

Social Studies

Topic 2: Environment and Physical Features

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- Put the words about environmental features into the correct category by completing the table below.

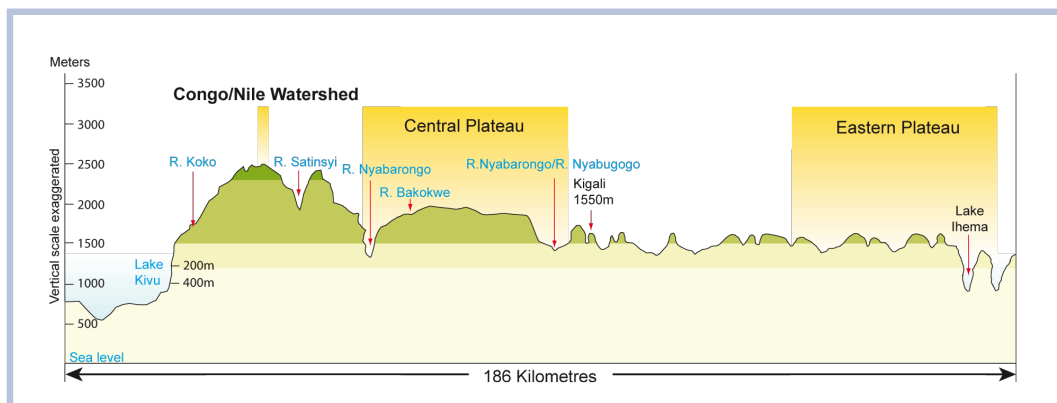
house	cow	river	sheep
grassland	bridge	road	mountain
waterfall	lake	volcano	swamp
goat	fish	forest	valley
village	furniture	tree	terrace
well	hill		

Write your answers here:

Environmental features		
Man-made features	Physical features	Living things

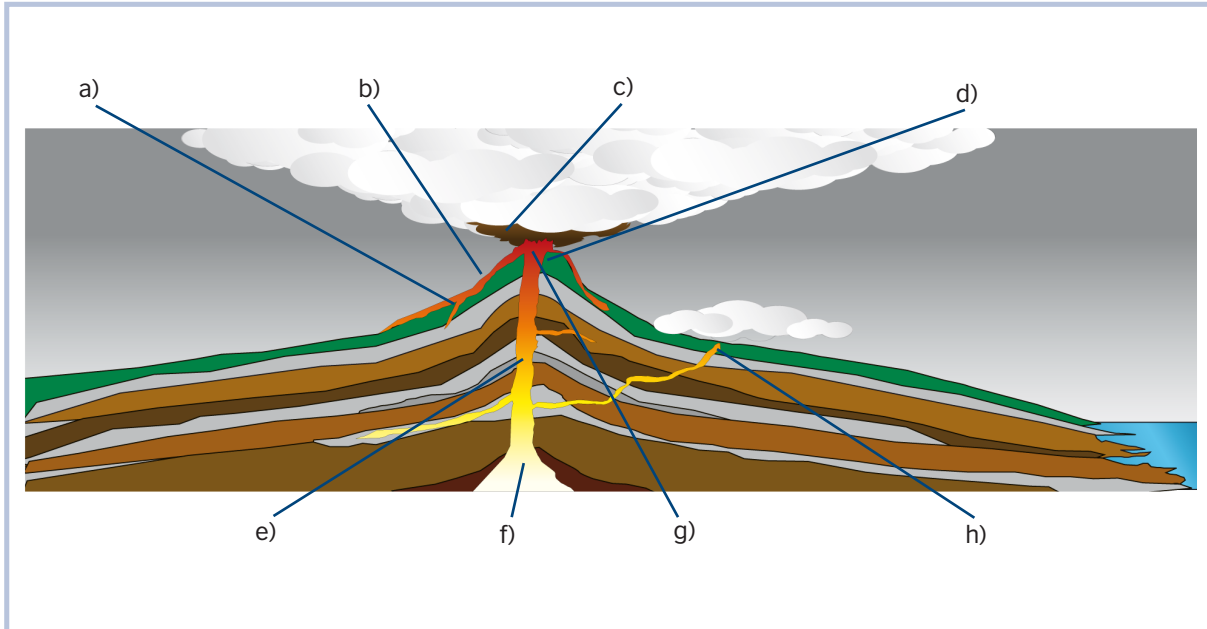
- Find the items in the list below in the diagram of a **cross-section of the physical geography of Rwanda**.

- the ridge of the Congo/Nile watershed
- a river running in a deep valley next to a plateau
- a mountain peak with a height above two thousand metres
- a lake deeper than four hundred metres
- two tributaries of the river Nyabarongo



3. Use the words about **volcanoes** to label the diagram.

ash	vent	crater	magma
vent	lava flow	cone	vent



Write your answers here

a)		b)		c)		d)	
e)		f)		g)		h)	

4. Choose the correct words from the list to fill the gaps in the text about **volcanoes**.

active	lava	layer	extinct
molten	dormant	crater	destruction
pressures	erupts	eruption	

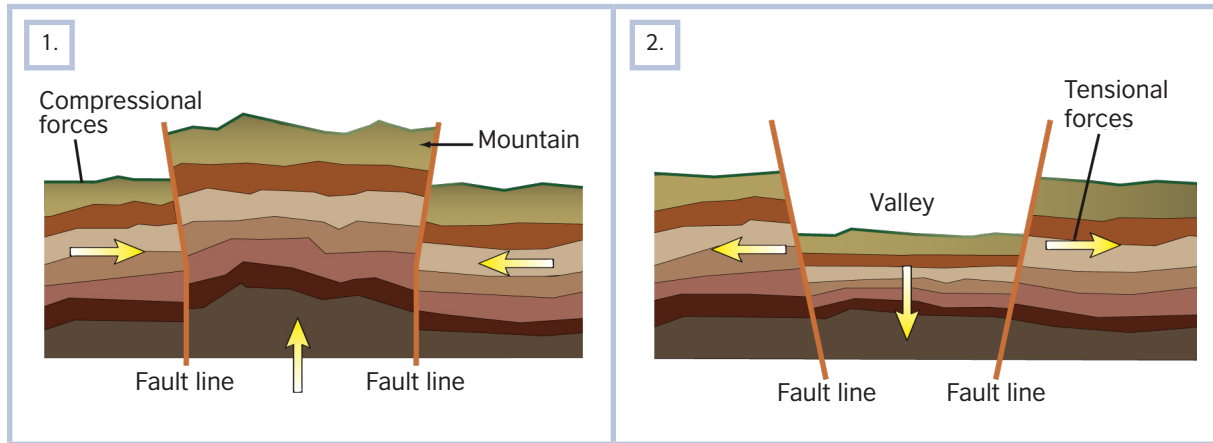
Underneath the earth's surface there is a layer of very hot ^{a)} _____ rock called magma. When this ^{b)} _____ of rock is forced upwards by ^{c)} _____ from deeper down, a volcano is formed. When a volcano ^{d)} _____ it throws ^{e)} _____, ash, cinders, and gases out of the vent, forming a ^{f)} _____. A volcanic ^{g)} _____ is extremely dangerous and can cause the death of people living nearby and the ^{h)} _____ of their homes.

Some volcanoes are ⁱ⁾ _____ (sleeping) or extinct (dead). But others are still ^{j)} _____. The volcanic Virunga chains stretch from the northern part of Rwanda

to DRC. Some of the volcanoes in DRC are active, whereas volcanoes on the Rwanda side are

k) _____.

5. Match the sentences describing **the formation of hills and valleys** with the diagrams. Write your answers in the correct order in the grid below.

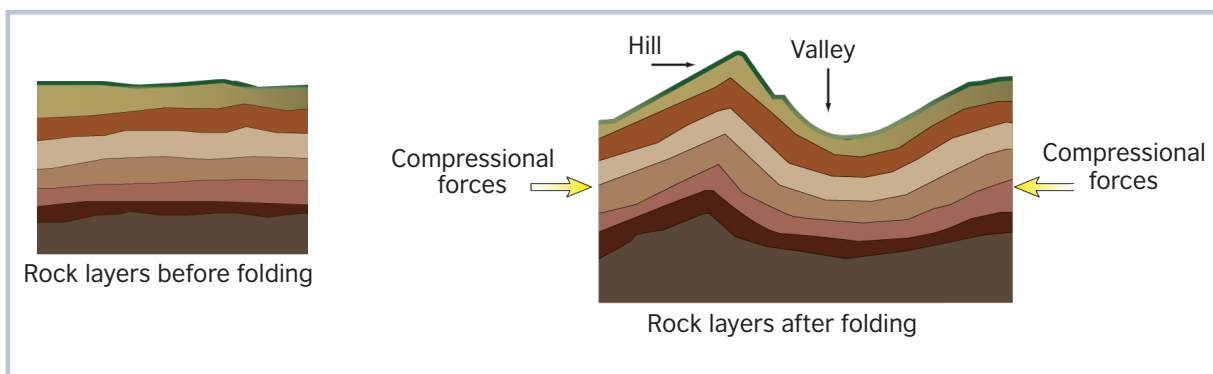


- a) The land is pulled apart.
- b) It forms a block mountain.
- c) The land the land in the middle rises.
- d) It forms a rift valley.
- e) The land in the middle sinks.
- f) The land is pushed inward.

Write your answers here:

1.			
2.			

6. Make sentences about **folding** by matching the beginnings and endings. Write your answers in the grid below.



a) Folding	1	often flow in the folds and make them deeper.
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b)	The shape of the valley and hill	2	can also form in the valleys.
c)	Rivers	3	occurs when pressure acts on the rock from each side.
d)	Lakes	4	differs from a rift valley.

Write your answers here:

a)	b)	c)	d)

7. Choose the correct words from the list to fill the gaps in the sentences about **valleys, plateaus, plains, lakes, and rivers**.

fault	flat	tributaries	softer
lower	inland	damming	erupts
deep	drainage	rainwater	artificial

- Valleys can form when a river runs through an area with _____ rocks on each side.
- Valleys can be small, or they can be very wide and _____.
- A plateau is an area of fairly _____ high ground.
- A plain is also fairly flat, but it is _____ than a plateau.
- _____ runs off the high ground and becomes a stream or river.
- Streams join up to form small rivers called _____, which join to form larger rivers.
- Large rivers find their way to _____ lakes or to the sea.
- The river system of a country is called its _____ system.
- Lakes form where there is a depression or _____ in the rock.
- Crater lakes form when a volcano _____ violently, leaving a large crater, which fills with rainwater.
- _____ lakes are sometimes made by human beings.
- This might be done by _____ rivers to create hydroelectricity or provide water for humans to use.

8. Find the words about **physical features** in the word search.

C	S	O	E	D	O	U	O	C	R	G	D	E	Y	W	O
V	R	H	Y	E	X	G	I	M	P	T	N	R	N	R	A
N	A	T	A	E	S	F	L	S	C	M	A	W	A	D	O
M	L	L	C	P	G	R	D	E	G	T	O	W	G	U	M
G	Q	S	L	Z	E	D	R	M	U	R	M	Z	G	L	N
P	C	E	U	E	G	E	A	B	R	S	P	N	M	Y	O
E	E	S	B	P	Y	P	I	A	P	F	H	Q	E	C	U
V	O	P	H	N	K	R	N	W	R	A	R	T	Q	S	D
E	M	S	M	L	T	E	A	I	A	T	S	Y	Z	E	E
D	V	J	W	F	L	S	G	D	I	R	U	T	H	C	Z
R	A	T	I	N	D	S	E	E	N	I	R	S	U	L	T
Y	M	R	A	S	A	I	S	G	W	G	R	I	E	R	O
C	L	E	V	E	L	O	B	X	A	E	O	E	D	E	E
R	C	O	N	T	I	N	E	N	T	U	U	R	C	G	G
O	S	D	A	M	P	B	I	A	E	A	N	F	C	R	E
A	S	P	I	R	U	E	W	C	R	Z	D	G	L	T	I

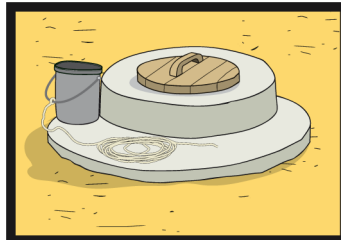
continent
dam
deep
depression
drainage
level
narrow
ocean
pasture
rainwater
ridge
rift
shape
surround
tributary
valley
watershed
wide

9. Match the pictures showing **how we can care for the environment** with the beginning and endings of the sentences. Write your answers in the grid below.

1.



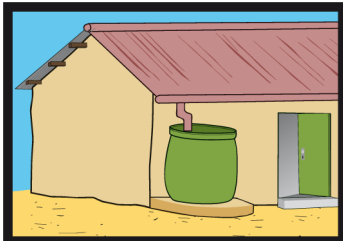
2.



3.



4.



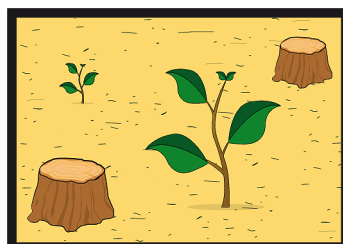
5.



6.



7.



8.



1.	Plant new trees	a)	to keep our water sources clean.
2.	Build terraces	b)	to avoid waste.
3.	Cover our wells	c)	to prevent deforestation.
4.	Save rainwater	d)	to protect wildlife.
5.	Dispose of rubbish carefully	e)	to keep rivers free of rubbish.
6.	Create national parks	f)	to stop the soil being washed away.
7.	Avoid putting waste into rivers	g)	to avoid wasting water.
8.	Recycle things	h)	to keep the environment clean.

Write your answers here:

Pictures	1.	2.	3.	4.	5.	6.	7.	8.
Beginnings								
Endings								

10. Match each **challenge of the environment** with its description and solution. Write your answers in the grid below.

Challenge	Description		Solution	
1. soil erosion	a)	In some areas there is not enough rain to grow crops.	1.	Use terraces and irrigation to keep the land moist; avoid overgrazing.
2. soil exhaustion	b)	People's lives may be in danger.	2.	Plant trees, avoid overgrazing, rotate crops, use terraces.
3. low rainfall	c)	Crops are grown repeatedly and the soil nutrients are used up.	3.	Choose crops that like dry conditions, or irrigate.
4. danger from volcanoes	d)	Land turns into desert.	4.	Use a herd of the right size.
5. desertification	e)	People grow crops on the sides of hills and the topsoil washes them away.	5.	Avoid living too close; take notice of warning signs.
6. overgrazing	f)	There are too many animals on one area of pasture; the grass cannot grow back.	6.	Use crop rotation.

Write your answers here:

Challenge	1.	2.	3.	4.	5.	6.
Description						
Solution						

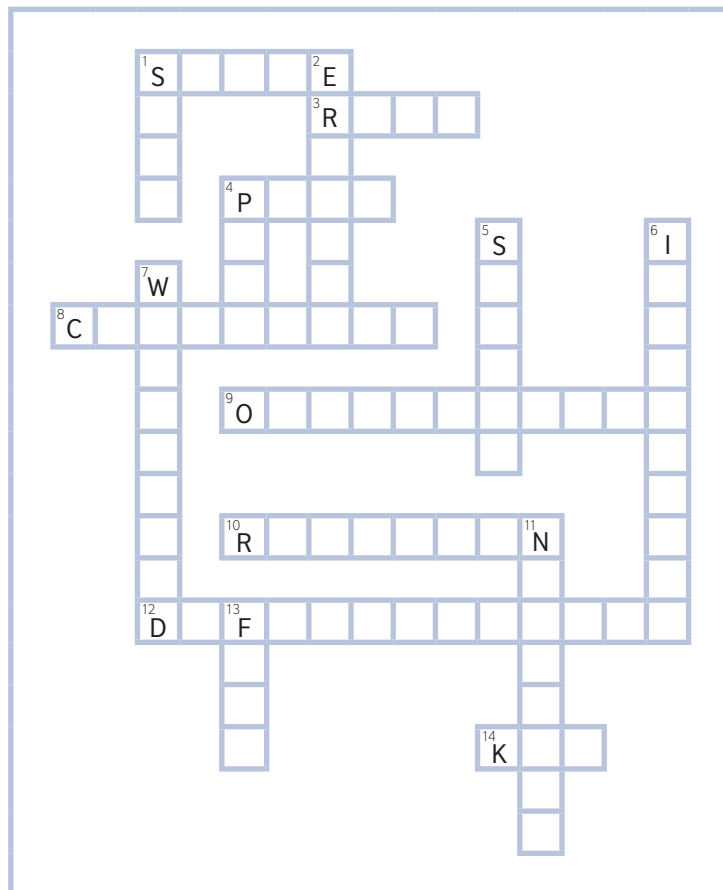
11. Complete the crossword by answering the following questions. All the correct answers are words about the **environment**.

Across

1. A surface or piece of ground that has one end higher than the other.
3. A crack or long narrow space that forms in a large mass of something such as rock.
4. To move someone or something away from you using your hands.
8. Something that needs a lot of skill, energy, and determination to deal with or achieve.
9. Graze (grassland) so heavily that the vegetation is damaged and the ground becomes liable to erosion.
10. A planned sequence of cropping according to which the crops grown in successive seasons on the same land are varied.
12. The process of cutting down and removing trees, especially from large areas of land.
14. A list of the symbols that are used on a map or a drawing.

Down

1. The top layer on the surface of the earth in which plants grow.
2. The process by which the surface of land or rock is gradually damaged by the action of water, the wind, the sea, or glaciers.
4. To move someone or something towards you using your hands.
5. A small narrow river.
6. The process of bringing water to land though a system of pipes and ditches to make crops grow.
7. A large flat area of land.
11. A substance that all organisms need in order to live, grow, and be healthy.
13. A bend in an underground layer of rock.



Glossary

active	/ˈæktɪv/adj an active volcano is likely to erupt at any time.
artificial	/ˌɑː(r)tɪˈfɪʃ(ə)/adj not natural or real, but made by people: <i>The growers use both natural and artificial light.</i>
ash	/æʃ/noun [U] the grey powder that remains after something has burned.
avoid	/əˈvɔɪd/verb [T] to try to prevent something from happening: <i>Try to avoid confrontation.</i>
bridge	/brɪdʒ/noun [C] a structure that supports a road, railway, or path going over a river, over another road etc: <i>Go over the bridge and then turn right.</i>
building	/ˈbɪldɪŋ/noun [C] a structure such as a house that has a roof and walls: <i>The town hall was a large impressive building.</i>
care for	/keə(r)/verb [I/T] to do the necessary things for someone who needs help or protection: <i>Teach your children how to care for their pets.</i>
cash crop	/kæʃ krɒp/noun [C] a crop that farmers grow so that they can sell it, rather than use it themselves.
cattle	/ˈkæt(ə)l/noun [plural] cows and bulls that are kept by farmers for their milk or meat.
challenge	/ˈtʃælɪndʒ/noun [C/U] something that needs a lot of skill, energy, and determination to deal with or achieve: <i>Are we ready to meet the environmental challenges that lie ahead?</i>
cinder	/ˈsɪndə(r)/noun [C] a small piece of something that has been burnt almost completely.
clean up	/kliːn ʌp/verb [T] to make a place completely clean and tidy: <i>Let's start getting this place cleaned up.</i>
conserve	/kənˈsɜː(r)v/verb [T] to use very little of something such as electricity or water so that it is not wasted.
continent	/ˈkɒntɪnənt/noun [C] one of the very large areas of land on the Earth, for example Asia or Africa.
cook	/kʊk/verb [I/T] to prepare and heat food so that it is ready to eat: <i>What's the best way to cook fish?</i>
cover	/ˈkʌvə(r)/verb [T] to put one thing over another in order to protect or hide it: <i>Cover the food until you are ready to eat it.</i>
crater	/ˈkreɪtə(r)/noun [C] the round hole at the top of a volcano.
crop	/krɒp/noun [C] a plant that is grown for food: <i>They're all out planting the crops today.</i>
dam	/dæm/verb [T] to stop a river or stream from flowing by building a dam across it.
deep	/diːp/adj going a long way down from the top or surface of something: <i>The river is quite deep here.</i>
deforestation	/diːˌfɒrɪˈsteɪʃ(ə)n/noun [U] the process of cutting down and removing trees, especially from large areas of land.
depression	/dɪˈpreʃ(ə)n/noun [U] an area on a surface that is lower than the parts around it.
desertification	/dɪˌzɜː(r)tɪfɪˈkeɪʃ(ə)n/ noun [U] the process of land becoming so dry that it cannot be used for farming.
dispose of	/dɪˈspəʊz əv/phrasal verb to get rid of, throw out.
dormant	/ˈdɔː(r)mənt/adj not active or developing now, but possibly becoming active in the future.

drainage system	/ˈdreɪnɪdʒ ˈsɪstəm/ noun [C] an area of country from which rainwater flows into a particular river system.
environment	/ɪnˈvaɪrənmənt/ noun [singular] the natural world, including land, water, air, plants, and animals: <i>Industrial development is causing widespread damage to the environment.</i>
erosion	/ɪˈrəʊʒ(ə)n/ noun [U] the process by which the surface of land or rock is gradually damaged by the action of water, the wind, the sea, or glaciers: <i>coastal erosion.</i>
erupt	/ɪˈrʌpt/ verb [I] if a volcano erupts, it explodes inside and flames, rocks, and lava come out of the top.
eruption	/ɪˈrʌpʃ(ə)n/ noun [C] an occasion when a volcano explodes.
exhaustion	/ɪɡˈzɔ : stʃ(ə)n/ noun [U] a feeling of being extremely tired and without energy.
extinct	/ɪkˈstɪŋkt/ adj an extinct volcano is no longer active and no longer erupts.
extract	/ɪkˈstrækt/ verb [T] to remove something from something else: <i>a method of extracting sulphur from copper ore.</i>
farmland	/ˈfɑ : (r)m, lænd/ noun [U] land that is used for farming.
fault	/fɔ : lt/ noun a crack on or below the Earth's surface: <i>the San Andreas Fault.</i>
feature	/ˈfi : tʃə(r)/ noun [C] an important part or aspect of something: <i>the natural features of the landscape.</i>
firewood	/ˈfaɪə(r), wʊd/ noun [U] wood that is used as fuel for a fire.
fishing	/ˈfɪʃɪŋ/ noun [U] the activity, sport, or business of catching fish: <i>We're going fishing tomorrow.</i>
flat	/flæt/ adj smooth and level on the surface, with no lumps or slopes: <i>The farmland is very flat.</i>
fold	/fəʊld/ noun [C] a bend in an underground layer of rock.
food crop	/fu : d krɒp/ noun [C] a crop that farmers grow so that they can use it themselves, rather than sell it.
forest	/ˈfɒrɪst/ noun [C/U] a large area of land that is covered by trees and other plants growing close together.
fuel	/ˈfju : əl/ noun [C/U] a substance such as oil, gas, coal, or wood that releases energy when it is burned.
furniture	/ˈfɜ : (r)nɪtʃə(r)/ noun [U] the chairs, tables, beds, cupboards etc that someone puts in a room or house so that they can live in it.
gas	/gæs/ noun [C/U] one of the three main forms that matter takes, that is neither a solid nor a liquid.
generate	/ˈdʒenəreɪt/ verb [T] to produce power or heat: <i>75% of France's electricity is generated by nuclear reactors.</i>
goats	/gəʊt/ noun [C] a mammal similar to a sheep but with longer legs and a thinner coat.
gold	/gəʊld/ noun [U] a valuable yellow metal element that is used for making jewellery and in alloys.
grassland	/ˈgrɑ : s, lænd/ noun [U] a large area of land where wild grass grows.
graze	/greɪz/ verb 1 [I] to eat grass that is growing somewhere: <i>Goats grazed on the hillside.</i> 2 [T] to put an animal in a place where it can eat grass.
ground	/graʊnd/ noun [singular] the layer of soil and rock that forms the Earth's surface: <i>getting coal out of the ground. Plant roots grow downwards into the ground.</i>
grow	/grəʊ/ verb [T] if someone grows plants, they look after them and help them to develop.

height	/haɪt/ noun [C/U] how high something is, or how tall someone is: <i>He was about the same height as his wife.</i>
herd	/hɜː(r)d/ noun [C] a large group of animals of the same type that live and move about together.
hill	/hɪl/ noun [C] an area of land that is higher than the land surrounding it but is smaller and lower than a mountain: <i>The village is built on a steep hill.</i>
hydro-electricity	/ˌhaɪdrəʊˌlekˈtrɪsɪti/ noun [U] electricity generated by hydropower.
inland	/ˈɪnlənd/adj situated in a direction away from the coast.
iron	/ˈaɪə(r)n/ noun [U] a chemical element that is a hard heavy metal. It is used especially for making steel.
irrigation	/ˌɪrɪˈgeɪʃ(ə)n/ noun [U] the process of bringing water to land through a system of pipes, ditches etc in order to make crops grow.
key	/kiː/ noun [C] a list of the symbols that are used on a map or a drawing.
lake	/leɪk/ noun [C] a large area of water surrounded by land.
land	/lənd/ noun [U] an area of ground, especially one used for a particular purpose such as farming or building: <i>The land around here is very fertile.</i>
lava	/ˈlɑːvə/ noun [U] rock in the form of extremely hot liquid that flows from a volcano.
layer	/ˈleɪə(r)/ noun [C] an amount or sheet of a substance that covers a surface or lies between two things.
level	/ˈlev(ə)l/ noun [C] the height of something in a container or on a surface: <i>The river is at its highest level for several years.</i>
living things	/ˈlɪvɪŋ θɪŋz/adj living things are animals or plants that are alive, rather than objects such as rocks.
low	/ləʊ/adj small in height, or not far above the ground: <i>a low wall .The water level was very low.</i>
magma	/ˈmægmə/ noun [U] hot liquid rock inside the Earth.
man-made	/mæn meɪd/adj something that is man-made has been made by people and does not exist naturally.
map	/mæp/noun [C] a drawing of an area that shows the positions of things such as countries, rivers, cities, and streets: <i>a map of Central Asia.</i>
millet	/ˈmɪlɪt/noun [U] a type of grain grown for food and for use as fodder.
mineral	/ˈmɪn(ə)rəl/ noun [C] a natural substance found in the earth, for example coal, clay, or salt.
moist	/mɔɪst/adj slightly wet.
molten	/ˈməʊltən/adj molten rock, metal, or glass has become liquid because it is very hot.
mountain	/ˈmaʊntɪn/noun [C] a very high hill.
narrow	/ˈnæəʊ/adj if something is narrow, there is only a short distance from one side of it to the other: <i>narrow streets.</i>
nutrient	ˈnjuː triənt/noun [C] a substance that all organisms need in order to live, grow, and be healthy.
occur	/əˈkɜː(r)/ verb [I] to happen: <i>The police said that the accident occurred at about 4.30 pm.</i>

ocean	/ˈəʊʃ(ə)n/ noun [C] one of the large areas of salt water that cover most of the Earth.
overgrazing	/əʊvəˈgreɪzɪŋ/ noun [U] Graze grassland so heavily that the vegetation is damaged and the ground becomes liable to erosion.
pasture	/ˈpɑːstʃə(r)/ noun [C/U] land covered with grass where sheep or cows are kept.
physical	/ˈfɪzɪk(ə)l/ adj. relating to the natural features of the Earth's surface.
plain	/pleɪn/ noun [C] a large flat area of land.
plant	/plɑːnt/ noun [C] an organism that grows in soil or water and usually has green leaves.
plateau	/ˈplætəʊ/ noun [C] a large flat area of land that is higher than the land around it.
pressure	/ˈpreʃə(r)/ noun [U] a physical force that is pressing on someone or something.
protect	/prəˈtekt/ verb [T] to keep someone or something safe: <i>The hat will protect his face from the sun.</i>
pull	/pʊl/ verb [I/T] to move someone or something towards you using your hands: <i>Jane pulled the door open.</i>
push	/pʊʃ/ Verb [I/T] to move someone or something away from you using your hands <i>I pushed open the door.</i>
quarry	/ˈkwɒri/ noun [C] a place where stone is dug up out of the ground.
rainwater	/ˈreɪn,wɔːtə(r)/ noun [U] water that falls to the ground in the form of rain.
relief	/rɪˈliːf/ noun [U] the variations in elevation of an area of the earth's surface.
resource	/rɪˈzɔː(r)s/ noun [C] things that exist in nature and can be used by people: <i>Many of these countries are rich in mineral resources.</i>
recycle	/riːˈjuːz/ verb [T] to use something again.
ridge	/rɪdʒ/ noun [C] the long narrow top of a mountain or group of mountains.
rift	/rɪft/ noun [C] a crack or long narrow space that forms in a large mass of something such as rock.
river	/ˈrɪvə(r)/ noun [C] a large area of water that flows towards the sea.
road	/rəʊd/ noun [C] a way that leads from one place to another that cars and other vehicles can use: <i>The journey is about three hours by road.</i>
rock	/rɒk/ noun [C/U] the hard solid substance that forms part of the Earth's surface.
rotate	/rəʊˈteɪt/ verb [T] to plant or grow crops in a fixed order of succession.
rotation	/rəʊˈteɪʃ(ə)n noun [C/U] a planned sequence of cropping according to which the crops grown in successive seasons on the same land are varied so as to make a balanced demand on its resources of fertility.
rubbish	/ˈrʌbɪʃ/ noun [U] things that you throw away because they are no longer useful: <i>The streets were littered with rubbish.</i>
save	/seɪv/ verb [T] to avoid using something such as money, time, or energy, or to use less of it: <i>You can save five dollars if you buy your tickets before Saturday.</i>
shape	/ʃeɪp/ verb [T] to form something into a particular shape: <i>Shape the mixture into cubes.</i>

sheep	/ʃi : p/ (plural sheep) noun [C] a mammal that is kept by farmers for its wool or meat.
shelter	/ˈʃeltə(r)/ noun [U] a place to live, considered as a basic human need: <i>Everyone has the right to food, clothing, and shelter.</i>
slope	/sləʊp/ noun [C] a surface or piece of ground that has one end higher than the other: <i>At the end of the garden there is a steep slope.</i>
soft	/sɒft/ adj a soft substance is easy to press or shape and is not hard or firm: <i>The soil is fairly soft after the rain.</i>
soil	/sɔɪl/ noun [C/U] the top layer on the surface of the Earth in which plants grow.
source	/sɔ : (r)s/ noun [C] the beginning of a river or stream.
steep	/sti : p/ adj a steep slope goes up or down very quickly: <i>a steep hill.</i>
stone	/stəʊn/ noun [C/U] the hard substance that rocks are made of.
stream	/stri : m/ noun [C] a small narrow river.
surround	/səˈraʊnd/ verb [T] to be all around something or someone: <i>Armed police quickly surrounded the building.</i>
swamp	/swɒmp/ noun [C/U] an area of land that is covered by water
symbol	/ˈsɪmb(ə)l/ noun [C] a picture or shape that is used to represent something
terrace	/ˈterəs/ noun [C] A raised bank of earth having vertical or sloping sides and a flat top: turning a hillside into a series of ascending terraces for farming.
topsoil	/ˈtɒp, sɔɪl/ noun [U] the layer of soil that is near the surface of the ground and in which plants grow.
town	/taʊn/ noun [C] a place where people live and work that is larger than a village but smaller than a city: <i>a small town. A town on the River Ganges.</i>
tributary	/ˈtrɪbjʊt(ə)ri/ noun [C] a small river that flows into a larger river.
tungsten	/ˈtʌŋstən/ noun [U] a very hard metal element that is used for making steel.
valley	/ˈvæli/ noun [C] a low area of land between two mountains or hills, often with a river flowing through it.
vent	/vent/ noun [C] a hole in the Earth's surface through which lava or gas comes out.
village	/ˈvɪlɪdʒ/ noun [C] a very small town in the countryside.
volcano	/vɒlˈkeɪnəʊ/ noun [C] an opening in the surface of the Earth through which hot gas, rocks, ash and lava are pushed.
warning	/ˈwɔ : (r)nɪŋ/ noun [C/U] an action or statement telling someone of a possible problem or danger: <i>a warning of severe thunderstorms</i> _
wash away	/wɒʃ əˈweɪ/ verb [I] if water washes something away, it carries it away: <i>Heavy rains have washed away the bridge.</i>
waste	/weɪst/ noun 1 [singular/U] the failure to use something that is valuable or useful in an effective way: <i>All this uneaten food – what a waste!</i> 2 [C/U] the useless materials, substances, or parts that are left after you have used something: <i>nuclear waste.</i>
waterfall	/ˈwɔ : tə(r), fɔ : l/ noun [C] a place where water flows over the edge of a steep place onto another level below.
watershed	/ˈwɔ : tə(r), fed/ noun [C] a high piece of land that divides the flow of water in rivers in a particular area.

well	/wel/noun [C] a deep hole that is dug in the ground where there is a supply of water, oil, or gas.
wide	/waɪd/adj measuring a large distance from one side to the other: <i>An earthquake shook a wide area of southern Italy on Saturday.</i>
wildlife	/'waɪld,laɪf/noun [U] animals and plants that live in natural conditions.
wood	/wʊd/noun [U] the substance that trees are made of, used for making furniture and other objects: <i>tables made of wood</i> 2 [C] a small forest: <i>We walk the dog in the woods behind our house.</i>
woodland	/'wʊdlənd/noun [C/U] an area of land that is filled with trees

Key:

1.

Man-made features: house, bridge, road, village, furniture, terrace, well

Physical features: river, grassland, mountain, waterfall, lake, volcano, swamp, forest, valley, tree, hill

Living things: cow, sheep, goat, fish

2. N/A

3. a) vent, b) lava, c) ash, d) cone, e) vent, f) magma, g) crater, h) vent

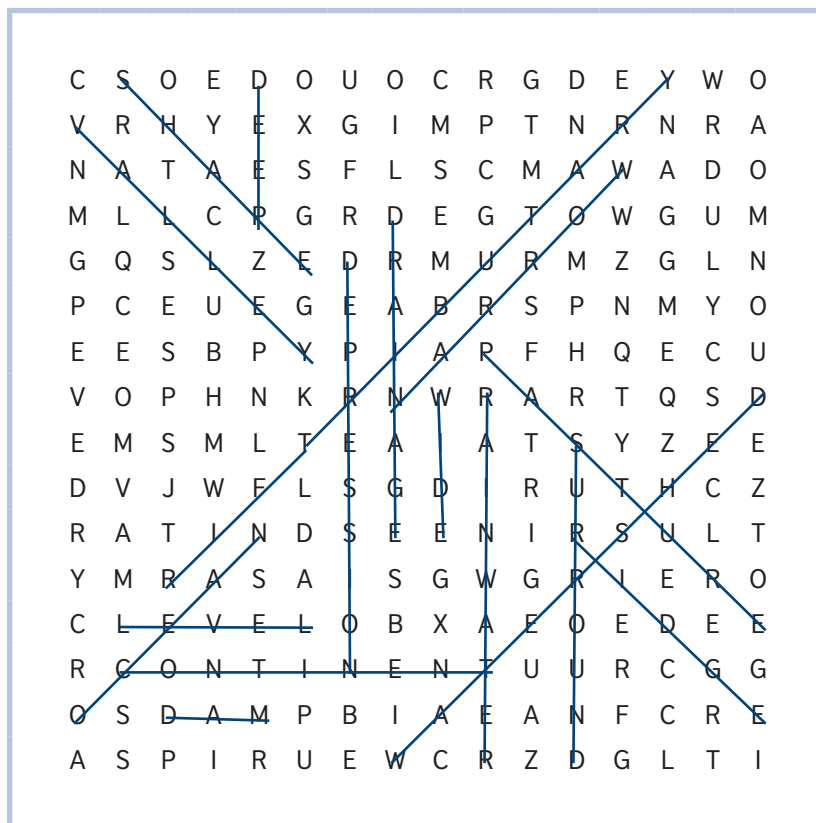
4. a) molten, b) layer, c) pressures, d) erupts, e) lava, f) crater, g) eruption, h) destruction, i) dormant, j) active, k) extinct

5. **1:** f, c, b); **2:** a, e, d)

6. a) 3, b) 4, c) 1, d) 2

7. a) softer, b) deep, c) flat, d) lower, e) Rainwater, f) tributaries, g) inland, h) drainage, i) fault, j) erupts, k) Artificial, l) damming

8.



9.

Pictures	1.	2.	3.	4.	5.	6.	7.	8.
Beginnings	7	3	5	4	6	8	1	2
Endings	e)	a)	h)	g)	d)	b)	c)	f)

10.

Challenge	1.	2.	3.	4.	5.	6.
Description	e)	c)	a)	b)	d)	f)
Solution	2	6	3	5	1	4

11. **Across:** 1. slope, 3. rift, 4. push, 8. challenge, 9. overgrazing, 10. rotation, 12. deforestation, 14. key;
Down: 1. soil, 2. erosion, 4. push, 5. stream, 6. irrigation, 7. watershed, 11. nutrient, 13. fold