YEAR 1: The Human Body and Senses

Contents Include:
What our bodies can do
Eyes and Sight
Ears and Hearing
Touch, Taste and Smell
Understanding Sensory Impairment

Please Note: The activities included in this pack are suggestions only. Teachers should adapt the lessons to ensure they are pitched correctly for their pupils. For an outline of the content included in Year 1 Science please see:

Year 1 Science Sequence
Lesson 1: Prior Learning- Our Bodies

The purpose of this lesson is to find out what children know about the human body and senses. Children may have knowledge of ways in which we can live a healthy lifestyle including what happens to our bodies when we exercise. Children may also be familiar with the concept of healthy eating. This unit will take children’s learning on further and will introduce them to more of the scientific terminology associated with bodies and senses. Children will also learn more detail about body parts such as the eye and the ear. If basic knowledge of body parts is not secure then teachers should adapt this lesson, and the following lessons if necessary to ensure children understand this.

This lesson has been designed to clarify what children know about their bodies and their senses. The task should be completed independently in order to gain an accurate assessment of their knowledge and understanding. Any insecure knowledge can be addressed immediately after the assessment task.

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<td>To show what I know about our bodies and our senses.</td>
<td>To know that we have five senses: sight, hearing, touch, taste, smell. To know the body parts associated with our senses. To understand that we can take care of our bodies by maintaining a balanced diet and exercising regularly.</td>
<td>Give children a blank outline of a body- what do children know? What can they label? This should be completed within approximately fifteen minutes as a prior learning assessment. Teacher to use information from walking around and looking at the work the children are producing to address any misconceptions. Task: Where possible use a mirror for children to look at their bodies, particularly their faces. Discuss what fantastic things our bodies can do. Complete worksheet explaining some of the things our bodies can do.</td>
<td>Caring for Our Bodies: exercise, sports, healthy, fit, heart, sweat, clean, soap, bath, fruit, meat, vegetables, protein, fat, sugar, carbohydrate, vitamins, nutrients Our Bodies: ears, eyes, nose, mouth, arms, legs, head, skull, stomach, heart, fingers, toes, feet, hands etc.</td>
<td>What can you tell me about our bodies? How can we make sure we look after our bodies? What are our senses? How do we use our senses? What happens when people’s senses are damaged or are not working?</td>
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Resources:
A4 Outline of Body, vocabulary flashcards
BBC Class Clips- A Healthy Diet for the Human body
The Human Body – Prior Learning Assessment
What can our bodies do?
My can ____________________________
______________________________.

My can ____________________________
______________________________.

My can ____________________________
______________________________.

My can ____________________________
______________________________.

hear  run  chew  jump  listen  skip
hold  touch  clap  sing  taste
Lesson 2: Eyes and Sight

**Teacher Knowledge:** Sight is one of the most important senses for finding out about the world around us. People use their eyes for almost every activity, from reading a book to riding a bicycle. The eye, our organ for sight, is a small sphere that is set in the skull in a protective socket. A small part of the eye is exposed which includes the sclera, cornea, iris and pupil. The sclera is the white part of the eye and the cornea is a thin, transparent tissue that covers the coloured part of our eye. The sclera and cornea act as protection against germs and particles such as dust that might harm your eye. The word sclera comes from the Greek word, sklēros meaning hard. The iris is the coloured disc that is located behind the cornea; it absorbs any strong light that might damage your eye. The pupil is in the centre of your iris and is a small black opening. The amount of light that enters your eye is controlled by the pupil. There are two muscles in your eye that make the pupil larger or smaller depending on how much light is in the environment. Pupils will be larger when there is little light in the environment, however pupils will contract when you look at a bright light. Children do not need to be taught in this level of detail, but it is helpful if teachers have good subject knowledge in order to answer tricky questions.

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<td>To know that the eye is an organ that we use to see.</td>
<td>To understand that our eyes use light to help us see. To know some of the different parts of the eye and what their purpose is. (E.g. The eyelashes, eyelids and cornea protect the rest of the eye) To understand that sometimes people need help to see and that there are tools that help us to do so e.g. glasses, contact lenses, telescope, microscope.</td>
<td>Introduce children to a diagram of the eye. Teach vocabulary for vision, eyelid, eyelash, pupil, iris (and sclera as an extension). Look at some images of eyes and identify key parts. Children could label a diagram on the IWB. Discuss how some people have different levels of vision—people who wear glasses/contacts etc. Also discuss how sometimes we need to help our eyes to see very small things e.g. a scientist might need to see a tiny little bug. In these situations we might need a microscope. Explain that we can also use tools to help us see things that are very far away e.g. looking at a planet through a telescope. Using magnifying glasses/microscopes to look at everyday objects from the classroom or outside. What happens when we look through a microscope? Discuss night time/darkness- how easy is it to see? Explain that our eyes need light in order for us to see. In partners—one child to look at the other’s pupil—cover eyes then look at a light (not too closely) and watch how their pupil changes. The pupil widens when it needs to let in more light and contracts when there is a lot of light. Discuss why we must not look at the sun.</td>
<td>Sight: eye, iris, eyelid, eyelash, pupil, vision, reflection, glasses, contact lenses, telescope, microscope, blindness.</td>
<td>How do we see? Describe how light helps us to see. What happens when someone needs help in order to see? Why is it important to look after our eyes?</td>
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**Resources:** Diagram of the eye, magnifying glasses/microscopes.
The Human Eye

Draw a picture of an eye here:
Can you label it too?

iris  eyelid
pupil  eyelash

What do you know about our eyes?
Lesson 3: Ears and Hearing

Our hearing allows us to gather important information about the world around us. We can take great pleasure from music, be alerted to danger by sirens and most importantly, can communicate with each other through speech. Our ears, the organ for hearing, allow us to use sound to interact with the world around us. The ear is made up of three parts, the outer ear, the middle ear, and the inner ear. The part of our ear we can feel on the outside of our head is called the auricle. The auricle is made up of fat and cartilage. Sounds are actually vibrations created by moving things. Particles vibrate creating sound waves that travel through the air or through other materials such as the ground or water. When the sound waves enter the ear they travel through the auditory canal to the eardrum and cause vibrations. These vibrations cause the bones in the middle ear to vibrate, sending vibrations into the inner ear where the fluid and tiny hair cells move. This movement of the tiny hair cells in the cochlea create nerve impulses in the auditory nerve which are then transmitted to the brain. The brain interprets the impulses as sound and can tell which direction the sound came from.

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<td>To know that sounds travel through our ears to send messages to our brain.</td>
<td>To know that sounds travel through our ears to send messages to our brain. To know that sounds can be very different, some loud and some quiet. To know that some people need help to hear and that some people cannot hear at all.</td>
<td>Watch BBC Class Clip on Sound and Hearing- discuss. Go on a sound walk around and listen to all the sounds indoors and outdoors. Go back into the classroom and talk about what the children heard. Read The Listening Walk, by Paul Showers, at an appropriate time in the lesson or during the day. Sound quiz- guess the sound from a collection of clips. Teach children that sounds move through the air in waves, and these waves travel through our ears. Our brains interpret the messages that the waves bring. Children can begin to understand that sounds are vibrations by gently placing their hand on their throat whilst humming a low sound. Investigate: which material would be most suitable for ear defenders for a person working in construction? Children could test out a range of materials including paper, foil, sponge, fabric, etc. Show children a clip of loud drilling to explain the need for ear defenders. Investigate: Can sound travel along a piece of string? Children could create cup telephones joined together by a piece of string. Discuss deafness, sign language and hearing aids.</td>
<td>ear eardrum deaf hearing aid vibration sound wave speaker radio stereo microphone</td>
<td>How do we hear sounds? How can sounds be different? What can be done to help people who can’t hear? What information can we get from sounds we hear? E.g. an alarm or a siren.</td>
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Resources:
BBC Class Clip on Sound and Hearing
The Listening Walk by Paul Showers (link to Amazon)
A useful video containing lots of common sounds- could be used without the image first to encourage children to really listen. Schools World TV- Listening to Sounds
How sounds can be perceived by people of different ages- BBC Class Clip
Our Sound Walk

How does sound travel through the air? (Write a sentence and draw a picture)
Lesson 4: Touch, taste and smell

This lesson will ensure that children understand the three remaining senses: touch, taste and smell. This lesson can be spread across several lessons if more exploration of the topic is required. Children should understand that we can use our nose to smell things such as flowers or food, which can be pleasurable. Our sense of smell can also warn us about possible dangers, for example if we smell smoke. Humans can recognise thousands of scents which travel as odour molecules through the air and into the nasal passage. The tongue is a muscular organ in the mouth. The top surface of the tongue is covered in taste buds which are made up of 50-100 nerve like cells that poke through an opening at the top of each taste bud. We can taste five main flavour categories, sweet, salt, bitter, sour and savoury. The final sense, our sense of touch, allows us to experience or ‘feel’ the physical properties of the world around us. We can detect the shape, the texture, the temperature, and many more properties of objects in our environment. The organ used for touch is our skin and it covers our whole body acting as both a barrier and a protector. All of our senses send messages to our brain enabling us to be aware of the world we live in.

See page 264 of What your Year 1 Child Needs to Know

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<td>To know that our senses help us to understand the world around us.</td>
<td>To know that our senses help us to understand the world around us.</td>
<td>Introduce the senses touch, taste and smell. Clarify that we have five senses including sight and hearing. Ensure children can confidently name the five senses and related body parts. Show children video clip about the five senses. Discuss what children noticed. Explore each of the senses through related activities:</td>
<td>touch taste smell skin tongue taste buds nose scent sweet salt bitter sour</td>
<td>Can you name our five senses? What do we use our senses for? How can our senses help us detect danger? Extension: How do animals use their senses?</td>
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<td>To know that our senses can warn us of danger.</td>
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<td>To understand that our senses send messages to our brains.</td>
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Resources:
BBC Clip- The Five Senses
BBC Clip- Taste
My Senses
Senses Word Bank

- **eye**
- **ear**
- **hand**
- **sight**
- **hear**
- **touch**
- **tongue**
- **nose**
- **smell**
- **taste**
Lesson 5: Understanding Sensory Impairment

This lesson has been included in the unit to help children learn about people who have sensory impairment, for example deafness. This lesson focuses upon Helen Keller, but could be adapted for children to learn about a different person with sensory impairment, for example someone in their community. Helen Keller was born in Tuscumbia, Alabama, in 1880. When she was only 19 months old, she became ill and the illness left her blind and deaf. When she was almost seven years old, her parents asked Anne Mansfield Sullivan to come and teach her. Miss Sullivan was incredibly dedicated and cared for Helen with patience and love. Miss Sullivan was able to help Helen to learn. Helen Keller quickly learned to read and write, by the age of 10, Helen could speak. When she was 20, Helen began to study at Radcliffe College. Miss Sullivan came to college with Helen so that she could spell all of the textbooks, letter by letter, onto Helen’s hand. Four years later, Helen Keller was awarded her degree. After she graduated, Helen began to work helping blind and deaf-blind people; this became her life’s work. In this lesson, children can learn about Helen Keller’s life and the impact her work had on other blind and deaf people.

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<td>To understand that some people have problems with their senses such as blindness or deafness.</td>
<td>To know that some people have problems with their senses. To understand that Helen Keller was taught to read, write and speak even though she was deaf and blind. To know that Helen Keller helped other people who were also deaf and blind.</td>
<td>Read a story that tells children about Helen Keller’s early life. Discuss the challenges she faced in her life and how she overcame them. Independent writing task: Who was Helen Keller and why is she remembered? Discuss how sensory impairment can create many different challenges for people.</td>
<td>Helen Keller deaf blind illness speak read write courage perseverance resilience</td>
<td>Who was Helen Keller? Why is Helen Keller remembered? What difficulties would Helen Keller have faced when she was growing up? How did she overcome difficulties in her life?</td>
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**Resources:**
- Information about Helen Keller
- Story books about Helen Keller: **Courage in the Dark, Who Was Helen Keller?**
- National Deaf Children’s Society - Youtube Channel
- Guide Dogs - Request a Speaker
Helen Keller

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Helen Keller
America
Deaf
Miss Sullivan

Hand
Touch
Blind
Lesson 6: Assessment Task

In this lesson, children will apply the knowledge that they have learned throughout this unit. They will complete an assessment task in a similar way to the prior learning assessment they completed at the beginning of the unit. Comparing the prior learning assessment with this final assessment will give the class teacher a clear picture of progression.

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<td>To show what I know about the human body and senses.</td>
<td>To identify, name, label and draw the basic parts of the human body.</td>
<td>Give children a blank outline of a body on A3 paper - what do children know now? What can they label? This should be completed throughout the lesson giving children ample opportunity to show what they know. If children would like an extra challenge they could show what they know on a blank page. Using peer assessment children can add any extra information using a coloured pencil (to differentiate from their independent work). The teacher can use information gained from walking around and looking at the work the children are producing to address any misconceptions or insecure knowledge. Give children their first prior learning assessment to compare with their final assessment and celebrate their progress. Ask them to identify new things they have learned.</td>
<td>All previously covered vocabulary.</td>
<td>Questions to be determined by the misconceptions highlighted during the task or any extension that needs to take place.</td>
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**Resources:**
A3 paper with an outline of a body.
The Human Body & Senses - Assessment Task (option 2)