

### KS3 Biology – My Body: Organs and Senses

Subject curriculum intent:	<p>To develop in our students:</p> <ul style="list-style-type: none"> <li>• An enjoyment of Science by providing relevant, interesting and challenging experiences and activities.</li> <li>• Observational skills, by looking for patterns and contrasts.</li> <li>• An inquiring mind and a logical approach to problem solving.</li> <li>• The ability to draw conclusions from simple experiments and, where appropriate, to devise suitable experiments for further investigations.</li> <li>• Communication skills in speaking and listening, written, diagrammatic and symbolic forms.</li> <li>• Co-operation and a respect for others by being able to work as part of a team – the development of appropriate social skills.</li> <li>• Confidence in their own abilities.</li> <li>• A respect for the environment and a careful use of resources.</li> <li>• An interest in the world about them and a greater understanding of it.</li> </ul>		
End of KS3 intent/outcome	End of KS4 intent/outcome	End of KS5 intent/outcome	
Students will build on their knowledge of science through the different areas – biology chemistry and physics. Students will ‘work scientifically’ to achieve the goals of each topic area they encounter.	Students will continue to develop their scientific knowledge through the different areas – biology, chemistry and physics. Students will ‘work scientifically’ to achieve the goals of each topic area they encounter. Students will be able to relate their scientific experiences to everyday life and have an understanding that science is all around them.	N/A	
Intent for this topic:	<p>Students will learn about different body parts, organs, senses and their functions. They will learn about the specific functions of the human body using their skills of discussion, questioning and observation. Students will identify the senses and what the senses enable humans to do i.e. taste, smell, see, feel and hear.</p> <p>Students will ‘work scientifically’ to achieve these goals, learning the key features of scientific enquiry; observing over time, pattern seeking, identifying, classifying, investigating (fair tests) and researching.</p>		
Core vocabulary needed for this subject/topic:	<p><b>Subject:</b> Biology, Chemistry, Physics Observe, pattern, identifying, classifying, investigating, fair test, researching</p> <p><b>Topic:</b> Body parts – head, arms, hands, legs, feet, eyes, nose, mouth Organs – brain, lungs, intestines, liver, kidneys, stomach Senses – see, hear, smell, taste, touch Functions</p>		

Vocabulary pupils will have accessed in other topics or subject areas:	Body parts, organ, senses, see, hear, touch, taste, smell			
Key vocabulary taught within this topic:	Body parts – head, arms, hands, legs, feet, eyes, nose, mouth Organs – brain, lungs, intestines, liver, kidneys, stomach Senses – see, hear, smell, taste, touch Functions			
<b>Prior knowledge: what pupils may already have studied</b>				
Key stage	Subject	Topic title	Term/year taught	Content/What might pupils already know?
KS3	Science	Healthy Life Styles: Food and Digestion	Autumn 2/Year 2	Students may have learnt about the digestive system and know some of the names of the organs in the digestive system and the functions.
KS3	PSHCE	Relationship and Sex Education	Summer/Every year	Students may have learnt about different body parts during their RSE lessons.
Links to other subjects: PSHCE				
Equality, Diversity and inclusion: Linda Buck – co-discovered how the sense of smell worked.				

	<u>OU P Steps 5-6</u>	<u>OU P Steps 7-8</u>	<u>OU Step 1</u>	<u>OU Step 2</u>	<u>OU Step 3</u>
<b><u>Subject specific knowledge</u></b>	<p>Knows the name and match the main body parts e.g. head, leg using signs or symbols.</p> <p>Knows the name 3 main organs e.g. heart, lungs, brain using signs or symbols.</p> <p>Names the senses and can match to the body parts using signs or symbols.</p>	<p>Knows the names of most of the external body parts.</p> <p>Knows the name of the senses and can use the appropriate body part when asked to smell or taste.</p> <p>Knows the name of 4 main organs in the body e.g. brain, heart, lungs, intestines</p>	<p>Knows the name all main external body parts e.g. hands, fingers, head.</p> <p>Knows the names of the 5 senses.</p> <p>Knows what each sense organ is for.</p> <p>Knows the names of the main organs in the body e.g. brain, heart, lungs, liver, intestines, kidneys, stomach</p>	<p>Knows the names of less easily defined body parts e.g. chest, elbow, knee, cheek.</p> <p>Knows the names of the five senses.</p> <p>Can link 3 senses to their appropriate organ.</p> <p>Knows the names of the main organs in the body.</p>	<p>Can link particular body parts to particular life processes.</p> <p>Can link all 5 senses to their associated organ.</p> <p>Is able to explain what each sense organ is for an how it is use it day to day.</p> <p>Knows the names of the main organs in the body and explain their</p>

		Can match the function to the organ.	Knows some of the functions of the key organs in the body.	Knows the functions of the key organs in the body.	<p>functions - brain, heart, lungs, intestine, liver, kidneys, stomach</p> <p>Know the names of other internal parts of the body, e.g. skeleton, muscles, arteries, veins.</p> <p>Can explain that they find out about things by looking, hearing, touching, smelling and tasting.</p>
<b><u>Subject specific skills</u></b>	<p>Is able to point to or match a main feature of the body.</p> <p>Is able to identify an organ from a choice of two .</p> <p>Is able to listen for a sound.</p> <p>Is able to move a specified body part once modelled.</p> <p>Is able to touch an object.</p> <p>Is able to indicate a taste using a choice of 2 symbols salty, sweet, and sour.</p>	<p>Is able to label a human body map using a choice of symbols.</p> <p>Is able to link a feature on the face to a sense i.e. nose - smell.</p> <p>Is able to name some of the major organs i.e. heart, lung.</p> <p>Is able to identify loud and quiet sounds.</p> <p>Is able to move a specified body part.</p> <p>Is able to indicate a taste using a range of symbols salty, sweet, sour, and bitter.</p> <p>Is able to identify dark and light.</p>	<p>Is able to label a human body map.</p> <p>Is able to link some features to a sense.</p> <p>Is able to name major organs.</p> <p>Is able to identify and name different sounds i.e. loud, quiet.</p> <p>Is able to move 3 specified body parts in sequence.</p> <p>Is able to indicate a taste e.g. salty, sweet, sour, bitter.</p> <p>Is able to identify dark and light and how it happens i.e. sun - light, lights off dark</p>	<p>Is able to label a human body map and explain some of the functions of body parts.</p> <p>Is able to link features to a sense.</p> <p>Is able to name major organs and locate them on the body. Can name and describe different sounds.</p> <p>Is able to move 4 specified body parts in sequence.</p> <p>Is able to identify and describe tastes.</p> <p>Is able to identify dark and light and</p>	<p>Is able to label a human body map and explain the functions of different parts of the body.</p> <p>Is able to link all features to a sense and explain why we need senses.</p> <p>Is able to name the major organs, some of the functions and locate them on the body.</p> <p>Is able to name and describe a range of different sounds.</p> <p>Is able to move 5 specified body parts in sequence.</p> <p>Is able to identify and describe in detail tastes.</p>

	<p>Is able to identify dark and light form a choice of two.</p> <p>Is able to follow a set of demonstrations to carry out a simple investigation.</p>	<p>Is able to make a prediction from a choice of 3 using symbols.</p> <p>Is able to follow a picture method to carry out a simple investigation.</p> <p>Is able to identify one thing that has changed when completing a fair test.</p> <p>Identifies the correct result in a table.</p>	<p>Is able to select an appropriate prediction from a given choice.</p> <p>Is able to follow a word and picture method to carry out a simple investigation.</p> <p>Is able to suggest what to change when completing a fair test.</p> <p>Is able to record results in a simple table.</p> <p>Analyses results in the form of tables, simple bar graphs and a brief descriptions using key words or sentence blanks.</p>	<p>describe how it happens.</p> <p>Is able to make a prediction linked to their investigation.</p> <p>Is able to follow a written set of instructions to carry out a simple investigation.</p> <p>Is able to explain why their investigation included a fair test.</p> <p>Is able to record results in a suitable table.</p> <p>Is able to record results in the form of a simple bar graph.</p> <p>Analyses results in the form of tables, simple bar graphs and a brief description.</p>	<p>Is able to identify and explain how to get light or dark and can use objects with high contrast and/or reflective surfaces and the light-room to focus and use vision purposefully.</p> <p>Is able to make predictions.</p> <p>Is able to follow a written set of instructions to carry out a simple investigation.</p> <p>Is able to design an experiment to include a fair test.</p> <p>Is able to record results in a suitable table.</p> <p>Analyses results in the form of tables, simple bar graphs and a brief description.</p> <p>Is able to draw conclusions from their results.</p>
<p><b><u>Suggested Activities</u></b></p>	<p><b><u>Parts of the Body</u></b></p> <ul style="list-style-type: none"> <li>• What parts do they know already? Either ask pupils to point and name parts of their body or teacher points to parts on his/her body and asks pupils to name them.</li> <li>• Play “Simon Says”</li> </ul>				

- Give body outlines to draw on and name.
- Discuss what might be inside the body. Ask children to draw what they think is inside their body.
- Look at how well they can move particular body parts e.g. move one finger at a time, wiggle their ears.
- Make jigsaws from pictures of people cut up.
- Draw monsters with e.g. 3 legs, 6 arms, 5 eyes etc. – this could be teacher directed or one child to another.
- Look at the different organs in the body and their function.
- Label the different organs on dolls or pictures.

### Senses

- Use ‘feely’ bags
- Think about how they know the teacher is in the classroom. If they were blindfolded, how would they know?
- Play sound games – identify sounds from a tape; make a sound map round school.
- What senses do they use to cross the road, ride a bike, find something under the bed etc?
- What sounds indicate pleasure, danger, warning?
- Blindfolded children try to walk in a straight line, recognise classmates by touch (SAFETY SYMBOL). What is it like not to be able to see?
- Make mazes on card using rough and smooth sandpaper. Sandpaper tells you what to do e.g. rough=turn, smooth=straight on. Find way through maze by feel.
- Identify foods by smell
- Taste potato and apple when holding nose – emphasis link between smell and taste.
- Identify crisps by taste – use colour of package to record results.
- Sort foods by taste – salty, sweet, sour, bitter.
- Try to identify different things when touched against different parts of the body – child is blindfolded.
- Discuss which organ goes with which sense, and match appropriate pairs of pictures.

### Sight:

- Use objects with high contrast and/or reflective surfaces and the light-room to focus and use vision purposefully.
- Use objects with high contrast and/or reflective surfaces to encourage tracking.
- Encourage pupils to focus on e.g. human faces – pair the faces with a motivating outcome such as a smile, music, food.
- Use coloured spectacles, acetate sheets, filters, torches to look at objects.
- Experience different types and intensities of light e.g. candle, torch, UV, strip light, dimmer switch.
- Experience darkness by turning off light in dark room, building tunnel under table, blindfold.
- Use different mirrors and spoons to look at objects and faces.
- Blindfold pupils to touch and guess an object; write name; touch other pupils and play other “games” as appropriate e.g. pin the tail on the donkey.
- Use a “body bag” to experience the one-way vision effect. This is a large bag made of a material that allows pupils to see but not to be seen.

## Resources

- Shiny objects
- Boldly coloured objects.
- Coloured spectacles
- Acetate sheets
- Filters – coloured.
- Torches
- Light sources
- Blindfolds.
- Tables, sheets etc to make tunnel
- Body bag.

## Hearing:

- Listen to a variety of sounds e.g. music, recorded sound effects, bodily noises, instruments, toys.
- Experience silence (near silence) to show contrast between silence and noise.
- Experience contrast between different types of sound e.g. drone; shout; sharp sounds; pleasant; unpleasant.
- Pupils create voluntary or involuntary sounds using their body or other objects.
- Use a selection of musical instruments or other noisy objects – have 2 sets of these, one which is hidden. Teacher makes a noise on one instrument and pupils select same one from the other set.
- Play sound lotto using a tape.
- Carry out activities e.g. turning on tap; opening the door; someone moving with a bell. Pupils locate these noises when blindfolded.
- Tape record pupils' vocalisations and playback.

## Resources:

- Tape of sound effects
- Noisy toys
- Musical instruments
- Taped/live music
- Objects to make sounds with – use everyday objects.
- Sound lotto and tape.
- Tape and tape recorder.

## Taste and Smell:

- Experience a variety of smells e.g. food, chocolate, peppermints, orange, massage oils, perfume, toothpaste, contrasting smells (sweet/sour such as honey/vinegar).
- Make choices with smells using adult help e.g. select oil for massage, select food for snack.

	<ul style="list-style-type: none"> <li>• Experience different foods with distinctive smells and tastes, i.e. orange, chips, crisps, popcorn.</li> <li>• Visit places with distinctive smells e.g. kitchen, pool, outside</li> <li>• Experience cooking smells to distinguish between ‘good’ and ‘bad’ food i.e. perfectly cooked food versus burnt food.</li> <li>• Develop own preferences – make own sandwich – select filling, types of bread.</li> <li>• Identify through blind tasting e.g. crisps, fruit, vegetable.</li> <li>• Discriminate between similar foods e.g. different types of crisps, biscuits.</li> </ul> <p>Resources:</p> <ul style="list-style-type: none"> <li>• Selection of foods and other substances with range of tastes</li> <li>• Selection of foods to cook/burn e.g. bread to make toast.</li> <li>• Bread “selection”</li> <li>• Fillings for sandwiches</li> <li>• Range of crisps or biscuits</li> <li>• Variety of substances to smell e.g. coffee, herbs, chocolate, toothpaste, massage oils.</li> </ul>
<p><b><u>Possible Investigations/ Working Scientifically</u></b></p>	<ul style="list-style-type: none"> <li>• Whose hand holds the most? Discussion to decide how to do this.</li> <li>• Devise own eye test. Which colours show up best? Can they see better with one eye.</li> <li>• A grouping and sorting investigation e.g. objects that are hot or cold; loud and quiet sounds.</li> <li>• Find out which materials stop sound – by covering the ears with different materials.</li> <li>• Identify other pupils from recorded or live voices and use photographs to indicate who it is.</li> </ul>
<p><b><u>Personal development</u></b></p>	<p><b><u>Problem solving</u></b> Investigations and matching exercises</p> <p><b><u>Communication skills</u></b> Working as pairs in investigations, asking and answering questions</p> <p><b><u>Self-belief</u></b> Learning new skills, practising them and demonstrating them.</p> <p><b><u>Self-management</u></b> Working with new equipment</p> <p><b><u>Teamwork</u></b> Working as groups to solve problems or find out new information</p>
<p><b><u>Possible Resources</u></b></p> <p><a href="https://www.science-sparks.com/learn-about-your-body/">https://www.science-sparks.com/learn-about-your-body/</a></p> <p><a href="https://www.pinterest.com/primarythemepk/human-body-activities-for-kids/">https://www.pinterest.com/primarythemepk/human-body-activities-for-kids/</a></p> <p><a href="https://www.icanteachmychild.com/human-body-activities-for-kids/">https://www.icanteachmychild.com/human-body-activities-for-kids/</a></p> <p><a href="https://www.weareteachers.com/anatomy-activities/">https://www.weareteachers.com/anatomy-activities/</a></p> <p><a href="https://www.abcya.com/games/five_senses">https://www.abcya.com/games/five_senses</a></p> <p><a href="https://playtolearnpreschool.us/5-senses-activities/">https://playtolearnpreschool.us/5-senses-activities/</a></p>	

### **Evidencing Work**

**All work / evidence sheets need to be printed off (where appropriate levelled in accordance with the rubric), students need to self-assess and work needs to be put in student folders.**

RRS Articles:

This unit of work is linked to Articles of the UN Convention on the Rights of the Child.

Article 13 (freedom of expression)

Article 24 (health and health services)

Article 29 (goals of education)