

Contents – Science in our lives

In this section you will cover the following language and concepts:



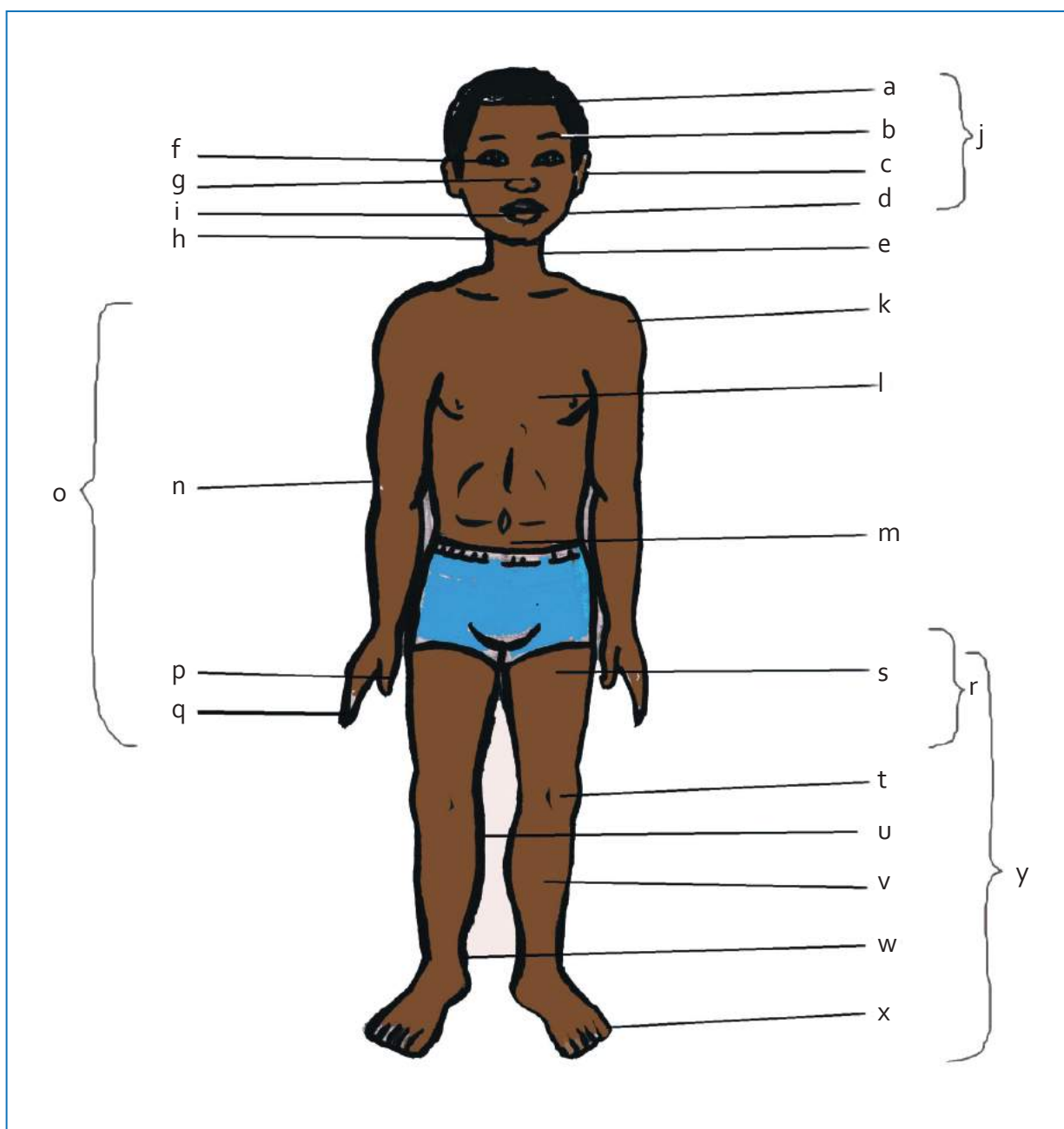
1. The human body	<p>Vocabulary: Eye; ear; mouth; neck; hands; nose; legs; back; finger; feet; toes; digits; thumb; knee; eyebrows; eyelashes; eye lids; lips; functions; bend; touch; smell; hold; move; breathe; see; hear; wink; speak</p> <p>Structures: What is this/that?; This is/that is...; What are these?; These are...; What is/are ears/eyes for?; They are for seeing/hearing/eating; Feet/fingers help us to...</p>
2. Health and sickness	<p>Vocabulary: Wash; do exercise; healthy/unhealthy; illness; fit/unfit; feel (tired); energy; parasite; vaccinations; contaminated; fever</p> <p>Structures: What are/is...healthy habits/practices; ... is healthy (a healthy habit); First conditional: If you.../If you don't..., you will/may/might...; Why is doing sport good for you? It's good for you because ...</p>
3. Safety	<p>Vocabulary: Precaution; safety; put out fire; snake bite; antibiotic pills; tall grass; scorpion</p> <p>Structures: Conditional: If I saw a snake I would run away; Is it safe/dangerous to...? Yes, it is/No, it isn't safe to...; should/shouldn't for safety advice. If we... it might...</p>
4. First aid	<p>Vocabulary: First aid; accident; incident; to be injured; to be taken ill; to be bitten; to be stung; to get a cut; to treat; minor; serious case; identify the snake; stay calm; reassure; wrap a bandage; apply pressure; medical advice</p> <p>Structures: Which (incident)?; If someone is bitten by a snake/injured/taken ill/shocked, you need to...</p>

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5. Science apparatus	<p>Vocabulary: Microscope; beaker; pair of tongs; retort stand; Bunsen burner; test tube; pipette; light; turn on/off; pick up; put down; hold; look through/ see more clearly; to heat</p> <p>Structures: What is this/that?; This is/that is...; Here is a...; A... is used for ...ing; We need a... to...</p>
6. Laboratory rules	<p>Vocabulary: Laboratory; rules; safety; do's; don'ts; taste; follow rules/break rules; knock over; catch fire; burn; trip over</p> <p>Structures: Do not...; You must/mustn't...; You're not allowed to...</p>
7. Combustion	<p>Vocabulary: combustion; burn; fire; paper; glass jar/beaker; smoke; oxygen</p> <p>Structures: What is this/that?; This/that is...; Is this/that...?; Yes it is..., No it is not...; How long...?; It took...; What did you see when ...? The paper changed colour/changed form/gave off smoke; comparative: ...er than, more quickly than ...</p>
8. States of matter	<p>Vocabulary: States; matter; solid; liquid, gas; particles; orange juice; milk; petrol; pencil; chair; nitrogen; oxygen; carbon dioxide; water vapour; steam; able/unable to flow; able/unable to change its shape</p> <p>Structures: The states of matter are...; Is... a solid, liquid or gas? Why?; It's a... because...; ...is an example of a...</p>
9. Ways of learning science	<p>Vocabulary: Aim; theory; procedure; observation/information gathering; results analysis; interpret; draw a conclusion; states of matter; melt; vapour/steam; heat; steps; stages; particles; molecules; moving</p> <p>Structures: What did you do?; I verb+ed...; What did you see/find out?; I saw/ found out...; What do you conclude?; I conclude that...</p>
10. Simple machines	<p>Vocabulary: Simple machine; calculator; microscope; a pair of scissors; wheelbarrow; crowbar; nail cutter; nails (fingers); nails (metal); load; soil; carry; long; short; thin; thick; made of metal; made of plastic; sharp; handles; wheel(s); for cutting; for moving; for lifting; for opening; joined in the middle; curved.</p> <p>Structures: What is... (simple machine)?; What are the uses of...?; It's used for...ing; It's used to...</p>

Lesson 1: The human body

Activity 1



Activity 2



Match the following parts of the body with their function.

Body part	Function
elbow	hear
leg	see
arm	smell
digits	protect the eye
knuckles	walk
eyes	bend the fingers to grip
ears	lift things
nose	bend the arm to make it work
eyelids	grip/hold things



Homework – Learn this vocabulary ready for a test.



Reflect – Think about how you can best learn this vocabulary. There are many ways that are successful for some and not others. Which is the best way for you? Try different ways and see what works best for you.

Lesson 2: Health and sickness

Activity 1



Look at the habits in the box below and write them in two lists.

doing sports eating fruit smoking washing yourself going to bed late
eating sweets brushing your teeth drinking beer

Healthy habits	Unhealthy habits

Activity 2



Write these sentences joining the beginning to the correct ending.

If you don't sleep enough,	You might get a serious illness.
If you do lots of exercise,	You will have energy and feel well.
If you smoke,	You will feel tired all the time.
If you eat good food,	You might get very ill.
If you don't have vaccinations,	You will stay fit and strong.



Reflect – Do you have a healthy life? Are there any ways that you can make it healthier? Are you going to change any of your habits?



Homework – Design a poster about health called *Healthy living*. It should include things that are healthy and unhealthy.

Lesson 3: Safety

Activity 1



Look at these situations and say what you would do.

What would you do if:

- You saw a snake in the tall grass near your compound?
- You picked up some firewood outside your house and saw a scorpion hiding under it?
- You saw a small fire starting in the bushes near your house?
- You saw a rat eating some food you left on the floor?
- Your 2-years-old brother ate your mother's antibiotic pills?
- Your sister accidentally mixed kerosene with the food

Start your sentences with, I would...

Activity 2



Safety in our home and school environment

Work with a partner, and write answers to these questions in your exercise books.

1. How can we stop snakes coming near our compound?
2. How can we keep scorpions and other insects away?
3. How can we prevent fires near our homes or school?
4. How can we keep rats out of our houses?
5. How can we be sure the small children in our homes don't eat medicines?

Write sentences starting with, We should...



Homework – If you can, do this homework in a group. Design a safety leaflet called *Safety at home* to be given to every house in your village. Write short sentences about safety and giving advice and draw pictures in your leaflet.

Lesson 4: First aid

Activity 1



Activity 2



What help would you give in these situations?

1. Your friend fell on some glass and cut his arm. It is bleeding a lot.
2. Your sister knocked over the cooking pot and boiling water fell on her hand.
3. Your mother fell in the house and banged her head on the floor.
4. Your friend fell off her bicycle and her leg looks strange. You think it's broken.

Activity 3



Choose the best first aid option for the injuries in Activity 2.

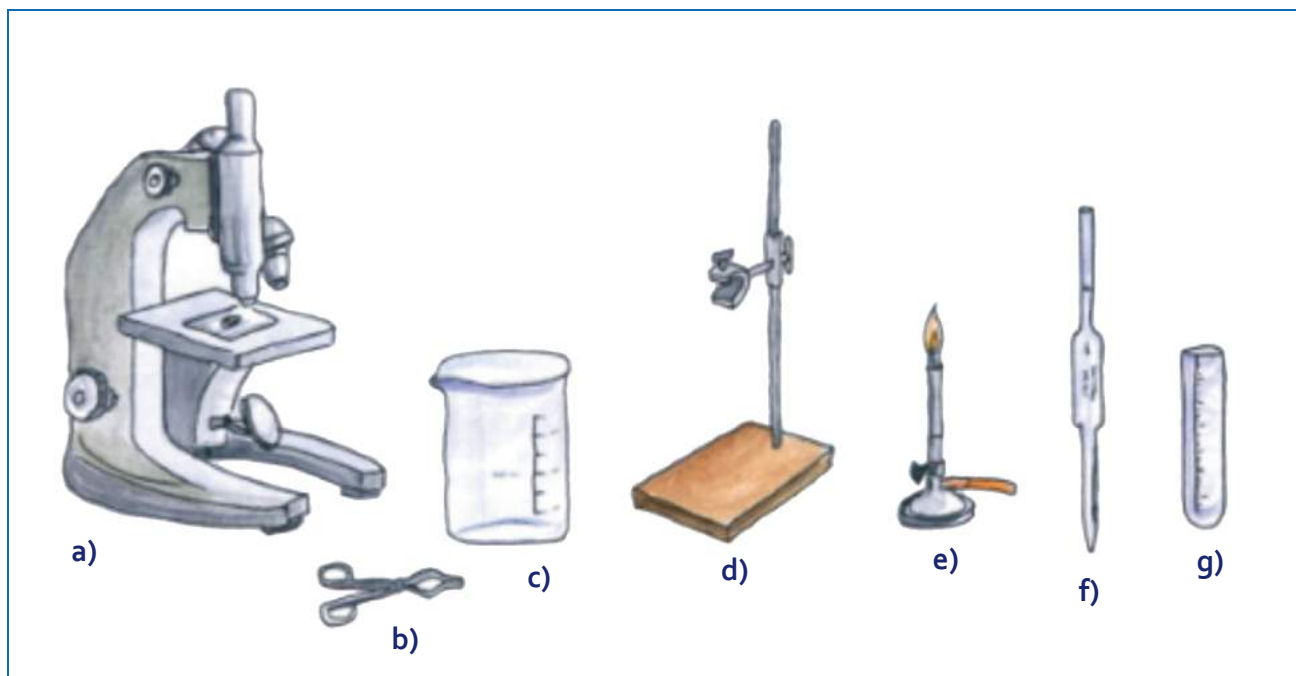
1. a) Try to get the glass out with your fingers.	b) Wash the wound with clean water and go to the doctor.
2. a) Put the hand in cold water for 10 minutes.	b) Put oil on the hand.
3. a) Make your mother stand up as soon as possible.	b) Put ice on your mother's head and get a doctor.
4. a) Tell your friend to keep still, and get help.	b) See if your friend can walk on the leg.



Homework – Write a short paragraph about a time when you or a member of your family had an accident or were ill. Try to remember what help they got before they went to the doctor or hospital.

Lesson 5: Science apparatus

Activity 1



Activity 2



Rearrange the letters of these words and then match the words to a definition.

1. etortr dstna	a) To see small things more clearly.
2. uBnesn nrbure	b) To contain small amounts of chemicals to be mixed/ heated/ cooled.
3. pmierocsco	c) To hold the test tube so that it doesn't move.
4. rekbea	d) To collect or introduce small amounts of liquid.
5. rpai fo stgon	e) To pick up small things without touching them with our fingers.
6. stet bute	f) To heat things.
7. ttepiep	g) To contain (and sometimes mix) larger amounts of things: powders, liquids, etc.

Lesson 6: Laboratory rules

Activity 1



Activity 2



Look at the symbols.

Design your own symbols for five more laboratory rules and make a poster. Write the rules under the symbols.

Activity 3



Read about these accidents and say which laboratory rule was broken.

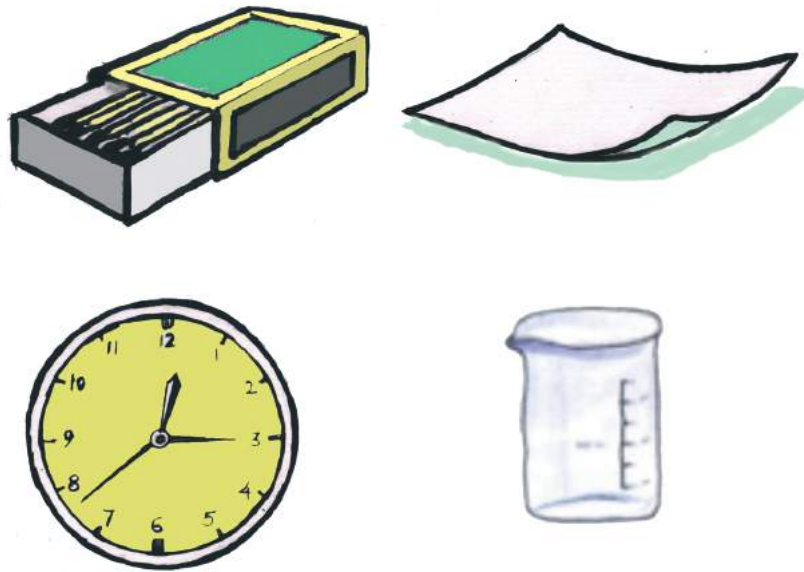
ACCIDENTS!
1. Some pieces of paper caught fire in the laboratory after students went home.
2. While walking around the laboratory, a student tripped over a bag and fell on the floor.
3. Jenina threw a book to Dami, and it hit a bottle containing chemicals. The chemical burnt Husuda very badly.
4. Talu entered the laboratory alone and could not understand how to close the gas pipe. Half an hour later he ran out of the laboratory but the laboratory and two more classrooms caught fire.

Lesson 7: Combustion

Activity 1



Watch the teacher demonstrating an experiment. While you are watching, record your observations in your exercise book.



Activity 2



Use the words to complete the gaps.

oxygen light air longer combustion heat

When we burn paper in the air, _____ and _____ are produced. It takes a
_____ time for paper to burn in a jar because there is no _____.
_____ from the air is needed for _____ to happen.

Lesson 8: States of matter

Activity 1



Matter

Matter is everything that is found within our environment and it can exist in three different states: solid, liquid and gas. Matter is made up of particles. The way these particles are packed together makes the matter (or material) solid, liquid or gas.

Solids usually keep their shape, unless they are broken or bent. Liquids can flow, and take the shape of their container. Gases are usually invisible, and can spread out to fill the space in which they are held.

Matter includes stones, vegetation, air, food, water and even our bodies.

Activity 2



Complete the following paragraph by filling the blank spaces with one of the words from brackets.

Matter exists in _____ (ten, four, three) states in everyday life. The air we breathe is in _____ (solid, liquid, gas) state. At home, when we cook ugali we use maize flour and water. In this case _____ (gas, water, maize flour) is liquid and _____ (liquid, water, maize flour) is solid.

Lesson 9: Ways of learning science

Activity 1



Copy this list. Listen to your teacher, and number the order in which you hear the teacher say these things.

conclusion	theory	aim
information gathering	procedure	results analysis

Activity 2



Match each step with an explanation. Then copy the steps and explanations in your exercise book

Step	Explanation
1. Theory:	a) The results obtained are analysed to identify new findings or verify the existing ones.
2. Conclusion:	b) Explanations on how to conduct the experiment step by step.
3. Aim:	c) Observations and data are recorded.
4. Information gathering:	d) The stage at which you study the scientific principles and laws governing the experiment.
5. Results analysis:	e) The findings of the experiment.
6. Procedure:	f) This is the purpose of the experiment. It should appear at the heading of experiment report.

Put the steps into the correct order for writing up an experiment. Then listen to your teacher to check your answers.

Activity 3



Read the introduction:

Introduction: This experiment aims to show that water can exist in different states or forms.

Listen to your classmates' questions and choose the correct answer from the table. Put your hand up if you think you have the answer.

1. Water can exist in three states: solid, liquid and gas.
2. I used fire, a pot and ice.
3. I saw ice melting to water and the water evaporating into steam.
4. When ice is heated, it acquires energy which loosens the attractions between the molecules. As a result the molecules become free to move. The ice has changed to water. If more heat is added, it changes water into water vapour (steam).
5. I heated ice in a pot.
6. The aim of the experiment was to prove that water exists in three states
7. All matter is made up of separate moving particles. The particles change state when you add energy.



Homework – Do an experiment at home.

Get two pieces of ice the same size. Put them both on separate dishes, one inside a sock and the other leave uncovered, on the dish.

Which piece of ice melts more quickly?

Write your conclusions and bring them to the next lesson.

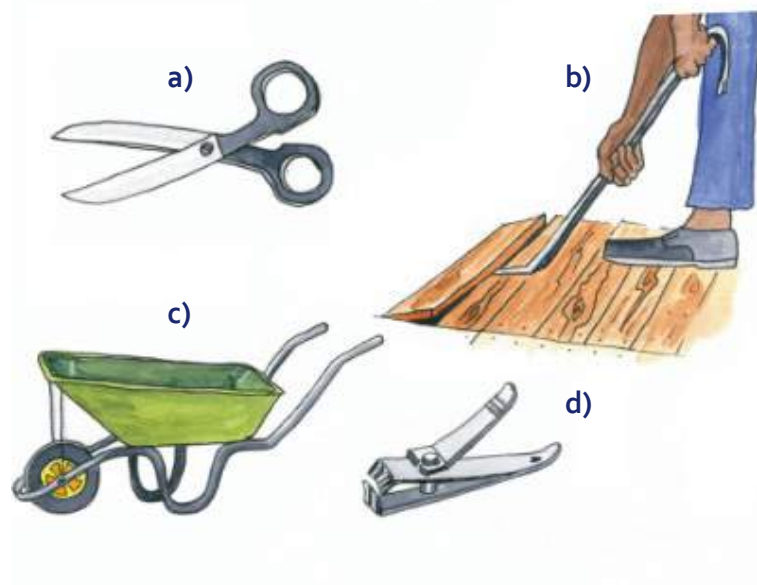
Lesson 10: Simple machines

Activity 1



Use the words in the box to describe the items

long	short	thin	thick	made of metal	made of plastic
sharp	handles	wheel(s)	for cutting	for moving	
	for lifting	for opening	joined in the middle		



Activity 2



Read, and guess what the objects are.

1. It is made of metal and plastic, and it has two sharp, thin metal parts joined in the middle. It has plastic handles. It is used for cutting things. _____.
2. It is long and thin, made of metal with a curved end. It is used to open wooden crates or boxes, or to get nails out of wood. It can also be used to lift stones out of the earth. _____

Write a similar short text describing one of the other objects.