OXFORD

SCHOOL Improvement

CAPS

PLANNER & TRACKER

Natural Sciences and Technology

Grade 5

- *Progress tracker*
- *Intervention strategies*
- *Worksheets and exam papers*
- *Assessment support*
- *Key vocabulary*

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Contents

The worksheets in this resource book are developed for use with *Oxford Successful Natural Sciences and Technology* Grade 5 Learner's Book. The answers to the worksheets can be found in the *Oxford Successful Natural Sciences and Technology* Grade 5 Teacher's Guide.

Progress tracker

Term 1

Term 2

Term 3

Term 4

TERM 1

Progress tracker for *Oxford Successful Natural Sciences and Technology* Grade 5						
	STRAND 1 **NATURAL SCIENCES: Life and Living** **TECHNOLOGY: Structures**					
Weeks	**Content and concepts (as per CAPS and 2023/24 ATP)**	**Learner's Book page**	**Time allocated (as per ATP)**	**Formal assessment activities**	**Date of completion**	**Teacher reflection**
1–3	**Plants and animals on Earth** – Many different plants and animals – Inter-dependence – Animal types	**10** 10 16 18	2,5 weeks (8,75 hours)			
3–4	**Animal skeletons** – Skeletons of vertebrates – Movement	**20** **20** 23	1 week (3,5 hours)			
4–6	**Skeletons as structures** – Frame and shell structures	**26** 26	2 weeks (7 hours)	Practical task: Activity 2 LB: p. 28 TG: p. 45 OR Practical task: Activity 3 LB: p. 29 TG: p. 46		
6–7	**Food chains** – Food and feeding	**30** 30	1,5 weeks (5,25 hours)			
8–9	**Life cycles** – Growth and development	**36** 36	2 weeks (7 hours)			
10–11	Revision Strand 1: Summary LB: p. 44			Exemplar test LB: p. 45 Control test TG: p. 129		

TERM 2

Progress tracker for *Oxford Successful Natural Sciences and Technology* Grade 5						
STRAND 2 **NATURAL SCIENCES: Matter and Materials** **TECHNOLOGY: Processing**						
Weeks	**Content and concepts (as per CAPS and 2023/24 ATP)**	**Learner Book page**	**Time allocated (as per ATP)**	**Formal assessment activities**	**Date of completion**	**Teacher reflection**
1–3	**Metals and non-metals** – Properties of metals – Properties of non-metals	**48** 48 53	2,5 weeks (7,25 hours)			
3–5	**Uses of metals** – Other properties of metals – Different uses of metals	**56** 56 60	2,5 weeks (7,25 hours)	Practical task: Activity 1 LB: p. 56 TG: p. 65 OR Activity 1 LB: p. 61 TG: p. 69		
6–8	**Processing materials** – Combining materials	**62** 62	2,5 weeks (12,25 hours)			
8–9	**Processing materials** – Properties and uses	**68** 68	1,5 weeks (5,25 hours)			
10–11	Revision Strand 2: Summary LB: p. 75			Exemplar revision test (Term 2) LB: p. 76 Exemplar test (Terms 1 and 2) LB: p. 77 Control test (Terms 1 and 2) TG: p. 134		

TERM 3

Progress tracker for *Oxford Successful Natural Sciences and Technology* Grade 5						
STRAND 3 **NATURAL SCIENCES: Energy and change** **TECHNOLOGY: Systems and control**						
Weeks	**Content and concepts (as per CAPS and 2023/24 ATP)**	**Learner's Book page**	**Time allocated (as per ATP)**	**Formal assessment activities**	**Date of completion**	**Teacher reflection**
1–3	**Stored energy in fuels** – Fuels – Burning fuels – Safety with fire	**80** 80 86 88	3 weeks (10,5 hours)	Practical task: Activity 3 LB: p. 83 TG: p. 81		
4–6	**Energy and electricity** – Cells and batteries – Mains electricity – Safety with electricity	**91** 91 96 99	3 weeks (10,5 hours)	OR Practical task: Activity 2 LB: p. 95 TG: p. 92		
7–9	**Energy and movement** – Elastic and springs	**102** 102	3 weeks (10,5 hours)			
10–11	Revision Strand 3: Summary LB: p. 116			Exemplar test (Term 3) LB: p. 117 Control test TG: p. 139		

TERM 4

Progress tracker for *Oxford Successful Natural Sciences and Technology* Grade 5						
STRAND 4 **NATURAL SCIENCES: Planet Earth and beyond** **TECHNOLOGY: Systems and control**						
Weeks	**Content and concepts (as per CAPS and 2023/24 ATP)**	**Learner Book page**	**Time allocated (as per ATP)**	**Formal assessment activities**	**Date of completion**	**Teacher reflection**
1	**Planet Earth** – The Earth moves	**120** 120	1 week (7 hours)			
2–4	**Surface of the Earth** – Rocks – Soil comes from rocks – Soil types	**124** 124 126 130	2,5 weeks (8,75 hours)	Practical task: Activity 3 LB: p. 134 TG: p. 116		
4–6	**Sedimentary rocks** – Formation of sedimentary rock – Uses of sedimentary rock	**136** 136 140	2 weeks (7 hours)			
6–8	**Fossils** – Fossils in rock – Body and trace fossils – Importance of South African fossils	**142** 142 144 149	2,5 weeks (8,75 hours)			
9	Revision Strand 4: Summary LB: p. 152			Exemplar revision test (Term 4) LB: p. 153 Exemplar end-of-year exam LB: p. 154 Control end-of-year exam TG: p. 145		

STRAND 1: Science vocabulary

BACKBONE

Pronunciation	***bak**-bohn*
Part of speech	noun (plural: backbones)
Definition	the line of vertebrae down the back of your body
Afrikaans	ruggraat
IsiXhosa	umqolo; umchachazo
IsiZulu	umgogodla

BIODIVERSITY

Pronunciation	*by-oh-di-**ver**-sit-ee*
Part of speech	noun (no plural)
Definition	the number of different types of organisms in an area (habitat)
Afrikaans	biodiversiteit
IsiXhosa	izinto ezahlukahlukeneyo ngokwendlela zokuphila
IsiZulu	ukwehlukahluka kwempilo

BONE

Pronunciation	***bohn***
Part of speech	noun (plural: bones)
Definition	the hard white parts inside the body of a person or an animal
Afrikaans	been
IsiXhosa	ithambo
IsiZulu	ithambo

CARNIVORE

Pronunciation	***kaan**-i-vaw*
Part of speech	noun (plural: carnivores)
Definition	an animal that only eats other animals (meat)
Afrikaans	karnivoor; vleiseter; vleisvreter
IsiXhosa	isidla-nyama
IsiZulu	isiphilanganyama

ENERGY TRANSFER

Pronunciation	***en**-uh-jee **traanss**-fur*
Part of speech	noun (plural: energy transfers)
Definition	a change of energy form into another energy
Afrikaans	energieoordrag
IsiXhosa	udluliso lwamanda
IsiZulu	ukweduliswa kwamandla

FOOD CHAIN

Pronunciation	***food chayn***
Part of speech	noun (plural: food chains)
Definition	a series of living creatures in which each creature feeds on the one below it in the series
Afrikaans	voedselketting
IsiXhosa	ikhonkco lokutya
IsiZulu	umzungezo wokudla

FRAME STRUCTURE

Pronunciation	***fraym struk**-tshuh*
Part of speech	noun (plural: frame structures)
Definition	a structure made of strips that are joined together
Afrikaans	raamstruktuur
IsiXhosa	uphahla
IsiZulu	uhlaka

GERMINATE

Pronunciation	***jurm**-i-nayt*
Part of speech	verb (germinating; germinated)
Definition	to start to grow and develop
Afrikaans	ontkiem
IsiXhosa	ntshula
IsiZulu	-mila; -qhuma

GERMINATION

Pronunciation	*jurm-i-**nay**-shuhn*
Part of speech	noun (no plural)
Definition	the process in which a seed begins to grow and develop
Afrikaans	ontkieming
IsiXhosa	ukuntshula; ukuhluma
IsiZulu	ukumila; ukuqhuma

HABITAT

Pronunciation	***hab**-i-tat*
Part of speech	noun (plural: habitats)
Definition	the natural place where a plant or an animal lives
Afrikaans	habitat
IsiXhosa	indawo yokuhlala
IsiZulu	isikhungo

HERBIVORE

Pronunciation ***hurb****-i-vaw*
Part of speech noun (plural: herbivores)
Definition an animal that only eats grass and other plants
Afrikaans herbivoor; planteter; plantvreter
IsiXhosa igqabi
IsiZulu iqabunga

INVERTEBRATE

Pronunciation *in-****vur****-ti-bruht*
Part of speech noun (plural: invertebrates)
Definition an animal that has no backbone
Afrikaans ongewerwelde
IsiXhosa izilwanyana ezingenathambo lomqolo
IsiZulu -ngenamgogodla

JOINT [ANATOMY]

Pronunciation ***joynt***
Part of speech noun (plural: joints)
Definition a part of a body where bones meet
Afrikaans gewrig
IsiXhosa ilungu
IsiZulu ilunga

LIFE CYCLE

Pronunciation ***lyff sike****-uhl*
Part of speech noun (plural: life cycles)
Definition the series of forms into which a living thing changes as it develops
Afrikaans lewensiklus
IsiXhosa amanqanaba obomi; umjikelo wobomi
IsiZulu umjikelezo wempilo

MATE [TO HAVE SEX]

Pronunciation ***mayt***
Part of speech verb (mating; mated)
Definition when two animals come together to make young animals
Afrikaans paar
IsiXhosa ukukhwelisa
IsiZulu -lalana; -khwelana

MATURE

Pronunciation *muh-****tyoor***
Part of speech adjective
Definition fully grown or fully developed
Afrikaans volwasse
IsiXhosa gqibeleleyo
IsiZulu -khulile; -vuthiwe

MUSCLE

Pronunciation ***muss****-l*
Part of speech noun (plural: muscles)
Definition a body part that can tighten or stretch
Afrikaans spier
IsiXhosa isihlunu
IsiZulu umsipha; isicubu

OMNIVORE

Pronunciation ***om****-ni-vaw*
Part of speech noun (plural: omnivores)
Definition an animal that eats both plants and other animals
Afrikaans omnivoor; alleseter; allesvreter
IsiXhosa oodlakonke
IsiZulu isidlakonke

ORGAN

Pronunciation **aw***-guhn*
Part of speech noun (plural: organs)
Definition a body part that carries out a special function that is needed for the whole body to live
Afrikaans orgaan
IsiXhosa ilungu
IsiZulu isitho

PHOTOSYNTHESIS

Pronunciation *foh-toh-****sin****-thuh-siss*
Part of speech noun (no pural)
Definition the process by which plants take in Sun energy to make food
Afrikaans fotosintese
IsiXhosa ukwenziwa kokutya zizityalo ngelanga
IsiZulu ukwakhiwa kokudla kwesihlahla

POLLINATE

Pronunciation ***pol****-i-nayt***Part of speech** verb (pollinating; pollinated)
Definition to move pollen from the male to the female parts of a flower so that the plant produces seeds
Afrikaans bestuif
IsiXhosa ukuchumisa ngepholeni
IsiZulu -qhola

POLLINATION

Pronunciation ***pol****-i-nay-shuhn*
Part of speech noun (no plural)
Definition the process of moving pollen from male to female parts of a flower for seed production
Afrikaans bestuiwing
IsiXhosa uchumiso ngepholeni
IsiZulu ukuqholwa

RIB

Pronunciation ***ruhb***
Part of speech noun (plural: ribs)
Definition one of the bones around your chest
Afrikaans rib
IsiXhosa ubambo
IsiZulu ubambo

SHELL STRUCTURE

Pronunciation ***shel struk****-tshuh*
Part of speech noun (plural: shell structures)
Definition the skeleton on the outside of some invertebrates
Afrikaans dopstruktuur
IsiXhosa ebuqokobhe
IsiZulu isakhiwo segobolondo; umumo wegobolondo

SHOULDERBLADE

Pronunciation ***shohl****-duh-blayd*
Part of speech noun (plural: shoulderblades)
Definition one of the two large flat bones at the top of the back where the arms join the body
Afrikaans skouerblad
IsiXhosa igxalaba
IsiZulu isiphanga

SKELETON

Pronunciation ***skel****-i-tuhn*
Part of speech noun (plural: skeletons)
Definition the bones of a whole animal or person
Afrikaans skelet
IsiXhosa uphahla lomzimba; amathambo
IsiZulu uhlaka lwamathambo

SKULL

Pronunciation ***skuhl***
Part of speech noun (plural: skulls)
Definition the bones of the head of a person or an animal
Afrikaans skedel
IsiXhosa ukhakayi
IsiZulu ugebhezi

SPINAL CORD

Pronunciation ***spine****-uhl* ***kawd***
Part of speech noun (plural: spinal cords)
Definition bundle of nerves that run down the back and connects the body and the brain
Afrikaans rugmurg
IsiXhosa umnqonqo
IsiZulu umhlandla; umgogodla

VERTEBRA

Pronunciation ***ver****-ti-bruh*
Part of speech noun (plural: vertebrae)
Definition one of the ring-like bones that make up the backbone and protect the spinal cord
Afrikaans werwel
IsiXhosa ithambo lomqolo
IsiZulu ungceshana

VERTEBRATE

Pronunciation ***vur****-ti-bruht*
Part of speech noun (plural: vertebrates)
Definition an animal that has a backbone
Afrikaans gewerwelde
IsiXhosa ezinethambo lomqolo
IsiZulu okunomgogodla

ACTIVITY 1: Describe animals with and without backbones

Name:_____ **Grade:**_____

1. Look at the pictures of the invertebrates in Figure 1 on page 18 of the Learner's Book.

   1.2 Compare the body of the snail and the earthworm. Describe how their bodies are the same.

   _____

   _____

   Describe how their bodies are different.

   _____

   _____

   1.3 Count how many legs each animal has:

   A earthworm: _____ B grasshopper: _____

   C spider: _____ D millipede: _____

2. Look at the pictures of the vertebrate animals in Figure 2 on page 19 of the Learner's Book.

   2.2 Describe each animal's body covering.

   _____

   _____

   _____

   _____

   _____

   2.3 List the animals that have four legs.

   _____

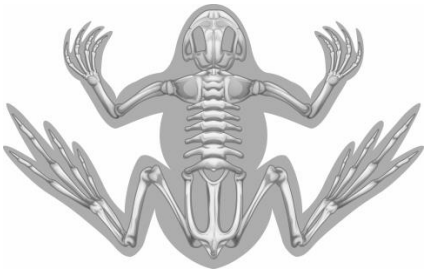
3. Look at the animals in Figure 3 on page 19 of the Learner's Book. Identify the vertebrate.

   _____

ACTIVITY 1: Identify the parts of the vertebrate skeleton

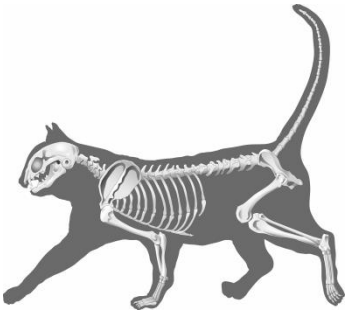
Name:_____ **Grade:**_____

1. Read about bones on page 20 of the Learner's Book.
2. Look at the vertebrate animal skeletons in Figure 2 on page 22 of the Learner's Book. Identify the following parts: skull, backbone, ribs, limbs, shoulder and hip bones.

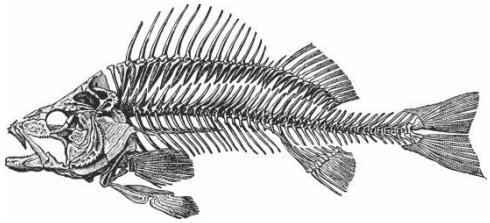


frog

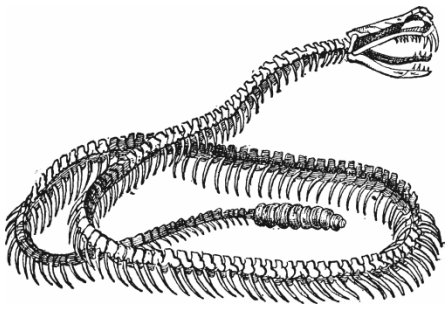
bird



cat



fish



snake

3. List the animals that do not have limbs.

_____

4. List the animals that do not have hip bones or hip girdles.

_____

ACTIVITY 1: Draw and sequence food chains

Name:_____ **Grade:**_____

1. Look at the pictures of the two habitats in Figure 2 on page 35 of the Learner's Book. Draw food chains for the pond and the rock pool habitats.

2. There are three food chains in Figure 3 on page 35 of the Learner's Book, but they have been mixed up. Redraw each food chain in the correct order.

   A: _____

   B: _____

   C: _____

   _____

ACTIVITY 2: Identify and label the stages and processes in the dandelion's life cycle

Name:_____ **Grade:**_____

Look at the pictures of the life cycle of the dandelion in Figure 5 on page 38 of the Learner's Book.

1. Copy the pictures from the Learner's Book into this space.

2. Match these labels in the box to the Stages 1 to 5 in the life cycle.

adult plant	seedling	fruiting plant
seed	flowering plant	

3. Complete these sentences. Write them in the right place on your pictures above:
   - 3.1 The seed _____ into a seedling.
   - 3.2 The seedling _____ into an adult plant.
   - 3.3 The adult plant _____ and _____.
   - 3.4 The flowering plant is _____ by a bee.
   - 3.5 The pollinated plant becomes a _____ _____.
   - 3.6 The fruiting plant produces seeds and the seeds are _____.

ACTIVITY 3: Identify and label the stages and processes in the dog's life cycle

Name:_____ **Grade:**_____

Read the case study about Sam's dog on page 40 of the Learner's Book.

1. Make a list of the stages and processes in a dog's life cycle.

Stages	Processes

2. Write down the sentences or phrases in the case study that describe each stage or process.

Stages or processes	Sentences or phrases

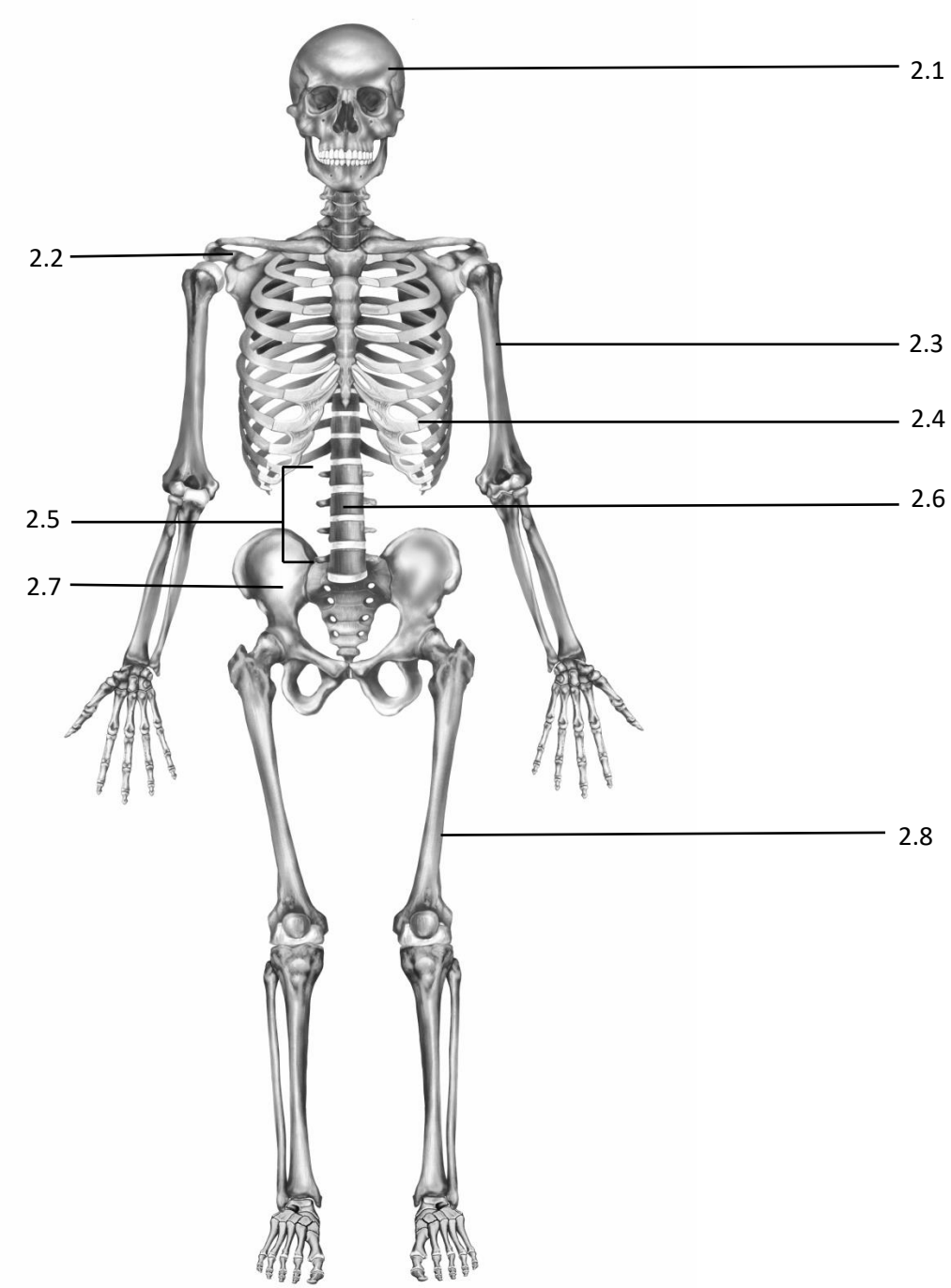
STRAND 1: Control test

Name:_____ **Grade:**_____

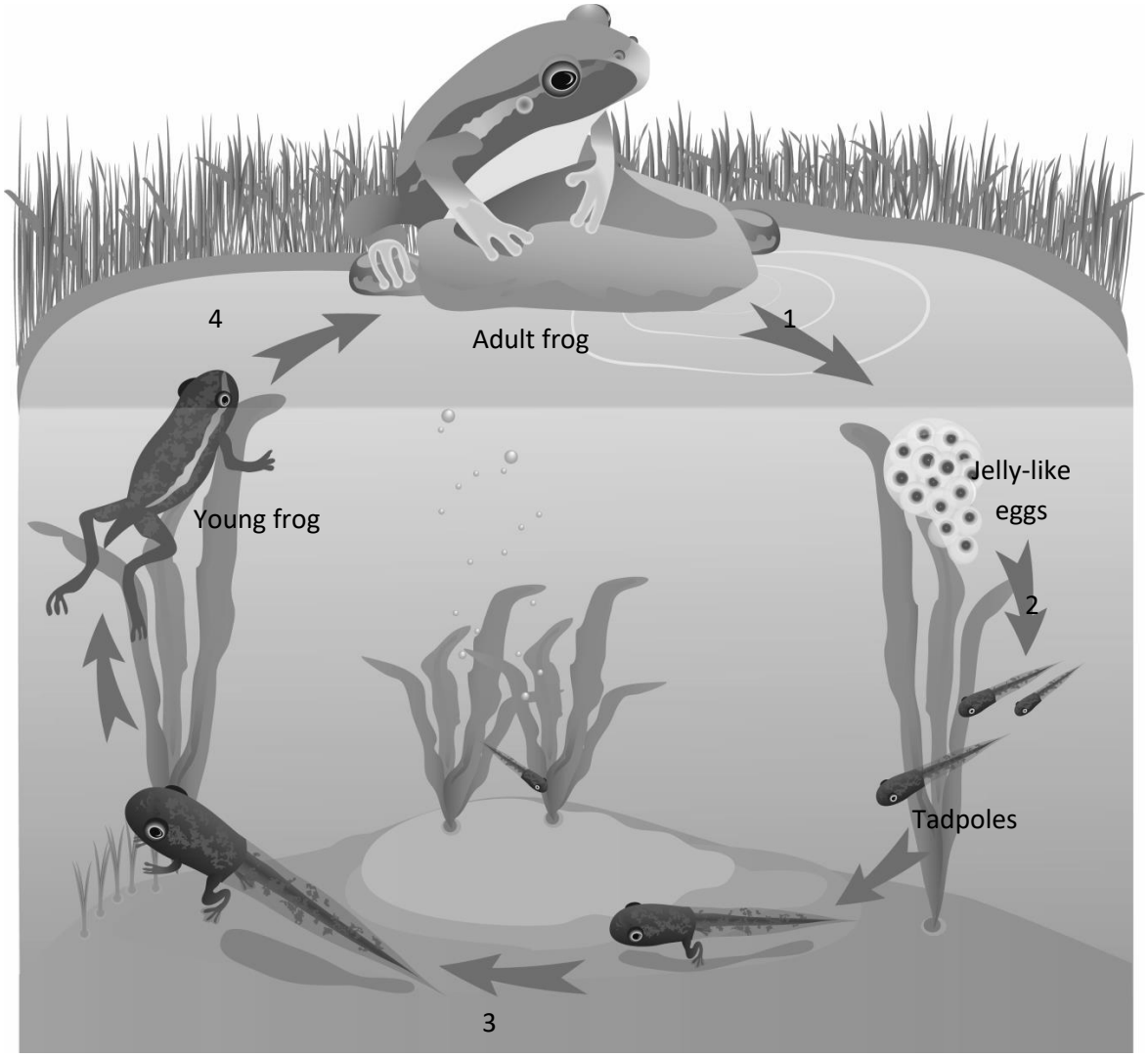
1. Classify a human as a vertebrate or invertebrate. (1)

_____

2. Give the missing labels. (8)



3. Look at the life cycle of the frog below and answer the questions that follow.



4. Name the four processes in the life cycle of the frog. (4)

1: _____

2: _____

3: _____

4: _____

5. Explain what is special about the frog's life cycle. (2)

_____

_____

Total: 15 marks

STRAND 2: Science vocabulary

BRITTLE

Pronunciation	***brit**-l*
Part of speech	adjective
Definition	hard but breaks easily
Afrikaans	bros
IsiXhosa	iqoboqobo; iqwathaqwatha
IsiZulu	okuqhephukayo

CONDUCT

Pronunciation	*kuhn-**dukt***
Part of speech	verb (conducting; conducted)
Definition	to allow heat, electricity or sound to pass through or along a substance
Afrikaans	gelei
IsiXhosa	ukunikezela; ukugqithisa
IsiZulu	-dlulisa

CONDUCTOR [ELECTRICITY]

Pronunciation	*kuhn-**duk**-tuh*
Part of speech	noun (plural: conductors)
Definition	substance that allows electricity to pass through or along it
Afrikaans	geleier
IsiXhosa	isinikezeli; isigqithiseli
IsiZulu	isidlulisi sikagesi

DUCTILE

Pronunciation	***duk**-tile*
Part of speech	adjective
Definition	can be stretched to form strands of wire
Afrikaans	rekbaar
IsiXhosa	enwabulukayo; enwebekayo
IsiZulu	-nwebekayo

DULL

Pronunciation	***dul***
Part of speech	adjective
Definition	not bright or shiny
Afrikaans	dof
IsiXhosa	mfiliba; mbatshileyo
IsiZulu	-gqwalile; -phuphile; -phashile

HARDNESS

Pronunciation	***haad**-nuhss*
Part of speech	noun (no plural)
Definition	the property of being solid and difficult to break or bend
Afrikaans	hardheid
IsiXhosa	ukuqina; ukomelela
IsiZulu	ukuqina

INSULATOR [ELECTRICITY]

Pronunciation	***in**-syuu-lay-tuh*
Part of speech	noun (plural: insulators)
Definition	a material or device that prevents electricity from passing through
Afrikaans	isolator; nie-geleier
IsiXhosa	isigqumi
IsiZulu	isivimbelakushisa

INVESTIGATE

Pronunciation	*in-**vess**-ti-gayt*
Part of speech	verb (investigating; investigated)
Definition	to research or study something to find out facts and information
Afrikaans	ondersoek
IsiXhosa	phanda
IsiZulu	-cwaninga; -phenya

INVESTIGATION

Pronunciation	*in-**vess**-ti-gay-shuhn*
Part of speech	noun (plural: investigations)
Definition	the process of researching or studying something to find out facts and information
Afrikaans	ondersoek
IsiXhosa	uphengululo
IsiZulu	uphenyo; ukuphenya

MAGNET

Pronunciation	***mag**-nuht*
Part of speech	noun (plural: magnets)
Definition	a metal that attracts some other metals
Afrikaans	magneet
IsiXhosa	umazibuthe
IsiZulu	uzibuthe

MAGNETIC

Pronunciation	*mag-**net**-ik*
Part of speech	adjective
Definition	having the ability to attract metal objects
Afrikaans	magneties
IsiXhosa	umazibuthe
IsiZulu	-kazibuthe

MAGNETIC FIELD

Pronunciation	*mag-**net**-ik **feeld***
Part of speech	noun (plural: magnetic fields)
Definition	the area around a magnet within which it attracts or repels other metal objects
Afrikaans	magneetveld
IsiXhosa	indawo kamazibuthe
IsiZulu	indawo enozibuthe

MALLEABLE

Pronunciation	***mal**-i-uhb-l*
Part of speech	adjective
Definition	can be shaped without breaking
Afrikaans	smeebaar; pletbaar
IsiXhosa	nokukhandwa
IsiZulu	-nokucangcatheka

METAL

Pronunciation	***met**-l*
Part of speech	noun (plural: metals)
Definition	a solid substance that is usually hard and shiny
Afrikaans	metaal
IsiXhosa	intsimbi; isinyithi
IsiZulu	insimbi

NON-METAL

Pronunciation	***non**-**met**-l*
Part of speech	noun (plural: non-metals)
Definition	a solid substance that is usually dull and brittle
Afrikaans	nie-metaal
IsiXhosa	ayinantsimbi
IsiZulu	okungavezwa insimbi

PROPERTY

Pronunciation	***prop**-uh-tee*
Part of speech	noun (plural: properties)
Definition	the quality or characteristic of something
Afrikaans	eienskap
IsiXhosa	ipropati; into onayo
IsiZulu	uphawu

RUST

Pronunciation	***rust***
Part of speech	noun (no plural)
Definition	a red-brown powder that forms on iron
Afrikaans	roes
IsiXhosa	irusi; umhlwa
IsiZulu	ukuthomba

ACTIVITY 1: Investigate the properties of metals and non-metals

Name:_____ **Grade:**_____

Aim: In this activity you will investigate the properties of various everyday items.

Materials and method: Refer to page 54 of the Learner's Book for a list of materials and step-by-step instructions.

Questions

1. Record the results of the investigation in this table.

Item	Shiny or dull?	Hard or soft?	Malleable or brittle?
Copper wire			
Coin			
Nail			
Cooking pot			
Knife			
Fork			
Chalk			
Stone			
Sand			
Coal or charcoal			

2. Write down the common properties of metals and non-metals that you tested.

3. List the items that are metals.

4. List the items that are non-metals.

5. Explain why it may be difficult to decide it an item is a metal or a non-metal.

ACTIVITY 2: Investigate magnetic materials

Name:_____ **Grade:**_____

Aim: In this activity you will investigate which everyday metal objects are attracted to magnets.

Materials and method: Refer to pages 57 and 58 of the Learner's Book for a list of materials and step-by-step instructions.

Results

Record your results in this table.

Materials	Magnetic: Yes or no?
Coin	
Iron filings or steel wool	
Nail	
Drawing pin	
Paper clip	
Wire	
Aluminium foil	

ACTIVITY 3: Investigate materials that rust

Name:_____ **Grade:**_____

Aim: In this activity you will investigate some everyday items to see which of them rust.

Materials and method: Refer to pages 58 and 59 of the Learner's Book for a list of materials and step-by-step instructions.

Results

Record your results in this table.

Materials	Did it rust: Yes or no?
Coins	
Iron filings	
Nail	
Drawing pin	
Paper clip	
Wire	
Aluminium foil	

STRAND 2: Control test

Name:_____ **Grade:**_____

1. Answer the following questions about metals and non-metals:

   1.1 Choose the word that describes a non-metal: dull/shiny. (1)

   _____

   1.2 Choose the word that describes a metal: strong/brittle. (1)

   _____

   1.3 Choose the words that describe a non-metal: conducts electricity/does not conduct electricity. (1)

   _____

   [3]

2. Metals have special properties that non-metals do not have. Answer the following sentences with the word that describes a special property of a metal. Use the word bank below.

rusts	melt	magnet	malleable	heat	ductile

   2.1 Some metals, such as iron, are attracted to a special material called a _____. (1)

   2.2 A metal that can be pulled into a wire shape is _____. (1)

   2.3 A metal that can be pounded into a shape is _____. (1)

   2.4 Iron is a metal that forms a red powdery substance in air or water. Iron is a metal that _____. (1)

   2.5 Metals placed in hot water get hot because they conduct

2.6 _____. (1)

2.7 Metals heated to a very high temperature eventually _____. (1)

[6]

3. Describe the properties of a raincoat that make it useful. (3)

_____

_____

_____

_____

_____

_____

_____

_____

4. Frame structures have three different functions, such as to:
   4.1 span a distance
   4.2 carry a load
   4.3 protect against something.

   Give one example of different structures that perform these functions.

   4.1 _____

   _____

   4.2 _____

   _____

   4.3 _____

   _____

   (3)

Total: 15 marks

STRAND 2: Control mid-year exam

Name:_____ **Grade:**_____

1. Identify the vertebrate animals and the invertebrate animals listed in the box. (4)

tortoise	grasshopper	scorpion	whale

Vertebrates: _____

Invertebrates: _____

2. Fill in the missing parts of the table. (3)

Part of skeleton	What it protects
2.1	Lungs and heart
2.2	Brain
Backbone	2.3

2.4 Name the bones that make up the backbone. (1)

_____

[4]

3. Read the food chain below and answer the questions that follow:

plant	→	herbivore	→	carnivore

3.1 Give the number of links in this food chain. (1)

_____

3.2 Explain why the food chain begins with a plant. (2)

_____

3.3 Define the term herbivore and give an example. (2)

_____

_____

3.4 Define the term carnivore and give an example. (2)

_____

_____

[7]

4.1 Put these stages in the life cycle of a plant in the correct order: (5)

Adult plant	seedling	fruiting plant	seed	flowering plant

4.2 Name the process that takes a plant from a fruiting plant to seed.

_____ (1)

4.3 Name the process that takes the flowering plant to fruiting plant.

_____ (1)

4.4 Name the process that takes the plant from seed to seedling.

_____ (1)

[8]

5. Write definitions for the following properties of metals:

5.1 Ductile (2)

_____

5.2 Malleable (2)

_____

5.3 Magnetic (2)

_____

[6]

6. Iron is a metal. Write down two other examples of metals. (2)

_____

7. Identify the property of metals that make the following items useful:
   7.1 Cooking pot: _____ (2)
   7.2 Strut for a bridge: _____ (2)
   7.3 Gold jewellery: _____ (2)

8. Flour and water can be mixed to form a paste or glue.
   8.1 Describe two properties of the flour before being mixed. (2)

   _____

   8.2 Describe a property of the water before being mixed. (1)

   _____

   8.3 Describe a property of the glue or paste. (1)

   _____

   8.4 Explain why glue or paste is useful. (1)

   _____

[5]

9.1 * Explain why indigenous people often prefer woven containers to containers made from clay. (2)

_____

9.2 * State what they use to weave containers. (1)

_____

[3]

* Note: Technology (Processing) content is not included in the ATP.

Total: 45 marks

STRAND 3: Science vocabulary

AXLE

Pronunciation ***akss****-l*
Part of speech noun (plural: axles)
Definition a bar that connects a pair of wheels on a vehicle
Afrikaans as
IsiXhosa iasi
IsiZulu umphini wesondo

BATTERY [ELECTRICITY]

Pronunciation ***bat****-ree*
Part of speech noun (plural: batteries)
Definition a group of cells
Afrikaans battery
IsiXhosa ibhetri; ilahle
IsiZulu ilahle; ibhethri

CATAPULT

Pronunciation ***cat****-uh-pult*
Part of speech noun (plural: catapults)
Definition a machine used to shoot large rocks and other objects
Afrikaans katapult
IsiXhosa isilingi
IsiZulu isihlilingi

CELL [ELECTRICITY]

Pronunciation ***sel***
Part of speech noun (plural: cells)
Definition the smallest whole part of a battery
Afrikaans sel
IsiXhosa ibhetri
IsiZulu isiphehligesi esiyikhemikhali; isiphehlo sekhemikhali; ilahle

CIRCUIT [ELECTRICITY]

Pronunciation ***sur****-kit*
Part of speech noun (plural: circuits)
Definition a system that transfers electrical energy
Afrikaans stroombaan; kring
IsiXhosa indlela yombane
IsiZulu umgudu kagesi; impelelomgudu kagesi

CONSTRAINT [TECHNOLOGY]

Pronunciation ***kuhn****-straynt*
Part of speech noun (plural: constraints)
Definition something that limits or restricts someone or something else
Afrikaans begrensing; beperking
IsiXhosa umqathango; ummiselo
IsiZulu umgoqo; isithiyo

ELASTIC

Pronunciation ***fun****-l*
Part of speech noun (plural: elastics)
Definition a material that can stretch when you pull it and can go back to its usual size when you release it
Afrikaans rek
IsiXhosa ilastikhi; irekeni
IsiZulu ilastikhi

ELECTRICAL ENERGY

Pronunciation *i-****lek****-trik-l* ***en****-uh-jee*
Part of speech noun (no plural)
Definition the energy that is made when an electrical charge moves through a conductor
Afrikaans elektriese energie
IsiXhosa amandla ombane
IsiZulu umfutho kagesi; amandla kagesi

FLAMMABLE

Pronunciation ***flam****-uhb-l*
Part of speech adjective
Definition able to catch alight and burn easily
Afrikaans vlambaar
IsiXhosa evutha lula; etsha msinya; etshayo
IsiZulu -okhelekayo; -thungelekayo

FUEL

Pronunciation	***fyoo**-uhl*
Part of speech	noun (plural: fuels)
Definition	something you burn to make energy or power

LAMP

Pronunciation	***lamp***
Part of speech	noun (plural: lamps)
Definition	a device that uses electricity, gas or some other form of energy to produce light
Afrikaans	lamp
IsiXhosa	isibane
IsiZulu	isiphefu; isibani; ilambu

POWER STATION

Pronunciation	***pow**-wuh **stay**-shuhn*
Part of speech	noun (plural: power stations)
Definition	a place where electricity is generated
Afrikaans	kragsentrale
IsiXhosa	isitishi sombane; iziko lombane
IsiZulu	isiteshi sikagesi

PREDICT

Pronunciation	*pri-**dikt***
Part of speech	verb (predicting; predicted)
Definition	to say what you think will happen
Afrikaans	voorspel
IsiXhosa	-xela ngenx ’engaphambili; ukuangela into
IsiZulu	-qagula; bikezela
Afrikaans	brandstof
IsiXhosa	amafutha
IsiZulu	isibasamlilo; isiphehlamandla

SPECIFICATION [TECHNOLOGY]

Pronunciation	***spess**-i-fik-ay-shuhn*
Part of speech	noun (plural: specifications)
Definition	a detailed description of a product and the materials used to make it
Afrikaans	spesifikasie
IsiXhosa	iimpawu ezifunekayo
IsiZulu	incasiselomcikilisho

SPRING

Pronunciation	***spring***
Part of speech	noun (plural: springs)
Definition	a coil of metal that stretches or squeezes when you pull or press it and that can regain its shape
Afrikaans	veer
IsiXhosa	isipringi
IsiZulu	isipilingi

TERMINAL [OF BATTERY]

Pronunciation	***turm**-in-l*
Part of speech	noun (plural: terminals)
Definition	points on a battery to which the rest of the circuit is connected
Afrikaans	terminaal
IsiXhosa	isinxibelelanisi sogqithisombane; itheminali
IsiZulu	itheminali

ACTIVITY 3: Investigate the input and output energy of fuels

Name:_____ **Grade:**_____

Aim: In this activity you will observe what input energy we use to make fuels burn and observe the output energy.

Materials and method: Refer to pages 83 and 84 of the Learner's Book for a list of materials and step-by-step instructions.

Results

Record your results in this table. (15)

Type of fuel	Coal	Paraffin	Candle wax
What was the input energy? What did you do to get the fuel burning?			
What was the temperature of the water when you poured it into the glass beaker?			
Predict what will happen to the water after 15 minutes.			
What was the temperature of the water after 15 minutes?			
Predict what will happen to the water if more fuel is added.			
What was the output energy? • Heat only • Light only • Heat and light			

Total: 15 marks

ACTIVITY 2: Analyse fire threats

Name:_____ **Grade:**_____

1. Read the three newspaper articles on pages 88 and 89 of the Learner's Book.
2. List all the causes of the fires.

3. Suggest ways in which these fires could have been prevented.

4. Brainstorm at least three other causes of fires.

5. Report back to your class.

ACTIVITY 2: Make an electrical circuit

Name:_____ **Grade:**_____

Aim: In this activity you will build an electrical circuit to make a light bulb shine.

Materials: Refer to page 95 of the Learner's Book for a list of materials you will need.

Method

Step 1 Connect the electrical system together as shown in Figure 7 on page 95 of the Learner's Book.

Step 2 Predict what will happen when you connect the one free end of the wire to the other free end coming from the light bulb holder.

_____

_____

_____

Step 3 Take the two free ends and hold them together as shown in Figure 8 of the Learner's Book.

What do you notice?

_____

_____

Where you correct in your prediction?

_____

Step 4 Predict what will happen if you disconnect the wire.

_____

_____

Step 5 Disconnect the wire. Were you correct in your prediction?

_____

Total: 15 marks

ACTIVITY 1: Explain how electricity gets to our homes

Name:_____ **Grade:**_____

1. Read through the process of how electricity travels to our homes on pages 96 and 97 of the Learner's Book.
2. Draw a flow chart to show the path electricity follows, starting at the power station. Include drawings to show the main structures involved.

3. Electricity flows from the appliances in your home back to the power station. Write a sentence to explain each step the electricity takes on its way back to the power station.

ACTIVITY 1: Build and evaluate wheels and axles

Name:_____ **Grade:**_____

Design brief: Refer to pages 110–115 in the Learner's Book. In this activity you will build a model vehicle using different materials. You will then compare your vehicle with other groups and evaluate which materials make the best running model.

PART 2: Draw a final design (Learner's Book page 113)

Step 1 Draw a neat sketch of your vehicles.

Steps 2–3 Label your sketch. Label your materials.

Step 4 If your shell structure is weak, show how you are going to make it stronger.

Step 5 Make a list of your materials and tools that you will need.

_____

_____

_____

_____

STRAND 3: Control test

Name:_____ **Grade:**_____

1. Match the words in Column A with their meanings in Column B. (6)

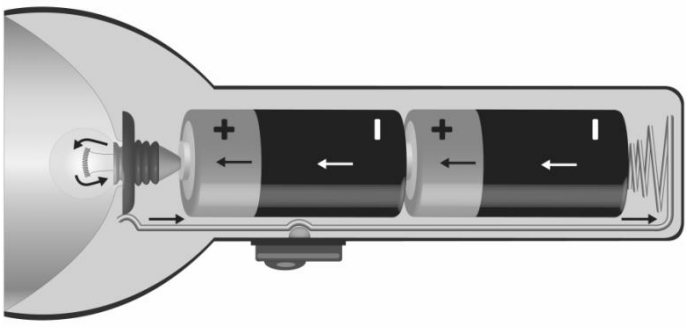
Column A	Column B
1.1 Fossil fuels	**A** Electricity from power stations
1.2 Terminals	**B** Stored energy mined from the Earth's crust
1.3 Electrical energy	**C** Input energy for an electrical system
1.4 Battery	**D** Ends of a cell or battery
1.5 Mains electricity	**E** Source of heat and light energy
1.6 Fire	**F** Groups of cells

[6]

2. Fill in the missing words.
   - 2.1 Elastic bands are useful because they can _____ energy. (1)
   - 2.2 When an elastic is released, it produces _____ energy. (1)
   - 2.3 Wheels and axles make up a _____. (1)

[3]

3. Study the picture of the torch below and explain how the electrical energy moves in this circuit. (3)



_____

_____

_____

_____

4. Describe how electrical energy gets to our homes. Fill in the missing steps. (3)

Step 1: _____

_____

Step 2: Electricity is sent to transformers where its power is increased.

Step 3: _____

_____

Step 4: Sub-stations decrease the electricity.

Step 5: _____

_____

Step 6: From here, it travels through the wires to the sockets in the wall.

Total: 15 marks

STRAND 4: Science vocabulary

AMBER

Pronunciation	***am**-bur*
Part of speech	noun (no plural)
Definition	tree resin that has fossilised and hardened
Afrikaans	barnsteen; amber
IsiXhosa	intlaka elukhuni embiwayo
IsiZulu	inhlaka

AXIS

Pronunciation	***ak**-siss*
Part of speech	noun (plural: axes)
Definition	the centre around which something rotates
Afrikaans	spil; as
IsiXhosa	iaksisi
IsiZulu	i-eksizi; i-akisisi

BODY FOSSIL

Pronunciation	***bod**-ee **foss**-uhl*
Part of speech	noun (plural: body fossils)
Definition	a fossil that forms from the hard parts of plants and animals
Afrikaans	liggaamfossiel
IsiXhosa	into eyay'iphila mandulo yaze yaba lilitye
IsiZulu	ithambo eliguquke itshe

CLAY [CLAYEY SOIL]

Pronunciation	***klay***
Part of speech	noun (no plural)
Definition	a type of soil made up of very small particles that is smooth when wet and hard when dry
Afrikaans	kleierige grond
IsiXhosa	umhlaba oludongwe
IsiZulu	umhlabathi osabumba; inhlabathi esabumba

COMPOSITION [OF SOIL]

Pronunciation	*kom-puh-**zi**-shuhn*
Part of speech	noun (no plurals)
Definition	the parts that make up soil like dead plants and animals
Afrikaans	samestelling
IsiXhosa	ukwakhiwa; uhlanganiso; udibaniso
IsiZulu	ukuhlanganisa; ukwakhiwa

CRUST [OF EARTH]

Pronunciation	***krust***
Part of speech	noun (plural: crusts)
Definition	the hard outer layer of the Earth's surface
Afrikaans	kors
IsiXhosa	isikhoko; uqweqwe
IsiZulu	iqeqeba; ikhekheba; uqweqwe

DECOMPOSE

Pronunciation	***dee**-kuhm-pohz*
Part of speech	verb (decomposing; decomposed)
Definition	dead animals and plants break down and become part of soil
Afrikaans	ontbind
IsiXhosa	ukubola
IsiZulu	-bolisa; -bola

DINOSAUR

Pronunciation	***dy**-nah-saw*
Part of speech	noun (plural: dinosaurs)
Definition	a land reptile that disappeared from the Earth millions of years ago
Afrikaans	dinosourus
IsiXhosa	isirhubuluzi esithile esikhulu samandulo
IsiZulu	isilwane sasendulo esikhulu esifana nentulo

FOSSIL

Pronunciation	***foss**-uhl*
Part of speech	noun (plural: fossils)
Definition	a part of a dead plant or animal that has been in the ground a long time and turned into rock
Afrikaans	fossiel
IsiXhosa	into eyay'iphila mandulo yaze yaba lilityе
IsiZulu	ithambo eliguquke itshe

HUMUS

Pronunciation	***hyoo**-muhss*
Part of speech	noun (nu plural)
Definition	the dark substance in soil formed by the breaking down of dead plants and animals
Afrikaans	humus
IsiXhosa	isivundiso; umbolo
IsiZulu	imvundo; umbolela

LIMESTONE

Pronunciation	***lime**-stohn*
Part of speech	noun (no plural)
Definition	a hard white sedimentary rock that contains many fossils
Afrikaans	kalksteen
IsiXhosa	ilitye lekalika
IsiZulu	itshemcako

LOAM [LOAMY SOIL]

Pronunciation	***lohm***
Part of speech	noun (no plural)
Definition	a type of soil that is a mixture of clay, sand and other soil grains
Afrikaans	leemgrond
IsiXhosa	umhlaba ovundisiweyo
IsiZulu	inhlabathi eyifenya; ugadenzima

ORBIT

Pronunciation	***aw**-bit*
Part of speech	noun (plural: orbits)
Definition	path of a planet, satellite or asteroid around another object
Afrikaans	wentelbaan
IsiXhosa	indlela yesijikelezi-langa; umjikelo emajukujukwini
IsiZulu	umkhondo wokuhamba kwekanyezi

RESIN

Pronunciation	***rez**-in*
Part of speech	noun (plural: resins)
Definition	sticky substance produced by plants
Afrikaans	gom; hars
IsiXhosa	intlaka
IsiZulu	inomfi; inhlaka

ROTATE

Pronunciation	*roh-**tayt***
Part of speech	verb (rotating; rotated)
Definition	to spin or circle around an axis (a central point)
Afrikaans	roteer
IsiXhosa	-jikeleza
IsiZulu	-zungeza

ROTATION

Pronunciation	*roh-**tay**-shuhn*
Part of speech	noun (plural: rotations)
Definition	the movement of an object when it spins on its own axis
Afrikaans	rotasie
IsiXhosa	ukujikeleza
IsiZulu	umzungezo

SAND [SANDY SOIL]

Pronunciation	***sand***
Part of speech	noun (no plural)
Definition	a type of soil that is made up of very small pieces of rock
Afrikaans	sanderige grond
IsiXhosa	umhlaba onesanti
IsiZulu	inhlabathi enesihlabathi

SANDSTONE

Pronunciation	***sand****-stohn*
Part of speech	noun (no plural)
Definition	a soft and crumbly type of sedimentary rock that is formed when sand grains stick together
Afrikaans	sandsteen; sandklip
IsiXhosa	ilitye lentlabathi
IsiZulu	itshe lesihlabathi

SEDIMENTARY [SEDIMENTARY ROCK]

Pronunciation	*sed-i-**men**-tree*
Part of speech	adjective
Definition	relating to rocks that form from layers of mud and sand that collect in low-lying areas and then harden over time
Afrikaans	sedimentêr
IsiXhosa	-enziwe ngentlenga
IsiZulu	-ezicucu; amadwala ezicucu

SHALE

Pronunciation	***shayl***
Part of speech	noun (no plural)
Definition	clay that has been hardened and turned into a sedimentary rock
Afrikaans	leiaarde; skalie
IsiXhosa	uhlobo oluthile lwelitye elinkumnkum
IsiZulu	ukhethe

SOIL TYPE

Pronunciation	***soyl tipe***
Part of speech	noun (plural: soil types)
Definition	refers to the different sizes of particles that make up the soil
Afrikaans	grondtipe; grondsoort
IsiXhosa	uhlobo lomhlaba; udidi lomhlaba
IsiZulu	uhlobo lwenhlabathi

SUBSOIL

Pronunciation	***sub****-soyl*
Part of speech	noun (no plural)
Definition	a layer of soil between the topsoil and the rock beneath it
Afrikaans	ondergrond; onderlaag
IsiXhosa	umhlaba ongaphantsi
IsiZulu	inhlabathi engaphansi

TOPSOIL

Pronunciation	***top****-soyl*
Part of speech	noun (no plural)
Definition	the top layer of soil, often consisting of dead plant material
Afrikaans	bogrond
IsiXhosa	umhlaba ongaphezulu
IsiZulu	ungwengwezi lwenhlabathi; inhlabathi engaphezulu

TRACE FOSSIL

Pronunciation	***trayss foss****-uhl*
Part of speech	noun (plural: trace fossils)
Definition	a fossil that forms from the traces left by an animal and that show us how the animal lived
Afrikaans	spoorfossiel
IsiXhosa	into eyay'iphila mandulo yaze yaba lilitye
IsiZulu	ithambo eliguquke itshe

ACTIVITY 1: Describe sandy, clayey and loamy soils

Name:_____ **Grade:**_____

Aim: In this activity you will describe sandy, clayey and loamy soils.

Materials and method: Refer to page 132 of the Learner's Book for a list of materials and step-by-step instructions.

Questions

1. What colour are the soils? Why do you think they are this colour?

   _____

   _____

2. Describe the feel of the soils. Are they rough or smooth?

   _____

3. Are the soils wet, moist or very dry?

   _____

4. What do the soils smell like? Try and describe the smell and think of reasons for the smells.

   _____

   _____

5. Make a pile of each type of soil. Sketch a picture of each pile. Give each picture a heading for the type of soil.

ACTIVITY 2: Identify trace and body fossils

Name:_____ **Grade:**_____

Investigate the six photos on page 148 of the Learner's Book.

1. Identify each photo as a trace or body fossil.

   A: _____

   B: _____

   C: _____

   D: _____

   E: _____

   F: _____

2. Compare the fossils with living plants and animals. Give one example for each picture.

   A: _____

   _____

   B: _____

   _____

   C: _____

   _____

   D: _____

   _____

   E: _____

   _____

   F: _____

   _____

ACTIVITY 1: Read about great South African fossil discoveries

Name:_____ **Grade:**_____

1. Read through the article about a dinosaur on page 150 of the Learner's Book. Answer the questions that follow.
   1.1 Name the two animals that the dinosaur looked like.

   _____

   1.2 State whether the dinosaur was a herbivore or a carnivore.

   _____

   1.3 Explain why the dinosaur skeleton was not identified in the mid-1960s.

   _____

   _____

2. Read through the text about the Coelacanth discovery on page 151 of the Learner's Book. Answer the questions that follow.
   2.1 State the name of the ship that caught this strange fish.

   _____

   2.2 Describe how Marjorie noticed the fish on the ship.

   _____

   _____

   2.3 Explain why Marjorie was at the docks that day.

   _____

   _____

   2.4 Explain why the taxi driver did not want the fish in his car.

   _____

   _____

STRAND 4: Control test

Name:_____ **Grade:**_____

1. Name the three layers of the Earth's crust. (3)

   _____ _____

   _____

2. Name three types of sedimentary rock. (3)

   _____ _____

   _____

3. Define the following terms:

   3.1 Fossil_____ (2)

   3.2 Sediments_____ (2)

4. Explain the difference between trace and body fossils. Use the images below to help you. (2)

_____

_____

_____

_____

_____

5. Complete the following sentences:

   5.1 The Earth _____ on its own axis. (1)

   5.2 The Earth _____ the Sun. (1)

   5.3 The Earth's revolution is _____-shaped. (1)

[3]

Total: 15 marks

STRAND 4: Control end-of-year exam

Name:_____ **Grade:**_____

1. Match the words in Column A with their meanings in Column B. (6)

Column A	Column B
1.1 Fuels	**A** Energy used to move things
1.2 Output energy	**B** Parts of a system that work together to move something
1.3 Circuit	**C** Energy after it has gone through a device or appliance
1.4 Movement energy	**D** Transfers electrical energy to where it is needed
1.5 Insulation	**E** Energy source for heat and light energy
1.6 Wheels and axles	**F** Materials that do not conduct electricity

[6]

2.1 List three everyday fuels. (3)

_____

_____

_____

2.2 Name two things that everyday fuels need to set them alight. (2)

_____

_____

[5]

3. State whether the following are true or false:

3.1 It is safe to use water to put out an electrical fire. _____ (1)

3.2 Do not pour cold water on a burn. _____ (1)

3.3 Use safety plugs to cover open wall sockets. _____ (1)

3.4 Frayed and torn cords are safe to use. _____ (1)

[4]

4.1 Predict what will happen to a candle if a glass jar is placed over it. (1)

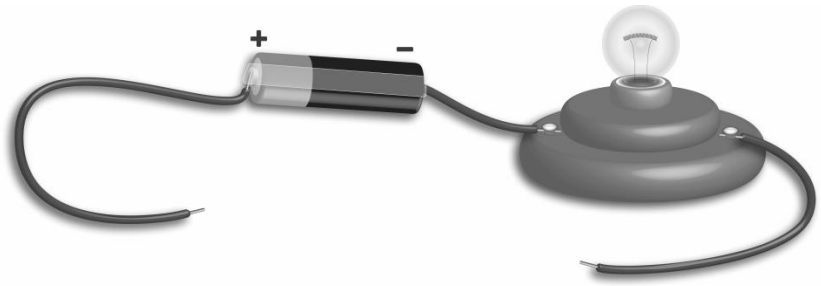
_____

4.2 Explain why this will happen. (1)

_____

[2]

5. Explain why the lightbulb in the following experiment does not light up. (3)



_____

_____

6. Electricity is transferred to our homes via the national electricity grid. Rearrange the following steps in the correct order to show how electricity reaches our homes. (3)

Electricity boxes _____

Transformers _____

Power stations _____

Step-down substations _____

Pylons _____

Wall sockets and plugs _____

_____

7. Explain how energy can be stored in elastics and what energy we get from

them. (2)

8. Describe the orbit of the Earth in three full sentences. (3)

9. Suggest three reasons why there is life on Earth. (3)

10. Name three types of soil found on Earth. (3)

11. Define the following words:

    11.1 Absorb (1)

    11.2 Conserve (1)

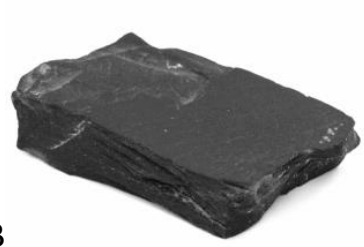
[2]

12. Name two ways in which fossils form. Write a short description of each. (4)

13. Explain the differences between body fossils and trace fossils. (2)

14. Identify the following sedimentary rocks: (3)

A 

B 

C 

_____ _____ _____

Total: 45 marks

How to develop rubric and checklist assessment tools

Rubrics

A rubric is a tool teachers use to assess a learner's performance on a specific task. It is presented in the form of a grid that clearly outlines the criteria used for assessment as well as different levels of performance per criterion.

Benefits of using a rubric

- A rubric helps learners to understand objectives. Developing rubrics with your learners will help them to understand the purpose and content and help them to prepare for the assessment.
- A rubric has a clear and standardised approach to assessment, which ensures that learners are assessed consistently and fairly.
- A rubric allows teachers to provide specific feedback to learners, highlighting areas of strength and areas for improvement.
- A rubric helps learners get a clear idea on how to improve their performance after assessment.
- A rubric allows learners to self-improve. Encourage learners to use the rubric before they hand in their work.
- A rubric is easy to use and can be easily adapted to meet changing needs.

Steps to creating a rubric

Step 1: Clearly define the purpose of the assessment. Use the assessment guidelines in the curriculum documents to determine what task/assignment the learners are required to complete.

Step 2: Define the criteria.
Use the objectives in the curriculum documents to consider what skills, knowledge or behaviours the assessment will evaluate.

Make sure that:
- criteria can be observed and measured
- criteria are important to the task at hand
- each criteria assesses a single aspect of the task.

- Each criteria contains levels of performance. When creating these, consider:

- what will constitute outstanding achievement
- how will you define moderate or adequate achievement
- how would you define work that falls below expectations.

- Ask yourself: Are there key criteria points that should carry a greater weight than others?

Step 3: Design a rating scale that clearly defines the levels of performance.
Check your mark allocation to ensure that your rubric falls in line with curriculum expectations. Make sure you use language and terminology that the learner is familiar with so that they have a clear understanding of what is required of them.

Provide a scale of achievement that can assess the learners' overall competency in completing the task. For example, you can provide an overall mark according to the seven-point scale of achievement:

Rating code	Description of Competence	Percentage
7	Outstanding achievement	80–100
6	Meritorious achievement	70–79
5	Substantial achievement	60–69
4	Adequate achievement	50–59
3	Moderate achievement	40–49
2	Elementary achievement	30–39
1	Not achieved	0–29

Step 4: Write descriptions of expected performance at each level of the rating scale.
Describe observable and measurable behaviour and use parallel language across the scale. Indicate the degree to which the standards are met. Ensure that learners understand the expectations before and during the assessment.

Step 5: Create the rubric.
Try to keep it to one page. Ask your colleagues for feedback and consider testing it before you use it for assessment. After you use the rubric, consider how effective it was and make any necessary revisions.

Exemplar:

Criteria	Mark allocation
Bowl has neat, level, well-shaped base. (3)	
Sides of bowl are even and neat. (3)	
Bowl has a good shape. (3)	
Clay sides are neatly smoothed.	
Bowl is attractively decorated. (3)	
Total: 15 marks	

Checklists

A checklist is a simple assessment tool that provides a list of items or criteria to be checked off. It differs from a rubric in that it provides learners with the criteria of the requirements of an assignment rather than a means of assessing acquired knowledge. A checklist can be used solely by you as a teacher, or you can give your learners a checklist that they can refer to in order to make sure that they have included the required components for a task.

Checklists usually consist of a number of statements that refer to specific criteria and where the answer will be, for example, “Yes” or “No”, or “Achieved”, “Not yet” or “Almost”.

Benefits of using a checklist

- A checklist ensures that all relevant criteria are assessed and evaluated.
- A checklist helps to ensure consistent assessment of specified criteria.
- A checklist can be used by learners as a self-assessment tool.
- A checklist identifies learning needs in a clear and simple way.
- A checklist is easy to create and use and provides an uncomplicated guide for assessment.

Steps to create a checklist

Step 1: Define the purpose and what you want to assess.
This could be specific skills or a general assessment.

Step 2: Identify the criteria.
What specific elements or content will be assessed?

Step 3: Create your checklist.
Check that it contains everything you want to assess.

Exemplar:

Criteria			
The learner …	**Yes**	**Partly**	**No**
found some relevant or interesting facts.			
wrote using their own words. presented the information in an interesting way.			
presented the information in an interesting way.			

Intervention strategies

Baseline assessment and intervention strategies

Some learners may experience academic backlogs for various reasons, including the impact on learning due to the COVID-19 pandemic, underlying learning barriers or special education needs such as visual or hearing impairments or intellectual barriers. Baseline assessment will help you identify learners that may be experiencing these barriers.

Analysing baseline assessment questions will provide insight into learners' current knowledge and skills regarding certain topics, as well as their preparedness for the work ahead. The results of baseline assessments can help to identify the areas where learners require support and/or intervention.

Learners may require support and/or intervention for the following reasons:

- barriers to learning
- class size
- reading comprehension (the ability to understand what they have read).

Barriers to learning

Some learners may face barriers to learning. It is important to accommodate learners with barriers to learning to ensure that our classrooms remain inclusive. These learners may require and should be granted more time for completing tasks, acquiring thinking skills (own strategies), and completing assessment activities. Adapt the number of activities to be completed without interfering with learners gaining the required skills. Learners experiencing barriers to learning can also be paired with others who may be able to support them.

Class size

- Peer tutoring can be an effective intervention method when class size is problematic.
- Quieter learners often struggle in a large class, as they tend not to ask questions. Organising learners into groups or pairs can help to create a more inclusive and enabling learning environment.
- Ensure that groups are made up of learners with varying ability, so that learners who may be struggling are supported by their peers.
- Peer assessment can also be used successfully during informal assessment and allows you to gauge learners' understanding in a less intimidating manner than a formal test or assignment.
- The following strategies can be used in a large class:
    - *Thumbs up/thumbs down:* Check understanding by a show of thumbs. Thumbs up indicate that learners have understood; thumbs down show that they have not understood; thumbs sideways could show that they are not sure.
    - *Response boards:* These are small chalkboards or whiteboards where learners record their response to a question. When you say "Show your answers" they all hold up the board. This way you can quickly see who is struggling.

- *Show fingers 1-2-3:* Ask learners to show fingers to indicate if they understand activity instructions before working in a group. 1 = I do not understand; 2 = I sort of understand but I need some help; 3 = I understand completely.

Reading comprehension

- Support learners by giving them pre-reading questions and post-reading strategies to organise what they have learnt. Pre-reading questions could include asking the learners what they already know about the topic. Teach learners to summarise the content into bullet points and make use of mind maps. This requires the learners to rewrite the content in their own words.
- Write difficult terminology on the board and give simple explanations.
- Diagrams can be very useful to explain concepts in a way that learners can visualise the situation.

General teaching intervention strategies

Teach from the learner's point of view

- Put yourself in the learner's position: If you were the learner, what would you like the teacher to explain or show you that you could not learn previously?
- Remember that learners might still have emotional issues related to the COVID-19 pandemic, which you may need to address.

Reteach topic(s) for which learners achieved low scores (closing the gap)

- Focus on concepts, and not only on factual content. Then use illustrations to support learners' understanding and avoid superficial rote learning. The more "real-life" examples used, the easier it will be for the learners to conceptualise the topic.
- Make the structure of your lessons and teaching materials clear: State specific, achievable goals, provide graphic organisers to link parts of the lesson and give frequent summaries of sections of the lesson. A graphic organiser can be any visual representation of content that gives an immediate overview of main points.
- Refer frequently to your progress in terms of the lesson structure. This will help learners to develop an overall and cohesive (holistic) grasp of the content.
- Skills, knowledge and concepts run like threads through the previous grades. Explain these threads to learners, as you begin teaching a new topic or module – it will help learners to link the new content to what they already know.

Metacognition

Metacognition is the ability to understand our own thought processes. It is essential that metacognition takes place during lessons.

Learners retain information best when they can visualise situations. Visual aids, such as flash cards and mind maps, and practical work can aid with developing metacognition, or getting learners to think about and understand their own thought processes. After completing practical tasks, give learners sentence starters to complete. For example: I learnt . . .; I wonder . . .; I still want to know . . .; I still don't understand . . .; I still have a question about . . . .

Retaining information

- Flash cards and mind maps can be useful tools to help learners memorise facts.
- Encourage learners to break down content into more manageable sections. They can then create a mind map for each sub-topic. Tables can also help learners summarise content into more manageable sections.
- A mnemonic is a word, sentence or poem that helps you remember something. Mnemonics help learners to memorise content. Use the first letter of each word to create a sentence that the learners can memorise easily. For example, a mnemonic such as "**E**at **A**n **A**pple **A**s **A** **N**ice **S**nack" can help learners to memorise the names of the continents: **E**urope, **A**sia, **A**frica, **A**ustralia, **A**ntarctica, **N**orth America, **S**outh America.

Develop presentation skills

Many learners find it challenging to speak in front of the class, but this improves with practice. Encourage learners to answer questions in class and take part in class discussions by using one or more of the following strategies:

- *Use the think-pair-share method:* Posing a question and giving learners a short time to think about it, followed by discussion with a partner and then sharing with others. Learners who are shy will find it easier to share ideas with a partner first.
- *Tell-check-say:* A learner tells the answer to a friend, together they check if the answer is correct by referring to the textbook, and then the first learner says the answer out loud to the class or writes it down.
- *Target basic and then more advanced questions to specific learners based on their readiness to answer them*: A good strategy is to first ask the question to the whole class. This ensures that everyone thinks about it. Then, ask a specific learner the question.
- *Keywords on cards:* These can be used to help the learner remember their presentation. Eye contact is essential, so emphasise to learners that they should not read their presentation.

Interventions for learners with special education needs

- Special educational needs may include visual or hearing impairments or intellectual barriers. Do not form an opinion about a learner too early This could lead to an inaccurate assessment of a learner's barrier, or an inaccurate assessment of the existence of a barrier (when in fact there may not be one). If the barrier is obvious after the first term and becomes a serious obstacle to the learner, seek professional help from the district office.
- Immediate steps could include: observing the learner inside and outside of the classroom, contacting the learner's previous teachers and consulting learner progress reports to understand their needs.

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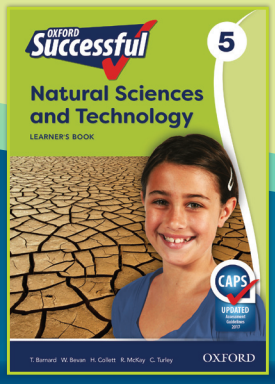

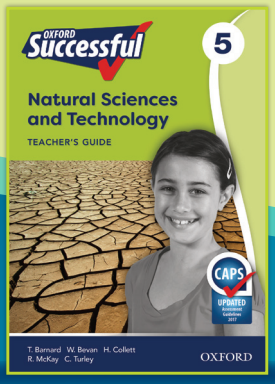

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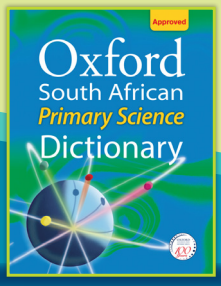

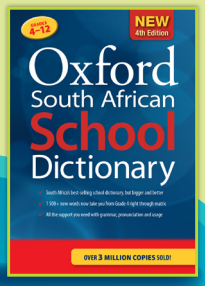

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