



SHAPING OUR WORLD  
9 - 16 NOVEMBER 2008

## The Primary Science Week Activity Pack

### Sights and Sounds

Get your senses involved in the 2008 Science Week Activity Pack. Here we explore the sense of sight and hearing through some simple, but incredibly fun investigations and activities.

In these two very fun demonstrations using very simple household objects, we will see how sound is a wave, while learning all about amplitude and pitch.

#### Sounds like Jumping Rice

Things you will need:

- Stereo-speaker
- Rice grains (uncooked)
- Sheet of paper



Firstly place a sheet of paper on top of your speaker. Next, sprinkle some uncooked rice grains onto the sheet of paper. Now turn on your speaker and slowly turn up the volume of the music.

What happens to the rice at different volumes? Turn on the music full blast and watch out for the jumping rice!

Sound is a wave and the wave vibrates particles in the air. The louder the sound, the bigger the amplitude. The amplitude is the length of the sound wave. It is the sound wave that is moving the rice, the bigger the sound, the more the rice jumps!

## Sounds like Bottle Pipes



Things you will need:

- 8 bottles  
(Same shape and size)
- Jug
- Funnel
- Water

- Make sure that all bottles are empty and clean

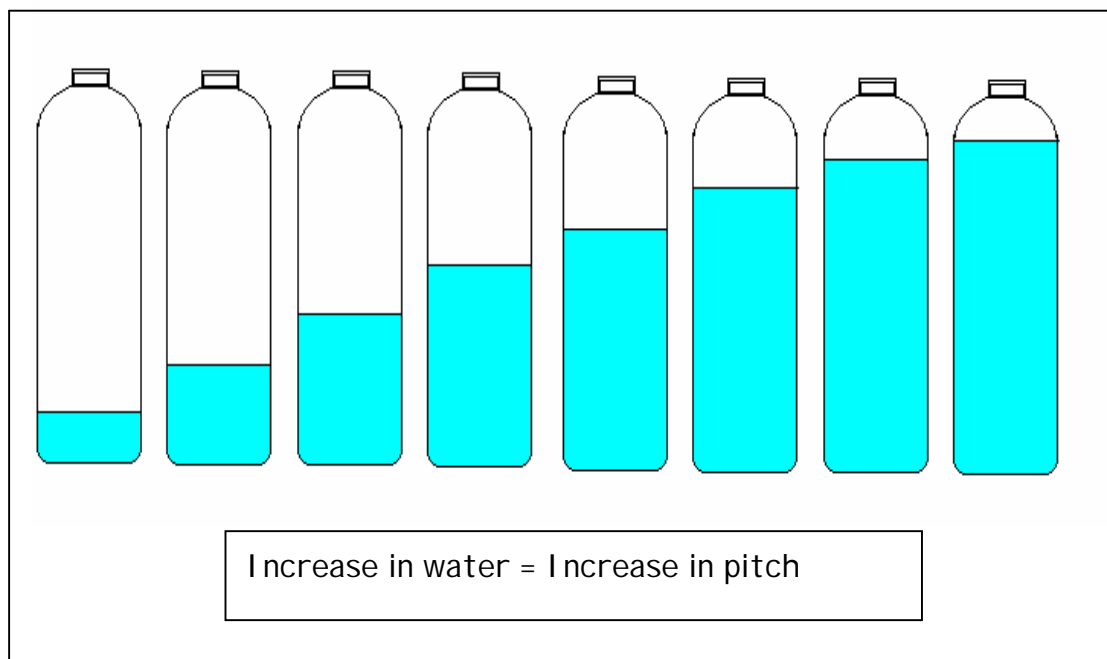
- Line up the 8 bottles in a row

- Using the jug and the funnel pour a small amount of water into the first bottle

- For each bottle increase the amount of water inside as shown in the diagram below

Is there a difference in the sound when you blow into each bottle?

What do you notice about the sounds in the different bottles?



Sound is a wave and it vibrates the air inside the bottle. The more air in the bottle the deeper the sound; the less air in the bottle the higher the sound. This is known as pitch.

Try play 'do-ray-me-fa-so-la-ti-do on' the bottle pipes. The lowest pitch is at the lowest do and the highest pitch is at the highest do.



What's your favourite colour?



RICHARD	Red
OF	Orange
YORK	Yellow
GAVE	Green
BATTLE	Blue
IN	Indigo
VAIN	Violet

Have you ever wondered what your favourite colour is? Everything you can see has a colour, but have you ever wondered where colour comes from?

White light is composed of all the rainbow colors. You can break light down by using prisms. A prism is a transparent object that usually has three sides and bends light so that it breaks up into rainbow colours. Using a prism on an overhead projector, you will see how light passes through the prism and produces a rainbow effect. Move and rotate the prism to see what happens.

Colour comes from light; we need light to see all of the things around us. Where does light come from and how many of these places can you list? Using crayons and paper, how many of these can you draw?

That's right, light can come from many different places, such as the sun, the moon, the stars, light bulbs, fire, fireworks, lamps and lasers.

Gather up as many different materials as you can (CDs, construction paper, cellophane, wax paper, mirrors) and using these materials what can you tell about the different way they react to light?

List your materials in the table below and tick each box to show what kind of material they are.

Material	Reflect, reflection - light bouncing off objects	Transparent (light passes through)	Translucent (some light passes through)	Opaque (no light passes through)	dull, matte	shiny, glossy

For lots more primary science ideas visit the resources and activity pages on the Primary Science website [www.primaryscience.ie](http://www.primaryscience.ie)

## Primary Science Week Quiz

Q1 Who invented the television?

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Q2 Who invented the telephone?

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Q3 Who invented pasteurisation?

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Q4 What do kilometres measure?

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Q5 What do hours, minutes and seconds measure?

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Q6 What does Kilometres per hour measure?

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Q7 How many colours are there in a rainbow?  
\_\_\_\_\_

Q8 What are the colours of the rainbow?  
\_\_\_\_\_

Q9 Is the Earth the 1st, 2nd or 3rd planet away from the sun?  
\_\_\_\_\_

Q10 A material that does not let light pass through is called  
\_\_\_\_\_

Q11 A material that allows electricity to flow through it is called  
\_\_\_\_\_

Q12 A material that attracts iron is called a  
\_\_\_\_\_

Q13 A toy car is being pushed down a ramp, if you put sandpaper on the ramp does this makes the car go faster or slower?  
\_\_\_\_\_

Q14 What is the nut of an Oak tree called?  
\_\_\_\_\_

Q15 Name the part of the tree that is usually underground, draws minerals and water from the surrounding soil, and sometimes stores food.  
\_\_\_\_\_

Q16 What organ pumps blood around the body?  
\_\_\_\_\_

Q17 What organ in your body is used for breathing?  
\_\_\_\_\_

Q18 Name the 5 senses  
\_\_\_\_\_

## SCIENCE WEEK WORDSEARCH

A R T Y B U W E T Y B U A Z V V R  
 U R A I N B O W R T H J T H G I L  
 S J N B D L L O O K N B R E R O W  
 P U Q G E U T R S U N A D E F L Q  
 E F A R E E D W E R F H H A G E X  
 C R S E D F B R A V C R G R E T Z  
 T Q W E N J A U H A S D N U R T Y  
 R S T N L K T R A N S P A R E N T  
 U O E R T U B N O P L I T E V R A  
 M U Q S I G H T E T S T A R S A B  
 S N G H Y U I L G H P C T Y U Y W  
 O D A R A C H S P O P H R T Y R A  
 U G F E R R G G T U H J K I U F V  
 S H M I R R O R E R R R E D U K E  
 I T O G R E U H Y B G H R J J K N  
 G I O P A Q U E S I N D I G O K L  
 H Y N R R F Y U J N V F W D E R G  
 T N H E T R G T H R U W O L L E Y

Rainbow

Sight

Red

Spectrum

Opaque

Orange

Light

Transparent

Yellow

Sound

Mirror

Green

Ear

Sun

Blue

Pitch

Moon

Indigo

Wave

Stars

Violet

**\*\*Answers to the Primary Science Week Quiz**

Q1	John Logie Baird		Q10	Opaque
Q2	Alexander Graham Bell		Q11	A conductor
Q3	Louis Pasteur		Q12	Magnet
Q4	Speed		Q13	Slower
Q5	Time		Q14	Acorn
Q6	Distance		Q15	Roots
Q7	7		Q16	Heart
Q8	Red, Orange, Yellow, Green, Blue, Indigo, Violet.		Q17	Lungs
Q9	3rd		Q18	Hearing, sight, touch, smell, taste