St. Giles CE Primary School

Achieving Through Adventure

Learning Project TERM 6, WEEK 2
TOPIC OF THE WEEK: I CAN'T HEAR YOU!

Age Range: Y3/4

Weekly Maths Tasks (Aim to do 1 per day)

ONLINE: Watch the White Rose videos below and complete the worksheets attached to this pack. This week's topic is **tenths and hundredths.**

Please note: you may have completed these videos in prior weeks but in order to align the Y3 and 4 learning more I will set specific videos from now on. The attached worksheets can be completed in line with the videos so please complete these as practice even if you have watched the videos before. The worksheets have 3 levels of questions for each day ***so don't feel you need to complete all questions.***

Years 3 and 4:

Monday: Week 5 Lesson 3 on Tenths

Tuesday: Week 5 Lesson 4 Count in Tenths or Y4

Wednesday: Y3 Week 6 Lesson 1 Tenths as Decimals or Y4 Week 7 Lesson 1 Tenths as Decimals

Thursday: Week 6 Lesson 2 Fractions on a numberline

Friday: try the White Rose Friday Maths Challenge or practise times tables!

SKILLS PRACTICE:

- ONLINE: Work on Times Table Rockstars.
- ONLINE: Daily arithmetic for different areas of maths.
- OFFLINE Maths Challenge: Complete the Geography activity below and then create a bar chart or graph to show the changes in wind speed over the week.

Weekly Reading Tasks (Aim to do 1 per day)

Try to read every day. There are some ideas here:

- ONLINE: This book is about ears and hearing: https://readon.myon.co.uk/reader/index.html?a=inbod_whyear_s11
  1. Read a few sections each day. At the end of each day, write quiz questions you could ask someone about the facts in the book. Try quizzing someone at home and see what they know about sound and ears.
  2. When you finish the book, explain why it is important to look after your ears.
- OFFLINE: Read the text about the Sense of Hearing and answer the questions. Choose the **1, 2** or **3 stars** level text attached to this pack.
- OFFLINE: Choose a book to listen to on Audible or read a book of your choice to an adult. Talk about the story and the characters. Predict what you think might happen next. Explain why you like/ do not like the book.

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Weekly Spelling, Punctuation and Grammar Tasks (Aim to do 1 per day)	Weekly Writing Tasks (Aim to do 1 per day)
• OFFLINE: Practise the Year 3/4 Common Exception Words see list here • OFFLINE: Choose 5 Common Exception words. Write the meaning and an example of how to use the word in a sentence. • ONLINE: Practise weekly spellings on Spelling Shed. • ONLINE: Watch the video that explains what a preposition is. Now make a list of as many prepositions as you can think of. • ONLINE: Look at the reading book 'Why Do My Ears Pop?' from the reading tasks. Can you spot the prepositions in the book? • OFFLINE: Write 10 sentences using different prepositions about this picture: Example: *The cat is sitting **on** the moon and dangling a spider **from** a string.* 	• Go outside if you can (otherwise go into a room alone). Sit quietly and listen to everything around you. Make a quick list of all the sounds you hear. Focus on even the quietest rustle. Then write a sentence about each sound to describe what made it. Try to use similes, fronted adverbials, expanded noun phrases and adverbs. E.g.: As dry as paper, the crispy leaves rustle gently in the warm breeze. • Look at this image. It is a page from a non-fiction book. What features can you see? What is the job of each feature? E.g.: sub-headings tell you what each section of text is about. • ONLINE: Watch the video about exploring the ear and write a description of a journey into an ear! Imagine what you would see, hear, smell, feel at each point on your journey. Use prepositions to explain where you are at each point of the journey: **behind** the ear drum, **along** the ear canal, etc. • Plan and write a report (like the Rocks and Fossils text above) that explains how we hear things. You can use any information sources you have used this week. Make sure you have a title, introduction, sub-headings, diagrams with labels and give lots of facts. Make your work attractive so that people want to read it. This piece of work will probably take you 2 sessions to complete. • ONLINE: Visit https://www.pobble365.com/ and choose one of the activities on the page.

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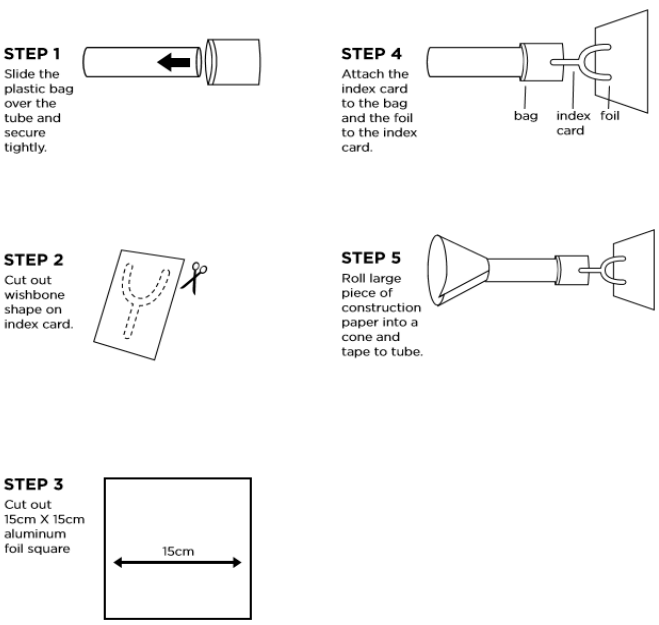
Learning Project - to be done throughout the week

The project this week aims to provide opportunities for your child to explore how we hear and why air is so important.

- Science: L place one finger on your throat or Adam's apple and hum. You should be able to feel a *vibration*. Now stretch a rubber band between your fingers and pluck it. You should now see, feel, and hear the vibrations. A vibration is a rapid back-and-forth motion. When you hum or speak, it makes the vocal cords in your throat vibrate. When you pluck the rubber band, it vibrates. The vibrations from an object, such as a rubber band or vocal cords eventually reach our ears by vibrating the air and we hear them as sounds. If there was no air, we could not hear anything! Watch this video to get a better explanation. Today you are going to make an 'ear' to see how we hear things.
  You will need: a cardboard tube, an elastic band, sticky tap, a plastic bag or clingfilm, a piece of thick card, some kitchen foil, paper.

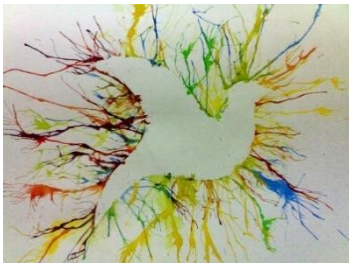


Follow these instructions to construct your 'ear'. It is important that the bag is secured as tightly as possible to the tube. Attach the wishbone shape using tape, being careful not to puncture the bag. Keep it at right angles to the tube. Attach the wishbone to the foil with tape, keeping it at right angles again.

Before doing step 5, try talking into the tube. What happens to the bag? Touch it as you talk. What happens to the foil? Try talking from the side of the tube (not directly into it). What happens now? Add the paper cone and try again. What has changed?

Now watch this video or look at this interactive ear and see if you can identify which parts of a human ear are represented in your model. Draw your 'ear' and label it with the correct words: pinna, ear canal, ear drum, ossicles. CHALLENGE: write sentences to explain what each part of the ear does.

Design Teachnology: Design and make a windchime. Use objects you have at home to make a windchime that you could hang in your garden or in a window. Think about which objects will make the loudest sounds (remember what you have learned in science about vibrations). Experiment with different objects and different ways of hanging them to create the best sounds. Draw a picture of your windchime and label it. Would you make any changes if you made it again? Explain why.



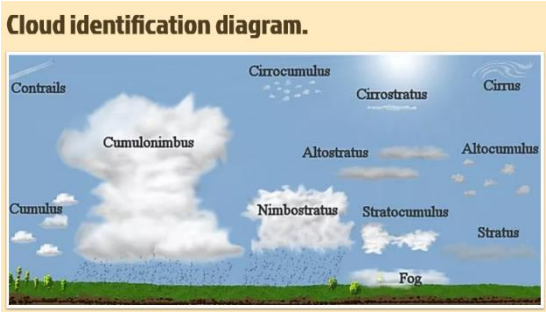
Art: Look at this painting. It was created using a blow technique over a stencil. Practise the blow technique a few times before trying with a stencil. Use wet paint and blob it on the paper before blowing the paint with a straw. It's easier if you cut the straw quite short first. Experiment with how to blend the colours

using just your breath. When you are happy with your technique, create a stencil shape on card. Lay it carefully on the paper (you may want to blu-tack it in place). Use the blow technique to paint over and around the stencil. When the paint dries, remove the stencil and admire your art.

Geography: Read about the Beaufort Scale. This is used to classify windspeed. Keep a wind diary for a week by observing the effect the wind has on things outside. Here is an example:

Day	Scale Force	Evidence
Monday	2	Leaves are rustling and petals are moving.

CHALLENGE: look at these cloud types and keep a diary of the clouds you see each day too.



Spanish: practise how to say how you feel in Spanish at The Oak National Academy.

RE: Look at this picture and think about the questions and read the Bible story. You could do one of the response activities if you like.

Additional learning resources parents may wish to engage with

Author Rob Biddulph does twice weekly drawing videos for children. You can watch them and have a go at Draw with Rob.

Your child may have concerns about the current situation. Childline has lots of advice about how to discuss it with your child.

Nosy Crow Books have released a superb free book for children called Coronavirus: a book for children. You can download and read it here.

Rocks and fossils

There are lots of kinds of rocks. Some are made by heat inside the Earth. Others are made from sand, mud and pieces of dead plants and animals.

This is a fossil of a sea animal called an ammonite.

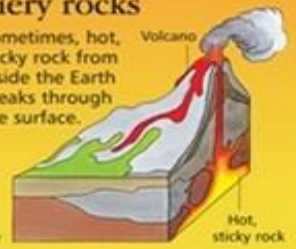
Rocky layers

Sand, mud and pieces of plants and animals that sink and settle at the bottom of the sea are known as sediment.

Layers of sediment build up slowly. Over millions of years, the bottom layers get squeezed and stick together to become sedimentary rocks.

Fiery rocks

Sometimes, hot, sticky rock from inside the Earth breaks through the surface.



Hot, sticky rock pours out of a volcano. When it cools, it becomes hard. This kind of rock is known as igneous rock. Igneous means "fiery".

This is a fossil of a sea animal called a trilobite.

This is the fossil of a sea creature called a sand dollar.

Fossils

Fossils are the stony remains of animals that lived millions of years ago. Most fossils are found in sedimentary rock.

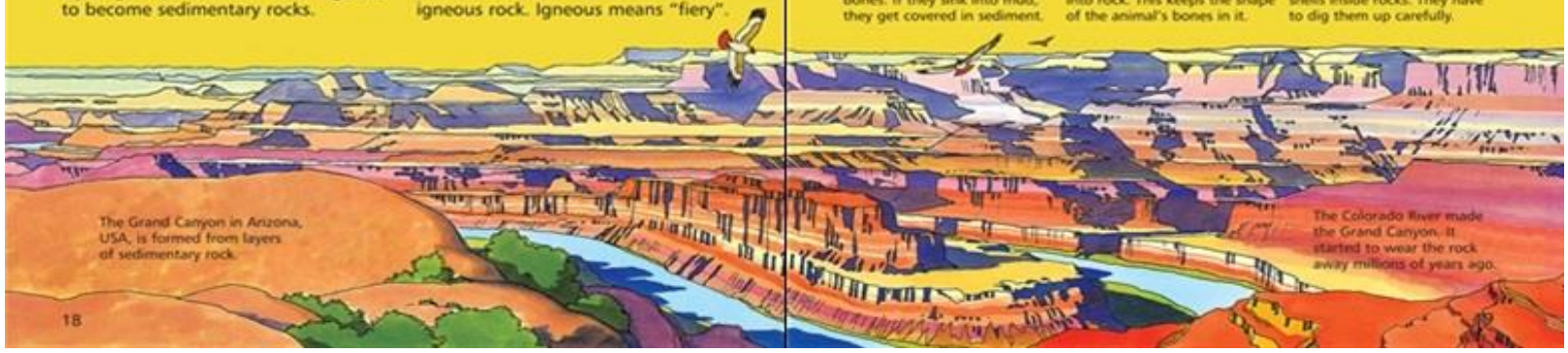
Internet links

- Scan the code to see lots of different fossils.
- For more links, go to www.usborne.com/quicklinks

When an animal dies, its soft parts rot away leaving its bones. If they sink into mud, they get covered in sediment.

Over millions of years, the sediment layers slowly harden into rock. This keeps the shape of the animal's bones in it.

Millions of years later, people sometimes find fossil bones or shells inside rocks. They have to dig them up carefully.



The Grand Canyon in Arizona, USA, is formed from layers of sedimentary rock.

The Colorado River made the Grand Canyon. It started to wear the rock away millions of years ago.

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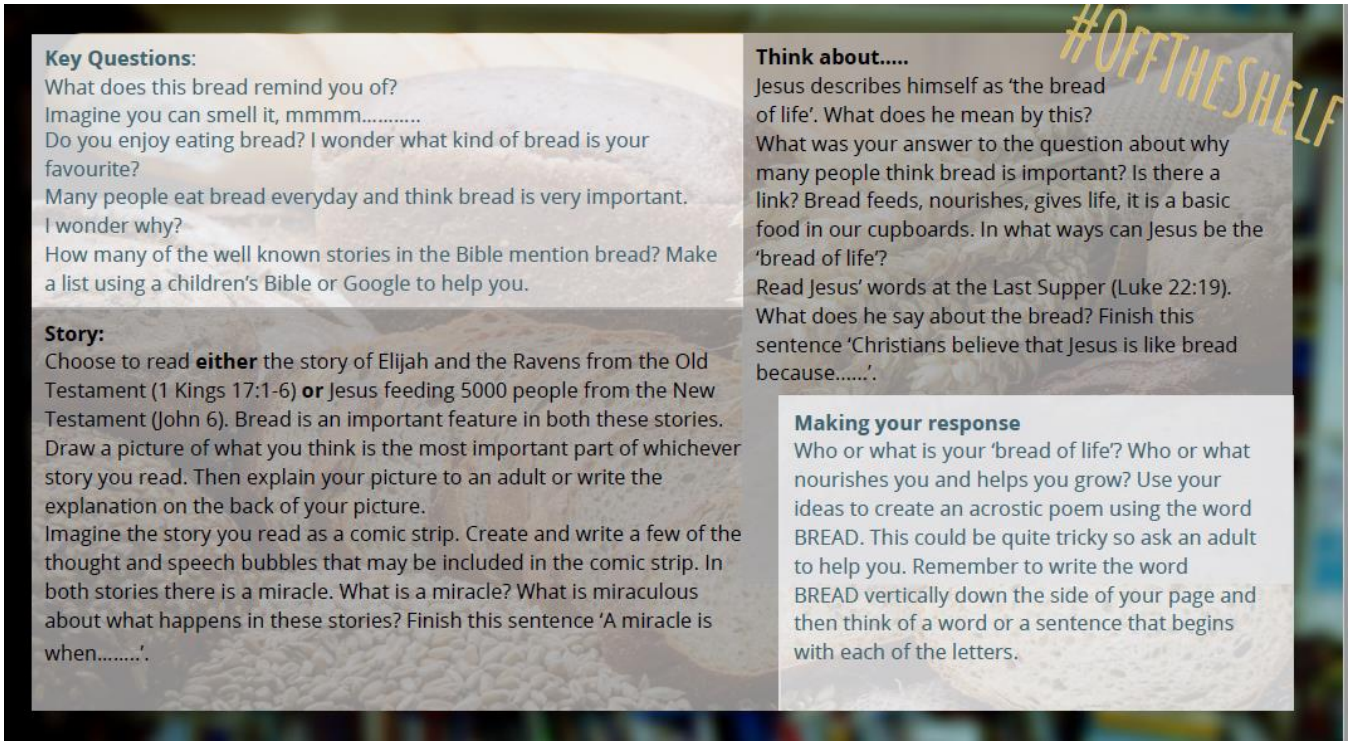
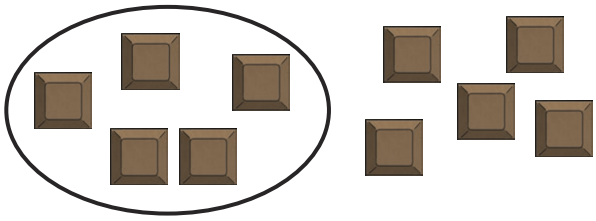


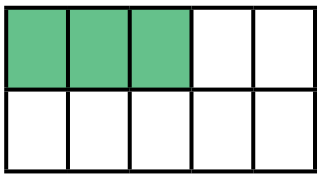
1) If the frame represents one whole, what does each box represent?

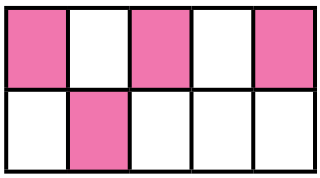
2) What fraction of chocolate is circled?

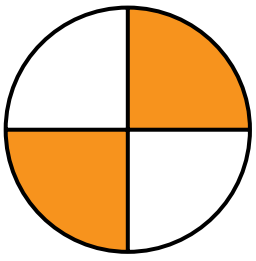


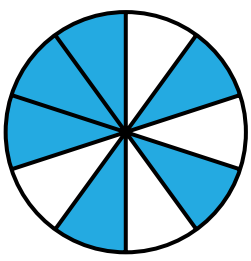
3) The shaded fraction of the chocolate has been eaten. What fraction is left over?

4) Match the fractions.









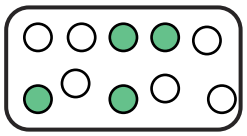
$\frac{2}{4}$

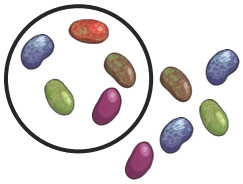
$\frac{3}{10}$

$\frac{4}{10}$

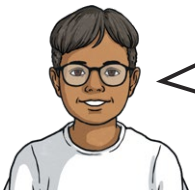
$\frac{6}{10}$

1) Which is the odd one out? Explain your answer.





2)



My denominator is 10. My numerator is greater than 6 but less than 9.

What could Hamed's fraction be? Explain how you know.

3) **a)** Match the fractions to the correct descriptions.

My fraction is 7 tenths.

My numerator is half of the denominator.

My fraction is the smallest.

$\frac{3}{10}$

$\frac{7}{10}$

$\frac{5}{10}$

b) Which two of these fractions make a whole? Explain your reasoning.

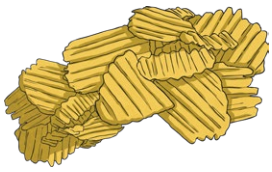
1) There were 10 bags of crisps in a cupboard.

$\frac{3}{10}$ are ready salted.

$\frac{4}{10}$ are cheese and onion.

$\frac{1}{10}$ are salt and vinegar.

$\frac{2}{10}$ are prawn cocktail.

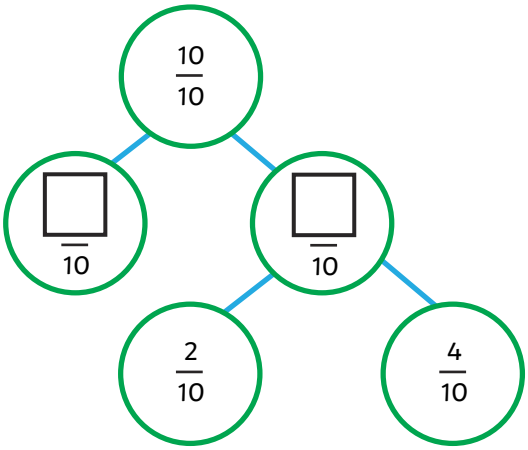


Gary admits to his friends that he has eaten all of his favourite flavours and only $\frac{3}{10}$ of the crisps are left.

Find all possibilities for which flavours he ate.

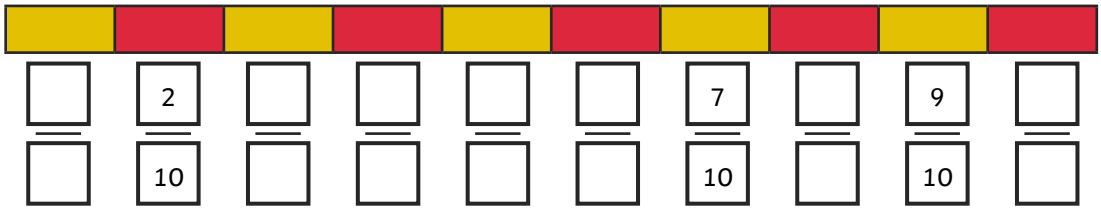
2) Write a word problem involving tenths using the pictures of fruit.

3) **a)** How many ways can you complete the part-whole model?

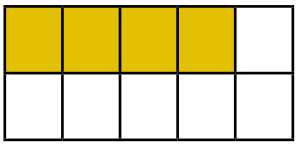


b) Use this example to create your own part-whole models showing tenths.

1) The counting stick is worth 1 whole. Complete the missing sections.



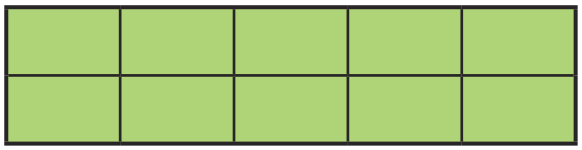
2) **a)** Fill in the table to show the words, numbers and visual representation of each fraction.

Representation	Words	Fraction
	three-tenths	
		

b) What fraction would come next in the table? Write your answer in words. _____

3) Start at $\frac{7}{10}$ and count back four-tenths. What number do you land on? _____

4) **a)** What fraction of the ten frame is shaded?



_____

b) If another section is shaded, what would the next tenth be? _____

1) Two children are discussing fractions.

Which child is correct? Using reasoning to explain.

2) True or false? Six-tenths is $\frac{3}{10}$ more than three-tenths.

Use a ten frame to help explain your reasoning.

3) **a)** Use the clues to find the missing fraction. Record any working out in the box below.

I start on a tenth with an even numerator.

I count backwards three-tenths.

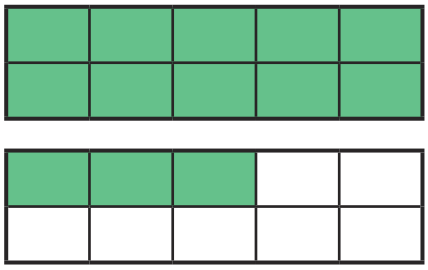
I count forwards four-tenths.

I am now on $\frac{5}{10}$.

What fraction did I start with?

b) Is there more than one possibility? Use reasoning to explain your answer.

1) Farooq is shading in ten frames to show tenths.



Is Farooq correct? Explain how you know.

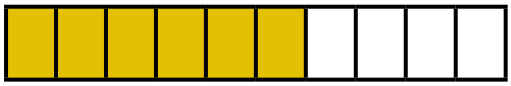
2) **a)** Jasmine has 2 chocolate bars. Each bar has 10 pieces. She eats four pieces.

How many ways can you represent the chocolate that is left over?

b) Is Jasmine correct? Explain how you know.

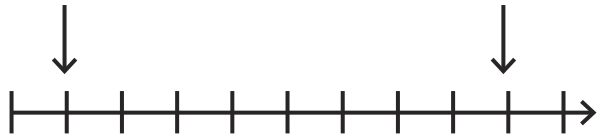
3) Represent $1\frac{4}{10}$ in as many ways as you can.

1) Write the fractions and decimals shown.



A = _____

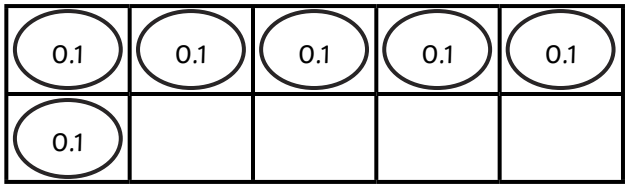
B = _____ C = _____



2) Draw lines to match the fractions to the correct decimal.

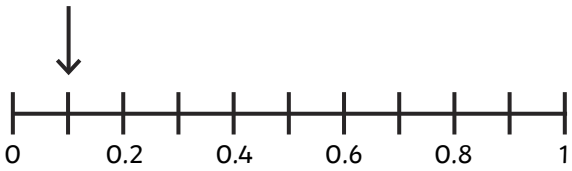
$\frac{3}{10}$	0.9
four-tenths	0.3
$\frac{9}{10}$	0.4

3) Use the image to complete the fraction and decimal.



$\frac{\square}{10}$ 0. _____

4) True or false? The arrow shows 0.3. Explain your answer.



1) Which is the odd one out? Use reasoning to explain your answer.

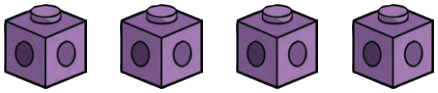
nine-tenths

0.9

0.1	0.1	0.1	0.1	0.1
0.1	0.1	0.1	0.1	

2)

Each one of my cubes represent a tenth. If I add another four cubes, 0.7 will be represented.



Is Hamed correct? Explain with reasoning.

3)

If I order the fractions and decimals on a number line from smallest to largest, 0.8 will be the third largest.

$\frac{3}{10}$ 0.8 $\frac{7}{10}$ 0.6 nine-tenths

Do you agree? Explain with reasoning.

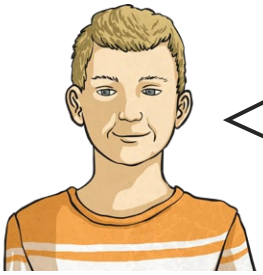
1) Neil and Kumar are counting up and down in tenths.

- Neil starts at 1.6 and counts backwards.
- Kumar starts at 0.8 and counts forwards.

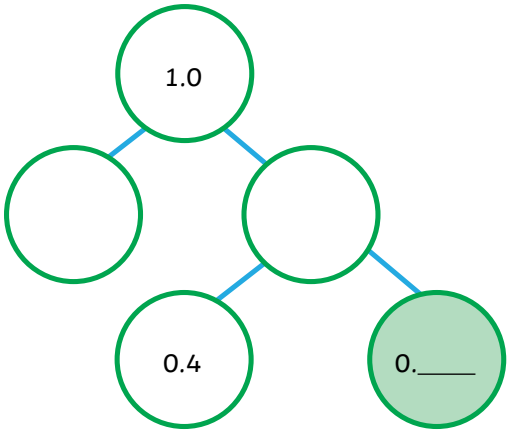
What decimal will they reach at the same time?

Draw then explain your answer.

2)



I can put different digits in the shaded circle to complete the part-whole model.

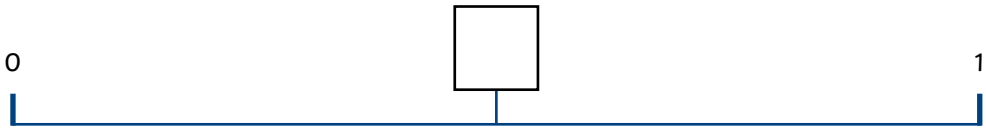


What decimal numbers can be placed in the shaded circle to correctly complete the part-whole model? Find all possible answers.

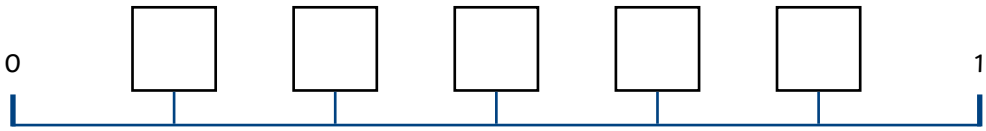
3) Represent 0.6 in as many ways as you can.

1) The number line has been divided into equal parts. Fill in the blanks with the correct fraction.

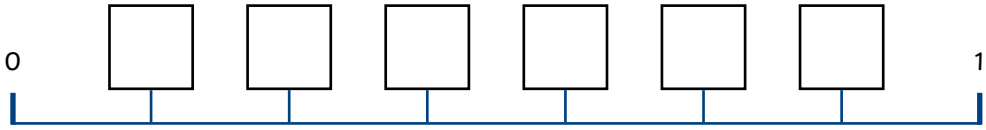
a)



b)



c)



2) Write $1\frac{1}{6}$ on the number line.

3) Write $3\frac{2}{6}$ on the number line.

4) Sergio walked to school.

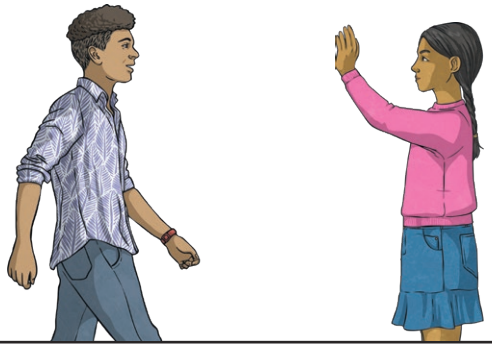
He stopped to tie his laces $\frac{2}{7}$ of the way there.

Then, he stopped to meet his friend $\frac{4}{7}$ of the way there.

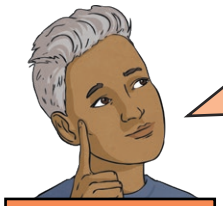
Show Sergio's journey.

start of journey

end of journey



1)



Mason

On my number line, I start at 1.

I move forwards 4 spaces, backwards 2 spaces and forwards 3 more spaces. I land on 1 $\frac{4}{6}$.

Do you agree with Mason?

Explain your reasoning.

2)

Ahmed

I start on 1 $\frac{6}{8}$. Then, I count back $\frac{4}{8}$. After, I count on $\frac{2}{8}$. I will end on 2.

Ahmed has made an error.

Use a number line and reasoning to explain what the answer should be.

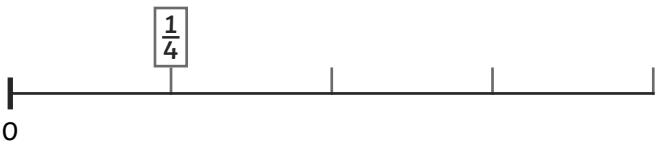
3)

Elizabeth

The number 1 always goes at the end of a number line.

Sunny

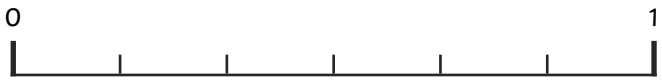
The number 1 will be written on different positions on each number line.



Do you agree with Elizabeth or Sunny?

Show and explain your reasoning.

1) Some shapes have been removed from a number line.



 I am the smallest of all fractions.

 I sit more than halfway along on the number line.

 I am worth more than the hexagon but less than the rectangle.

 I am the largest of all fractions.

a) Where could each shape be placed? Draw them on the number line and find all possibilities.

 _____

 _____

 _____

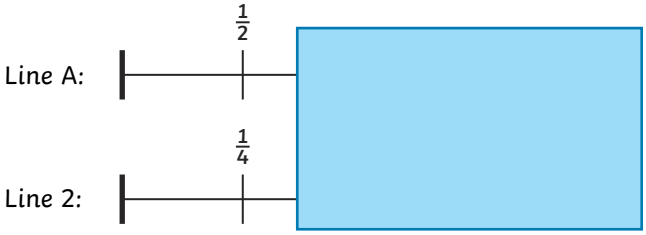
 _____

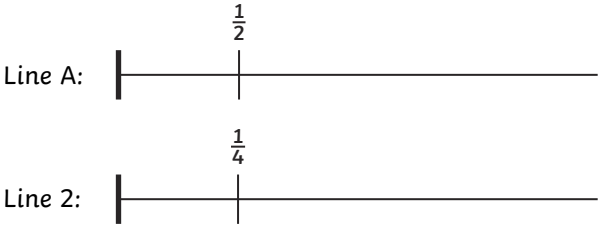
b) Write a clue for a different shape that could be placed on an empty part of the number line.

_____

_____

2) Only part of each number line can be seen - the rest is hidden. Each line stops at a whole. Which line is longer? Explain your reasoning and show your working out on the number lines.

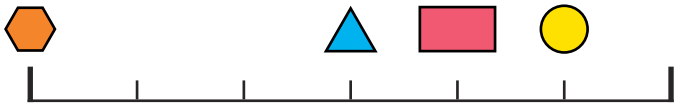




_____

_____

3) Some shapes sit on part of a number line.



 The heart represents $\frac{3}{8}$ and sits $\frac{1}{8}$ before the hexagon.

Use this information to solve the values of the other shapes.

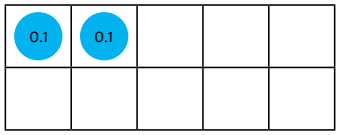
 _____

 _____

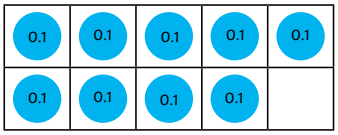
 _____

 _____

1) Match the equivalent pairs.

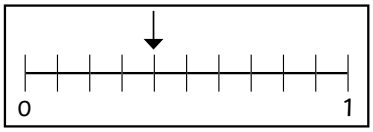
a) 

b) 0.5

c) 

d) $\frac{4}{10}$

e) five-tenths

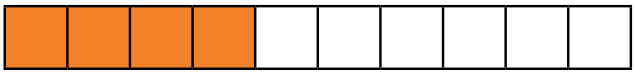
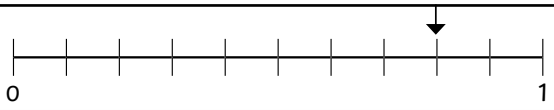
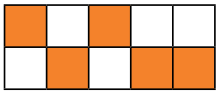
f) 

g) 0.9

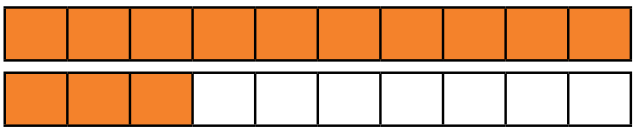
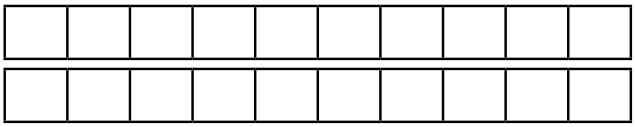
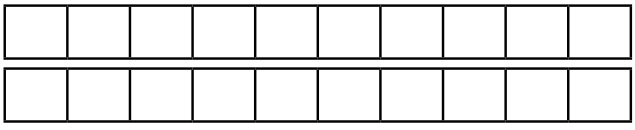
h) $\frac{2}{10}$

_____ and _____ _____ and _____ _____ and _____ _____ and _____

2) Complete this table:

Representation	Decimal	Fraction
		
		
		
		
	0.1	
		$\frac{2}{10}$

3) Complete this table:

Representation	Decimal	Fraction
		
	1.9	
		$\frac{16}{10}$

1) Jas and Lin write this representation in the ways shown:

Jas

$1\frac{4}{10}$

Lin

five-tenths

Are both children correct?
If not, can you explain what mistake they have made and what they should have written?

2) Sam is converting numbers written using whole numbers and fractions to decimals. This is his first conversion:

$1\frac{8}{10} = 0.18$

a) What mistake has he made?

b) Draw a model to help show Jas how to convert fractions to decimals. Write notes on your model to help explain.

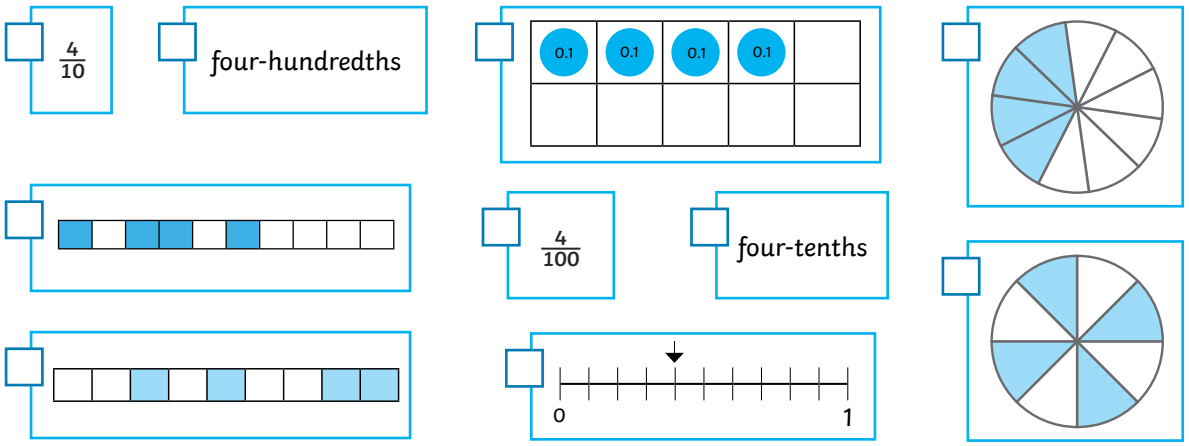
1) In a centimetre (cm), there are 10 millimetres (mm).

1mm = $\frac{1}{10}$ cm

Use this information to complete this table:

Centimetres and Millimetres	Millimetres	Fraction	Decimal
1cm 2mm	12mm	$1\frac{2}{10}$ cm ($\frac{12}{10}$)	1.2cm
	15mm		
		$\frac{5}{10}$ cm	
			1.7cm

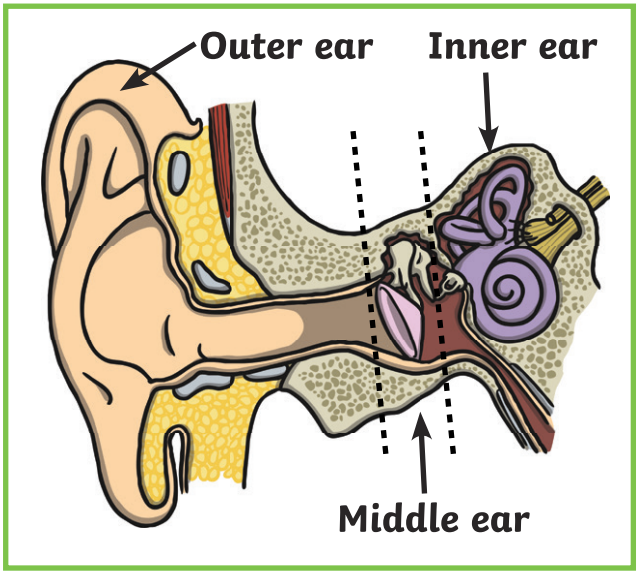
2) **a)** Which representations are equal to 0.4? Tick the correct representations:



b) How many different ways can you represent $\frac{7}{10}$?

Sense of Hearing

Our ears give us the ability to hear sounds from things all around us. We can hear high sounds, like a bird singing, and low sounds, like a dog barking. We can also tell where sounds are coming from. Our sense of hearing works by trapping sounds in our ears, which our brains then work out.



Outer Ear – This is the bit you can see. It sends sounds into the ear, down the ear canal to the ear drum.

Middle Ear – The eardrum vibrates and moves the three bones (hammer, anvil and stirrup). These bones shake and send vibrations into the inner ear.

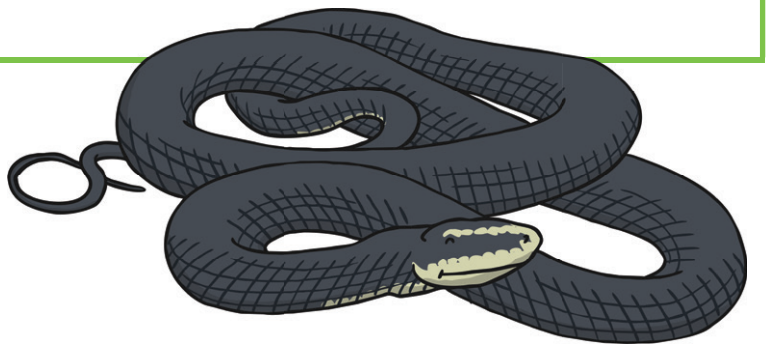
Inner Ear – This is full of liquid and little hairs which move, letting you know there is a noise.

Did you know?
The ear has some of the most amazing bones in the body? It has the three smallest bones and also the hardest bone in the body!

Sometimes, people have problems with their hearing and can't hear very well at all. They can have hearing aids fitted. These are like little speakers that make all of the sounds that the person hears louder, almost like someone is shouting. Sometimes, people can't hear at all, which means they are deaf. They can go to hospital for an operation to try to fix their hearing but this doesn't always work. They can learn sign language, which is a way of talking using your hands.

Some animals have amazing hearing!

Even though snakes do not have ears, they 'hear' using their tummies, feeling the vibrations through the ground and from objects around them. The barn owl can pinpoint prey using its ears. Its ears are in slightly different places so that it can hear sounds coming from different directions. One ear focuses on sounds that are higher up and the other focuses on sounds that are lower down.



Sense of Hearing **Questions**

1. Name one part of the ear.

2. What is the inner ear full of?

3. Which animal has its ears in different places?

4. How do deaf people communicate?

5. What is at the end of the ear canal?

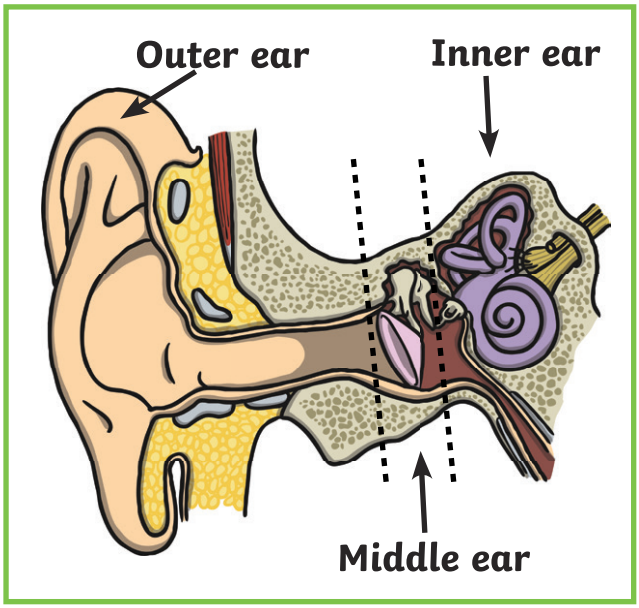
6. How do snakes hear differently from humans?

Sense of Hearing **Answers**

1. Name one part of the ear.
   Choice of outer, middle or inner ear – or any of the smaller parts, including eardrum, ear canal etc
2. What is the inner ear full of?
   The inner ear is full of liquid and little hairs.
3. Which animal has its ears in different places?
   The barn owl has its ears in two different places.
4. How do deaf people communicate?
   Deaf people communicate using sign language.
5. What is at the end of the ear canal?
   The eardrum is at the end of the ear canal.
6. How do snakes hear differently from humans?
   They feel the vibrations through their tummies.

Sense of Hearing

Our ears allow us to detect sounds around us. Humans are able to hear well, being able to hear high and low sounds. Our ears are actually broken down into three different parts.



The Outer Ear – This is the part of the ear that people can see. The size and shape of people's ears is random and it doesn't affect their hearing. People with big ears don't hear better than people with small ears! Some people choose to put earrings at the bottom of their ear but this doesn't affect hearing. The bottom of the ear is called the earlobe. Most people's earlobes hang free from their heads. Even though this is the main bit of the ear you can see, all it does is collect sound and send it down into the middle ear - a bit like a satellite dish collecting a signal.

The Middle Ear – The outer ear ends where the eardrum starts. The area after the eardrum is called the middle ear. This middle ear is made up of three tiny bones known as the hammer, the anvil and the stirrup. The sound that enters the outer ear makes the eardrum vibrate. These vibrations are picked up by these three bones, which actually form a kind of bridge. The middle ear is the place where the sound gets amplified.

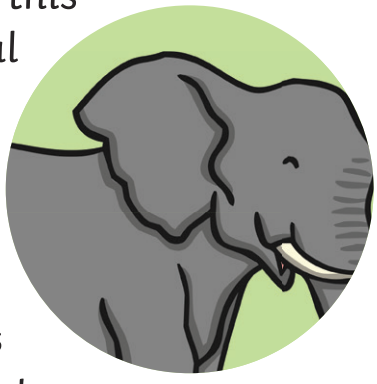
The Inner Ear – The sound travels through the inner ear into something called the cochlea. This is a bit like the shape of a snail shell. It is full of liquid and covered in tiny hairs. As the sounds move through the liquid, they make the

hairs vibrate. These vibrations send messages to the brain, which the brain recognises as particular sounds.

Did you know?
The strongest known ears belong to Manjit Singh. This man pulled a 7.5 ton passenger airline with his ears for a distance of 13 feet. He wore ear harnesses and ropes were attached to them. These ropes were in turn attached to the aircraft.

Our ears are very sensitive. If the hairs inside the cochlea are damaged, you would lose your sense of hearing. If you have ever spun around for a while, you will know what it feels like to be dizzy. This is caused by the fluid inside your ear moving around. Sometimes, people simply lose their hearing as they get older. They are able to wear hearing aids, which increase the sound so that they can hear more easily. If people lose their hearing completely, they might need to learn sign language. This is a way of talking by using your hands to create different shapes and different patterns instead of saying words.

Some animals use their super hearing to their advantage. Bats use something called echolocation, which means that they make a sound and then listen for the echo to tell them where objects, including their prey, are. They are so good at this that they rarely miss and can hunt in total darkness. The giant wax moth has learnt to hear and recognise the bat's call so that it can dodge it and avoid being caught!



When it comes to amazing hearing, it is hard to ignore the elephant. Not only are its ears massive but its hearing is fantastic. Elephants can hear a thunderstorm from over 6 kilometres away!

Sense of Hearing **Questions**

1. What is the name for the part of the ear that people can see?

2. Where does the outer ear end?

3. Who had the strongest known ears?

4. Describe two ways in which someone who has lost their hearing can be helped to communicate.

5. How do bats find their prey?

6. Why do you get dizzy?

7. Name the three tiny bones in the middle ear.

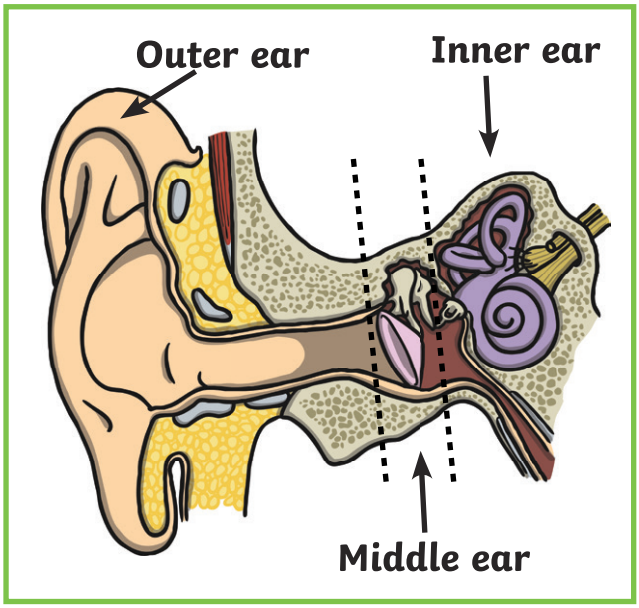
8. Do you think it would be difficult to learn sign language? Explain your answer.

Sense of Hearing **Answers**

1. What is the name for the part of the ear that people can see?
   People can see the outer ear.
2. Where does the outer ear end?
   The outer ear ends where the eardrum begins.
3. Who had the strongest known ears?
   Manjit Singh owned the strongest ears – he pulled an aircraft with them!
4. Describe two ways in which someone who has lost their hearing can be helped to communicate.
   Doctors can give them a hearing aid and they can learn sign language.
5. How do bats find their prey?
   Bats find their prey using echolocation.
6. Why do you get dizzy?
   The fluid moves around in your inner ear.
7. Name the three tiny bones in the middle ear.
   The three tiny bones are called the hammer, anvil and stirrup.
8. Do you think it would be difficult to learn sign language? Explain your answer.
   Varied answers.

Sense of Hearing

As our eyes allow us to detect light, our ears allow us to detect sound waves in the air around us. Humans have a good range of hearing, being able to hear sounds at a low and high decibel range. The ear was thought in the past to be more than just a body part for hearing. The Ancient Chinese believed that the shape of your earlobe foretold your future. A long earlobe meant that you would lead a long life and a short, wide earlobe meant that you would be rich. This is why Buddha is always shown with especially long earlobes, touching his shoulders. Also, the earlobe has been pierced from as far back as the Ice Age; we know this because scientists have found an ancient mummy with bone-pierced ears!



How does the Ear Work?

The ear consists of three main parts.

The Outer Ear – This is the part of the ear that people can see and it acts as a way of channelling sound down into the ear canal. The sound waves are directed into the opening by the particular shape of the ear. The sound vibrations travel down until they reach the eardrum, causing it to vibrate. This area is kept clear of dirt by earwax, allowing the sound waves to travel through uninterrupted.

The Middle Ear – The outer ear ends where the eardrum starts. The area after the eardrum is called the middle ear. This middle ear is made up of three tiny bones known as the hammer, the anvil and the stirrup. These are the smallest bones in the human body. All three of them could comfortably fit onto a penny. The middle ear is the place where the sound gets amplified.

The Inner Ear – The inner ear is found inside the temporal bone, the hardest bone in the human body. The sound travels into the cochlea, which is in the shape of a snail shell. It is full of liquid and covered in tiny hairs. There are over 20,000 hairs in the cochlea. As the sounds move through the liquid, they make the hairs vibrate. These vibrations create small chemical changes which the brain translates into sounds.

Did you know?

Your ears never shut down, not even while you are sleeping. They still hear sounds but these sounds don't register with your brain. This explains why sometimes you wake up suddenly when you hear a sound.

In the animal kingdom, dolphins use something called echolocation to find prey. They send out a high pitched sound and then listen for the echo as it bounces off a fish. They then use this echo to pinpoint exactly where the fish is. Even your average household pet has amazing hearing. Cats and dogs are both able to hear so well that they both know when their owners are coming home long before they walk in the door!

Technology now exists to help people who are losing their hearing. Hearing aids can amplify the sounds around a person to make them easier to hear and surgery is now carried out on people who have been deaf their whole lives to help them hear for the first time!

Sense of Hearing **Questions**

1. What is the function of ear wax?

2. How many hairs are there in the cochlea?

3. How do cats and dogs know when to wait for you at the front door?

4. What is the hardest bone in your body called?

5. How long have people been piercing their ears for?

6. How do dolphins find their prey?

7. If you lost your hearing, which sound would you miss the most?

8. In Ancient China, would you rather have short, wide earlobes or long earlobes? Why?

Sense of Hearing **Answers**

1. What is the function of ear wax?
   Ear wax keeps your ears clean.
2. How many hairs are there in the cochlea?
   There are over 20,000 hairs in the cochlea.
3. How do cats and dogs know when to wait for you at the front door?
   Cats and dogs have great hearing and can hear you long before you actually arrive at your door.
4. What is the hardest bone in your body called?
   The hardest bone in your body is the temporal and it is found in the inner ear.
5. How long have people been piercing their ears for?
   People have been piercing their ears since the Ice Age.
6. How do dolphins find their prey?
   Dolphins use echolocation to find their prey.
7. If you lost your hearing, which sound would you miss the most?
   Varied answers.
8. In Ancient China, would you rather have short, wide earlobes or long earlobes? Why?
   Varied answers.