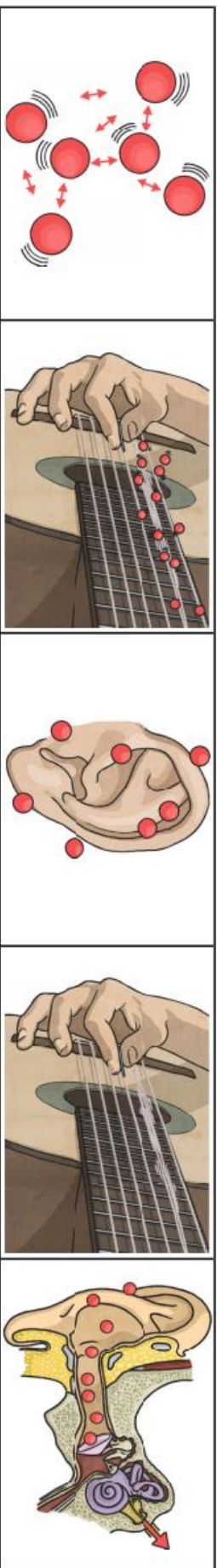
sound
vibration
pitch
high
low
short
long
air
different
length

Explain how you created your pan pipes so that they can play sounds of different pitches.



Travelling Sounds

Cut out the pictures at the bottom of the page and place them in the correct order in the boxes below. Add a caption beneath each picture to explain what is happening.





String Telephone



Make a string telephone to explore how sounds travel over a distance.

You will need:

Two paper cups

A compass or sewing needle to make holes in the cups;

Approximately 20m length of string (kite string works well).



What to do:

1. Use the compass or sewing needle to carefully poke a hole in the bottom of each cup. You may need to ask an adult to help you.
2. Thread the string through the holes and tie a knot at each end to stop it pulling through the cups.
3. You and your partner should each hold a cup and move apart so that the string is tight.
4. Take turns talking into your cup while your partner listens in their cup.


How does it work?

Use the key words below to help you explain how your string telephone works.

sound	voice	cup	vibrates	energy	string	solid
particles	close	quickly	distance	ear	louder	air



Soundproofed Studio



Type of Material	Loudness of Sound

The band are waiting to hear your suggestions! Use your results to choose the best material for soundproofing their studio. Write a letter to the band explaining your choice. Think of your own name for the band.

Dear _____

I have tested several different materials and my results show that the one you should use to soundproof your studio is _____

It was the best material because _____

Yours sincerely, _____

