

GOD IS CREATOR

PART 1

The sense of Hearing

Year 3

Term 2

<p>Thinking Skills</p> <p>Five senses 1</p> <p>The answer is:</p> <p>our senses.</p> <p>Give 5 questions.</p>	<p>Five senses 2</p> <p>Name 5 things that you could NEVER see.</p>
<p>Five senses 3</p> <p>Make something that will help blind people.</p>	<p>Five senses 4</p> <p>Draw 5 things astronauts would see if they travelled around the moon.</p>
<p>Five senses 5</p> <p>Find 10 different uses for a chair</p>	<p>Five senses 6</p> <p>Draw a set of head phones.</p> <p>Now redesign it using</p> <p>B – make one part bigger</p> <p>A – add something extra</p> <p>R – replace one part with something else</p>

Helen Keller

Biography

When Helen was little more than one year old, she became very ill. When she recovered from the illness, her parents found that their little girl could no longer see or hear.

It was a frightening experience for a little one year old, to find herself suddenly in a world of darkness. She just clung to her mother's dress all day as her mother went about the housework. Her mother loved Helen very much and helped her understand the world around her.

By the time Helen was five she was able to help her mother fold and put away the clean clothes. She was even able to tell her own clothes from the rest.

Three months before Helen turned seven, a teacher came to live with them. Miss Sullivan would be Helen's own personal teacher. Miss Sullivan taught Helen to understand letters which she would spell into the palm of Helen's hand. Helen could tell one letter from another by feel alone. Soon she was able to put letters together to make words. Helen learned to make words into Miss Sullivan's hand too, and before long they were able to talk to each other using the silent language.

Miss Sullivan then taught Helen to read words, which were written in raised type, on special pieces of cardboard. Helen could read the words by feeling the letters. This was called Braille. Miss Sullivan would play hide and seek with Helen using the Braille word cards. It was Helen who actually thought up the game. One day she pinned the Braille word, 'girl', on her dress and hid in the wardrobe. She had left some other words on the shelf, as clues for Miss Sullivan. The words were: 'is', 'in', 'wardrobe'. This meant that Miss Sullivan had to go and look for Helen in the wardrobe. She and her teacher played this game for hours at a time.

Because Helen was only one year old when she became deaf, she had not been able to speak with her voice as we do. When Helen was ten, Miss Sullivan heard about a deaf girl in Norway who had been taught to speak using her voice. Helen wanted to try to do this too. It was very difficult because she had to learn how to say sounds by feeling the position of the teacher's tongue and lips as the sound was being made. Then Helen would have to copy what the teacher did. On her first day, Helen had managed to imitate six sounds!

Helen never gave up. She kept trying until she was able to speak using her voice. When she was older, Helen helped others who had problems like herself. She wrote books and travelled the country giving speeches about helping the blind and deaf. She didn't need her teacher any more, but she always remembered Miss Sullivan, who had been so patient and kind to her. Helen thanked God for giving her Miss Sullivan.

Helen Keller was born in the U.S.A. and lived from 1880-1986.

God is Love – Themes for Christian Studies 2

Activities – Helen Keller

PART A

1. When did Helen become ill?
2. What happened to Helen because of the illness?
3. How did Helen's mother let Helen help around the house?
4. How did Miss Sullivan help Helen?
5. How did Helen learn to speak?
6. Why would we say that Miss Sullivan was patient and kind?
7. If you knew someone who was blind or deaf, how would you show love and kindness to them?

PART B - God is love

Read:

God is kind. God is patient. People can show God's kindness and patience in their lives. The Bible says, 'love is patient and kind'. Showing God's love to others is showing His patience and kindness. God wants us to show His love to everyone, especially those who cannot do things as well as we can.

Copy and fill in the missing words:

How can I show God's love to others?

I can be _____ to people who can't do things as well as I can.

I can look out for ways to _____ people who have needs.

Missing words: help kind

Worksheet 1: Sound and hearing

How sounds get to our ears

1. *What are some of the sounds you would hear if you were camping on a quiet night?*
2. *How would you feel if you couldn't hear anything?*

When you listen to something the sound comes through the ear and it hits the eardrum, then it goes to your brain. Your brain quickly thinks about it and then you will know what to do.

Sound is made by something that vibrates. Vibrate means to move quickly backwards and forwards.

Science experiment:

If you stretch a rubber band between your hands and pluck it, the rubber band will move back and forth and make a humming sound.

The hum you hear comes from the vibrations of the rubber band. If you touch the rubber band while it is still humming the hum will stop. This is because you have stopped the vibrations.

Place your finger on your throat and hum. You will feel the vibrations. Sound vibrations travel to your ears through the air around us. Sound vibrations traveling through the air are called sound waves.

3. *What are vibrations?*
4. *How do sound vibrations get to our ears?*

Worksheet 2: Sound and hearing

The outside of the ear

On the outside, we see the ear flaps. They are the sound collectors. They are called the *pinnae*.

Why do we have two ears?

The sound from one direction reaches one ear a tiny bit sooner than the other. Our brain tells us which direction the sound has come from. Then we can turn in that direction.

Try cupping your hand around your ear while you are listening to something. By doing this you will make a larger sound collector and hear the sound more clearly.

Many animals have bigger and better sound collectors than we do.

Animals can turn their ear flaps to the direction of the sound. If you clap your hands near your dog or cat when it's having a sleep, it will turn the ear flaps to pick up the sound.

1. *What are the ear flaps called?*
2. *Write and draw two animals that have bigger ear flaps than we do. Show the ears.*

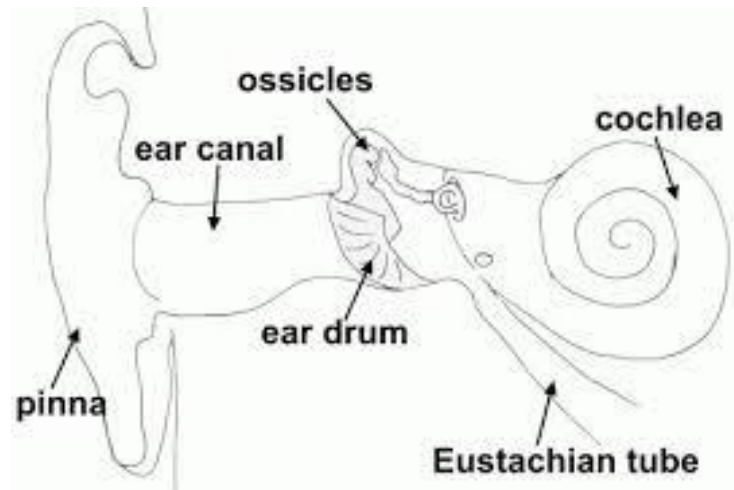
Worksheet 3: The sense of hearing

Inside the ear

There are hairs in our ears that are connected to nerves. The nerves carry the sound to the brain. That's when we 'hear' sound.

Never poke anything into your ear because it could get stuck in your ear or you could make a hole in the ear drum. Then it couldn't vibrate properly and you couldn't hear properly.

Draw and label this picture of the ear.



The inside of the ear has different rooms and pathways.

The pathways take twists and turns. It begins with the *ear canal*. The ear canal has some

hairs and sticky ear wax to trap dirt and stop insects from getting in.

It leads to the *middle ear*.

Stretched across the entrance to the middle ear is the *ear drum*.

The ear drum is a thin piece of skin that vibrates (shakes) when sound reaches it. Behind the ear drum is an open space filled with air. Three tiny bones go across this space. These bones make the sound louder. They are called the *hammer*, the *anvil* and the *stirrup*. Together they are known as the *ossicles*.

The stirrup touches another piece of thin skin called the *oval window*. It covers the entrance to the *inner ear*.

Inside the inner ear is a twisty tube called the *cochlea*. It is shaped like a snail shell. It is filled with liquid and also has thousands of tiny hairs which move back and forth as sound vibrations make the liquid move.

The hairs are connected to nerves which carry sound messages to your brain. That's when you 'hear'.

1. Which two parts are made of thin skin?
2. What do the three little bones do?

Worksheet 4: Sound and hearing

Vibrations

All sounds are made by something vibrating (shaking back and forth very fast). Sound vibrations are called sound waves. They travel can through the air, through water and through solid things. When the vibrations reach our ears, we hear the sound.

When you play a musical instrument, part of the instrument vibrates. That makes the air vibrate. The vibrating air travels to your ear and the inside of your ear vibrates. That's when you hear.

Most sounds reach us through the air. We hear voices this way. We make a sound when our vocal cords vibrate. If you put your hand on your throat and make a sound you can feel the vibration.

Did you know that your voice sounds different to you compared with the way other people hear it? This is because you hear your own voice not just through air, but through the bones in your head.

1. *Draw a picture to show this: a guitar string is vibrating. This makes the air vibrate and it reaches your ear.*
2. *What can sound travel through?*

Types of sounds

Sounds can be very high-pitched, like a high singing voice. Sounds can be low-pitched like a low singing voice.

Sounds can be loud or soft. Very loud noises make the tiny parts inside your ear vibrate too much. This can cause you to become deaf. Never shout in someone's ear. Keep the volume turned down if you are listening to music through headphones. A loud music concert can make your ears ring for hours afterwards. That's a sign that the loud sound was damaging your ears.

Think of all the beautiful sounds we can hear. God gave us the gift of music. Birds make beautiful music. Think of sounds that make us happy. Laughter makes us happy.

We need to take good care of our ears.

1. Which animal can make a high-pitched sound?
2. Which animal can make a low-pitched sound?
3. How can we damage our ears?
4. What are some of the beautiful sounds God has given us?
5. What sound makes you happy?

Worksheet 5: Sound and hearing

Questions and answer about ears

Work with a partner. One can ask the questions. The other can guess the answers.

Where are the tiniest bones found in our bodies?

Answer: in our ears

Why do our ears have flaps on the outside?

Answer: They are sound collectors.

Try cupping your hands around your ear while you are listening to something. You will make a larger sound collector and hear the sound more clearly.

Which animals have bigger sound collectors than humans?

Answer: many animals, e.g. elephant

What is the inside of your ear like?

Answer: It is like a set of rooms with entryways which take twists and turns.

What is the entry way closest to the outside?

Answer: the ear canal

What is in the middle of your ear?

Answer: an ear drum

How does an ear drum help us to hear?

Answer: It has a thin piece of skins stretched across it that vibrates, (shakes) when the sound reaches it.

Worksheet 6: Sound and hearing

Animal communication

Mammals use their sharp sense of hearing to find food, keep out of danger, attract mates and to guard their homes.

Bats hunt at night, using sound to find food, and to find their way around. A bat makes lots of high squeaking sounds, which hit objects, such as insects. The sounds then send back echoes, which the bat picks up with its sharp sense of hearing. It can tell from the echoes what and where the object is. This is called radar.

Dolphins use a similar method of sending messages through the water. This is called sonar. Whales send messages to each other by singing underwater. They have very loud, but very low voices. Monkeys get together in groups and make loud noises to keep other monkeys away from their trees.

Choose three animals and describe the sounds they make. Explain why they make these sounds.

People who cannot hear

Our ears are a special gift from God. But sometimes people are born unable to hear. They are born deaf. This is not how God intended it to be in His perfect creation, but because sickness and suffering came into the world after Adam and Eve sinned, not everything is perfect anymore.

Jesus healed many people who were deaf. How wonderful it was for them to hear for the first time!

People who are born deaf are unable to speak, because to learn to speak we have to be able to hear and repeat the sounds we hear. These people use a special sign language to communicate. They can also learn to understand what people are saying by lip reading.

Some people lose their hearing after sickness, an accident or exposing their ears to very loud noise. They may still have a little bit of hearing, but things sound very soft. These people can use a hearing aid, which is an electronic device placed in the ear to make the sound louder and clearer. If we know that someone cannot hear very well, we should always make sure that we are looking directly at them before speaking.

1. How can people who have hearing problems be helped?
2. How can we communicate with someone who cannot hear, or cannot hear very well?

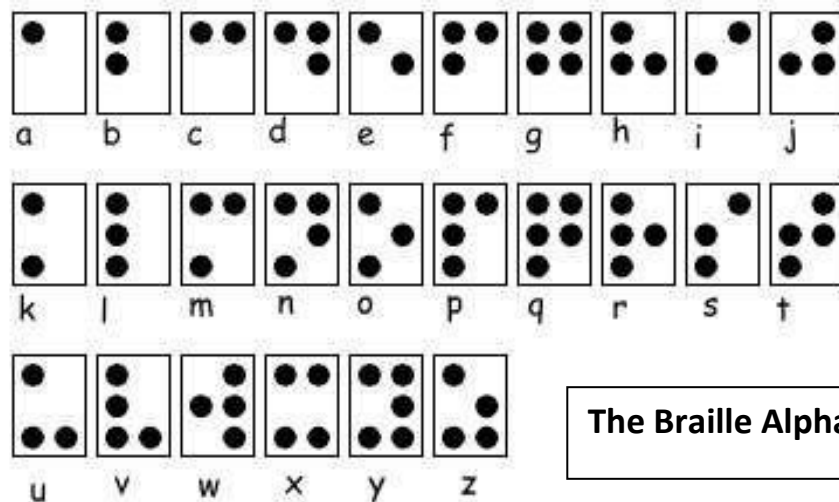
GOD IS CREATOR

PART 2

The sense of Touch

Year 3

Term 3



The Braille Alphabet

Worksheet 1: The sense of touch

How do we feel things?

We feel things because of nerves under the skin. Nerves are like little cords that send messages to the brain. They also send messages from the brain back to our body parts.

1. Copy:

We feel things because of under the skin.

Nerves carry m.....

2. Draw some pictures to show the messages that the nerves give us:

This is hot!

This is cold!

This hurts!

This feels soft.

This feels smooth.

3. Think about the way things feel. Things can feel soft, fluffy, slippery, hard, rough or smooth.

Look around the room for three objects and write down what the texture is like.

e.g. The table feels smooth.

4. Now write about three more objects that are not in the room.

A feels

A feels

A feels

Worksheet 2: The sense of touch

Hot and cold

You can only tell that something is hotter or colder than your skin.

1. Fill a glass with hot water.
2. Fill another glass with ice water.
3. Fill another glass with warm water.
4. Stand the glasses in a line.
5. Put one finger into the hot water and one in to the cold water. Leave them there a minute.

6. Dip the hot finger into the warm water.

How does the warm water feel?

Copy:

When I dip my finger into the warm water it feels

This is because the water is not as hot as my

7. Now dip the cold finger into the warm water.

Copy:

When I dip my finger into the warm water it feels because

The sense of touch 3

Touch test

We feel things because of the nerves under our skin.

There are feeling points called receptors.

The feeling points can be close together or far apart.

Science experiment

In this experiment you will find out where the receptors are close together and where they are far apart.

Take a polystyrene block and stick two pins in it.

The pin heads are about 1 cm out of the polystyrene. They are the same height.

Get a friend to put a blind fold on.

Press the pin heads GENTLY against your friend's skin at these places:

1. the palm of the hand
2. the fingertips
3. the inside of the arm.

What did you find?

The fingertips can feel things better because the nerve receptors are close together here.

The palm cannot feel as well as the fingertips.

The arm cannot feel things as well as the fingertips or palm.

Worksheet 3: The sense of touch

God created us with a sense of touch

Do you know why?

God is a protector. He gave us the sense of touch to protect us from things we come into contact with.

When we touch something that is hot, we take our hand away quickly. If we left our hand on something hot for more than a second, we would have a very bad burn.

When the weather is cold, we feel cold and know to wear warm clothes. If we wore thin clothes in cold weather, we may catch a cold.

If we touch something sharp, we pull our hand away immediately. If we walk on something sharp, we move our feet so as not to hurt our feet.

The sense of touch one of the many special gifts God gave us when He made us. He thought about everything a human being would need!

Activities:

1. Why is the sense of touch important to our safety?
2. Draw some things that would hurt us if we touched them.

Writing idea 1 : How things feel

Some words to use:

soft warm slippery cuddly slimy prickly ticklish
cold wet dry hard soft rough smooth sloppy

Write some sentences to explain how things feel. Here are some examples. Use some of the words above.

- A kitten
- A marble
- A frog

Writing idea 2 : Using your 5 senses

Write a description of something. For example:

- An elephant
- Some jewellery
- The wind
- The sea

Use interesting words to describe how it:

- Feels
- Smells
- Looks
- Sounds
- Tastes