

Science

Topic 13: Soil

Topic 13: Soil

1. Use the **types of erosion** to label the pictures.

gully erosion

sheet erosion

wind erosion

rill erosion



a)



b)



c)



d)

2. Choose the correct words from the list to fill the gaps in the sentences about **chemical weathering**.

break up	oxygen	rains	rock	products	smaller
----------	--------	-------	------	----------	---------

Chemical weathering refers to three types of erosion that happen when there is a chemical reaction between rocks and other substances.

Type 1: Carbon dioxide in water dissolves some of the minerals in rocks. This forms a weak acid.

This rock becomes ^{a)} _____ and leaves other small undissolved parts that

^{b)} _____ more easily.

Type 2: Some minerals found in rocks dissolve in water. When it ^{c)} _____, these

minerals dissolve and are removed from the ^{d)} _____. The remaining substances in the rock break up more easily.

Type 3: ^{e)} _____ in the air reacts with some of the substances in rocks. The

reactions create ^{f)} _____ that break up into small particles of soil.

3. Draw a line between each farming technique and its correct definition.

This technique places plant material on the surface of the soil and keeps it covered. This keeps moisture near the surface in the soil.	bare fallowing
This technique breaks up the surface of the soil and helps to separate soil particles. This lets air get into the soil and makes it easier for water to soak in rather than run off and cause erosion.	crop rotation
This technique is used for heavy, wet soils. You cut deep channels or put pipes in the ground so that water flows away faster.	draining
This is when you leave the land uncultivated for a period of time. This gives time for air to get back into the soil and also for micro-organisms to decay any remaining plant material.	hoeing
This is when you plant one crop until it is harvested, then plant a different crop in the same soil. After that you plant the first crop again. This helps to keep the nutrients in the soil.	liming
This is when you add a substance to the soil to reduce its acidity. This encourages bacteria and earthworm activity, helping plants to grow.	mulching

4. Unscramble the letters to make words that fill the gaps in the text about **humus**.

a)	granoic	b)	cafees	c)	settimer
d)	gunfi	e)	cmodeposers	f)	phphssoate
g)	bellous	h)	tuxtere	i)	sclump
j)	rationae				

The ^{a)} _____ matter in the soil is known as humus and is formed from decayed plant and animal material, including ^{b)} _____ and urine. The decay is brought about by the physical action of animals eating it, such as worms and ^{c)} _____. It is also decayed chemically by ^{d)} _____ and bacteria. All these organisms are known as ^{e)} _____. The decay releases nutrients, such as nitrates, ^{f)} _____, and ammonium salts, that were contained in the bodies of plants and animals back into the soil. These nutrients are ^{g)} _____ and dissolve in water, making it easier for plants to take them up through their roots. Humus also improves the ^{h)} _____ of soil by binding the particles together in ⁱ⁾ _____, which are referred to as soil crumbs. These soil crumbs improve ^{j)} _____ and drainage in heavy wet soils, making them more fertile.

5. After reading the text about the **properties of different soils**, choose the correct words from the list to complete the table. Write your answers in the spaces provided.

Sandy soils:

These soils have mostly large particles. The spaces between the particles trap a lot of air but hold very little water because it drains away easily. We say these soils are porous. Sandy soils also have a limited nutrient content because the nutrients in the soil water are lost as the water drains away. This is known as leaching.

Silty soils:

Silt particles are medium size. Silty soils hold more water than sandy soils. This means they also contain more dissolved nutrients, which plants can use. Silty soils are therefore good for growing crops.

Clay soils:

In clay-based soils the particles are tiny, and so the spaces between the particles are also tiny. This makes it more difficult for water and air to move through the soil. Clay soils hold more water than sandy soils and are not easily drained. Clay particles swell when they become wet, so they stick together and make a sticky, heavy soil. When the soil dries, the clay shrinks and leaves large cracks. Water runs through the cracks and does not wet the soil.

Good for growing crops	Holds more water than sandy soils	Holds very little water
medium size	mostly large	not easily drained
porous	sticky heavy soil	tiny

Type of soil	Sandy soil	Silty soil	Clay soil
size of particles	a)	b)	c)
characteristics	d)	f)	h)
	e)	g)	i)

6. Draw a line between each word or phrase about **methods of soil conservation** and its correct definition.

contour ploughing	This involves building banks on a hillside to reduce the flow of water down the slope. The banks can be built with clay or piles of stones.
organic fertiliser	This means digging over the soil around a hillside, not up and down. This reduces the flow of water down the hill, and so slows down the rate of erosion.
planting catch crops	This protects soil from wind erosion. Trees are planted and form a barrier to stop the wind.
planting trees or reforestation	This means planting crops so that the soil surface is never left bare. This prevents erosion.
strip planting	This involves planting lines of two or more different crops alternately. The different crops are harvested at different times so there are never large areas of land left uncovered, and erosion is reduced.
terracing	This adds humus to the soil to improve soil texture and prevent erosion.

7. Choose the correct words from the list to fill the gaps in the sentences about **agents of physical weathering**.

Ice	Wind	Temperature changes	Water
-----	------	---------------------	-------

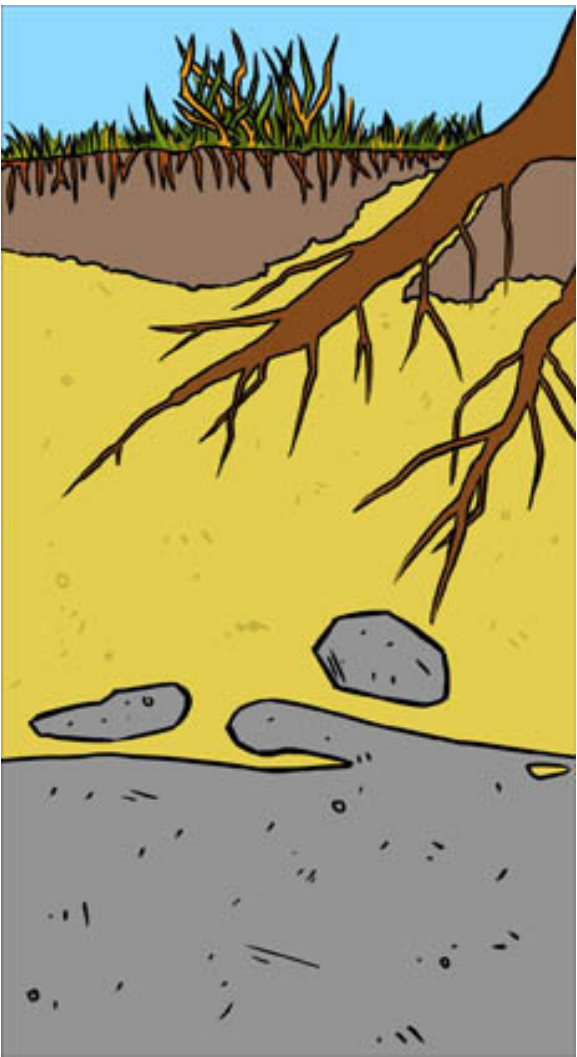
- a) _____: The continuous and repeated flowing movement of this agent against the surface of rocks breaks away, smaller pieces of rocks. Small stones or gravel are moved by the agent and will speed this process up as they bash against the rock.
- b) _____: This agent begins as water. Water collects in crevices in rocks and then freezes. The agent then increases the pressure in the crevice and small pieces of rock break away.
- c) _____: This agent blows over the surfaces of rocks and carries away small particles of dust and grit. These particles cause small pieces of rock to break away which add to

the soil.

d) _____: Rocks expand when hot and contract when cooled. If this change occurs suddenly, rocks crack and break into smaller pieces.

8. After reading the text about the **soil profile**, use the words to label the diagram. Write your answers in the spaces below.

If you cut straight down through soil, you will see that it has several distinct layers. These are called horizons or zones and make up the soil profile. The top layer of the soil is known as the A horizon. The next is the B horizon. These are the most fertile of the four soil zones. The A horizon contains leaf litter and decaying humus. The B horizon contains fertile soil. The C horizon is the subsoil, and is much less fertile. It contains weathering parent rocks. The D horizon is mainly made up of parent rock and forms the bedrock. Plant roots do not usually penetrate into the subsoil. The activity of animals, such as worms, is only in the top two horizons.

bedrock	fertile soil	leaf litter, decaying humus	weathering parent rocks	
				
				a)
				b)
				c)
d)				

9. Find the words about **soil** in the word search.

L F E G P E E R L M T A M G U T I D T H I C K E R D C O N C C T Y P O R O U S Q S X X I O D Y I R D R E P L E N I S H I G O L N E K F P H T P E C C S M I S O F V S S L Z I R I A S Z O E O F L J S P A O V N E L H S T F H O P L A Y E R A L K A L I N I T Y E C C S G G T T A T S E O L F M G S P M R I I N D I C A T I O N A H P O A C O M P O N E N T S A O R N O I G N L N N E Y B S E R M I U T N G E J D X Q T C N C W Y N C H Y E X R O M H U E T N E R K Y N E G A T T Y L P M D H E E V T H W H E A L N G X F E O Q T	alkalinity components cultivation float grainy hard indication inorganic layer leaching loam porous replenish shrink smooth soft thicker
--	--

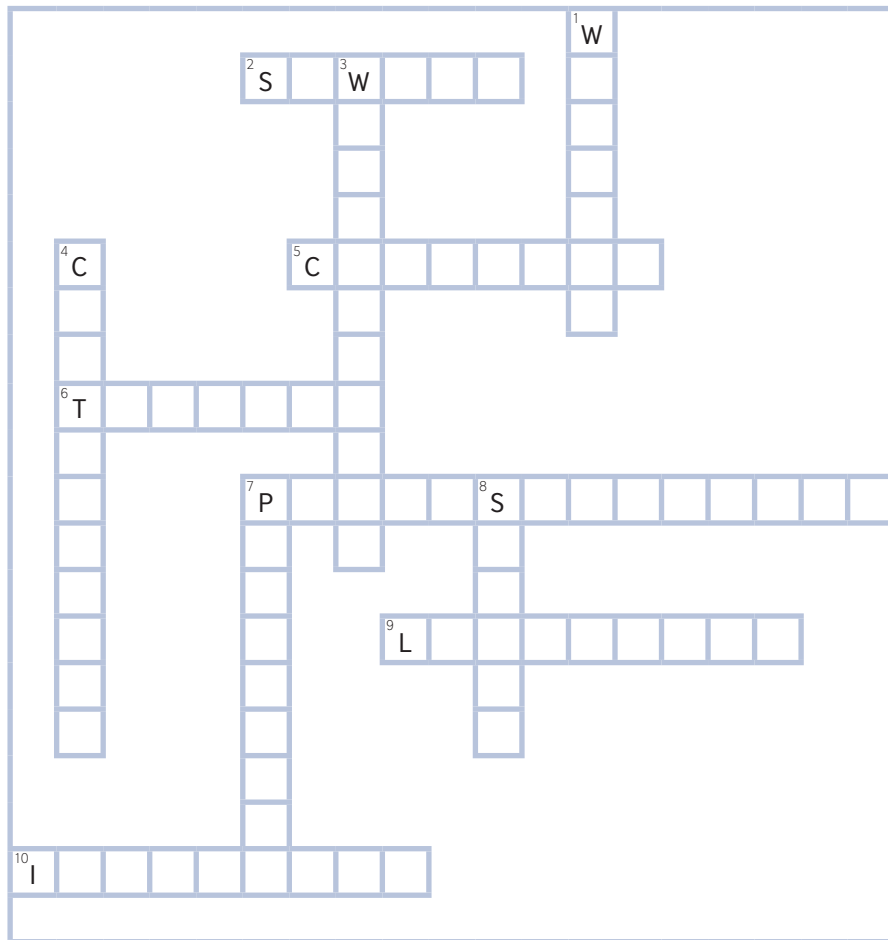
10. Complete the crossword by answering the following questions. All the correct answers are words associated with **soil**.

Across:

- The process of planting seeds in the ground.
- An area in a forest where there are no trees or bushes.
- A vehicle used on farms (for example, to pull machines).
- The process in which green plants combine carbon dioxide and water, using energy from light, to produce their own food.
- The process of making something flat (for example a patch of soil).
- A tool, or a simple piece of equipment.

Down:

- The process of removing unwanted plants from the ground.
- A large, open container with one wheel that you use outside for moving loads.
- The process of growing plants and crops.
- A soft, white metal used with other substances for making fertiliser.
- A tool used for lifting and moving something such as snow or soil. It consists of a long handle with a curved metal end.



Glossary

acidity	/əˈsɪdəti/ noun [U] the quality of being acid.
aerate	/ˈeəreɪt/ verb [T] to put air into something such as soil, <i>aerate the soil</i> .
aeration	/eəˈreɪʃ(ə)n/ noun [U] the process of forcing air into a liquid, for example in order to provide oxygen.
agents	/ˈeɪdʒ(ə)nt/ noun [C] a chemical or other substance that has a particular effect, <i>agents of weathering of rocks</i> .
agricultural	/ˌæɡrɪˈkʌltʃ(ə)rəl/ adj relating to farming, <i>agricultural implements</i> .
alkalinity	/ˈælkəˌlɪnəti/ noun [U] the quality of being or containing an alkali or consisting of an alkali.
alternate crops	/ˈɔːltə(r)neɪt krops/ verb phrase to grow a plant on a farm and then change this plant with another in order to best use the soil.
ammonium salts	/əˌmʊniəm sɔːlts/ plural noun phrase products of a reaction between ammonia and various acids used for a variety of purposes including fertilizer production.
animal traction	/ˈænɪm(ə)l ˈtrækʃ(ə)n/ noun phrase using creatures to pull something over a surface, or this type of power used for pulling.
apply manure	/əˈplaɪ/ noun phrase to put a layer of something to make the soil richer onto an area of land.
artificial fertilizer	/ˌɑː(r)tɪˈfɪʃ(ə)l ˈfɜː(r)təlaɪzə(r)/ noun phrase a man-made substance added to soil in order to help plants grow.
B horizon	/biː hæˈraɪz(ə)n/ noun phrase the B horizon is also referred to as “subsoil”, and consists of mineral layers which got there by leaching.
bacteria	/ˈbækˈtɪəriə/ noun plural microorganisms (=very small living things) that consist of a single cell. Some types of bacteria cause diseases and others cause things to decay.
banks	/bæŋks/ noun plural raised area of land along the side of a river.
bare fallowing	/beə(r) ˈfæləʊɪŋ/ noun phrase practice of digging or ploughing land and leaving it without any crops for a season.
bash against	/bæʃ/ verb [T/I] to hit something hard and violently, <i>bash against the rock</i> .
bedrock	/ˈbedˌrɒk/ noun [C] the solid rock under the ground that supports the soil above it.
biological action	/ˌbaɪəˈlɒdʒɪk(ə)l/ the effect that something relating to living things such as bacteria or animals has on something else such as soil.
break up	/breɪk ʌp/ phrasal verb [T/I] if something breaks up, it divides into smaller pieces, <i>break up into smaller pieces</i> .
break down	/breɪk daʊn/ phrasal verb [T/I] if a substance breaks down or is broken down into parts, it separates into the parts that it is made up of.
C horizon	/siː hæˈraɪz(ə)n/ noun phrase the C horizon is a subsoil, and is much less fertile containing weathering parent rocks.
carbon dioxide	/ˌkɑː(r)bən daɪˈɒksaɪd/ noun [U] a gas without colour or smell, produced when you breathe out or when substances containing carbon are burnt.

catch crop	/kætʃ kɹɒp/ noun phrase something planted after a main crop has been harvested in order to protect the soil from wind and water erosion.
channels	/ˈtʃæn(ə)lz/ noun plural a narrow passage made in the ground so that water can go along it.
chemical fertilizer	/ˈkemɪk(ə)l ˈfɜː(r)təlaɪzə(r)/ noun phrase a chemical substance put in soil to help plants grow.
chemical weathering	/ˈkemɪk(ə)l ˈweðə(r)ɪŋ/ noun phrase refers to types of erosion which happen when there is a reaction between rocks and other substances.
clay soil	/kleɪ sɔɪl/ noun phrase a type of heavy wet substance on the surface of the Earth in which plants grow and that does not easily absorb water.
clearing	/ˈkliəriŋ/ noun [C/U] an area in a forest where there are no trees or bushes.
clumps	/klʌmpz/ noun plural a group of trees or plants growing very close together.
components	/kəmˈpəʊnənts/ noun [C] an individual quality or feature of something.
composition	/ˌkɒmpəˈzɪʃ(ə)n/ noun [C/U] the way that something is formed from separate parts or people.
contour ploughing	/ˈkɒntʊə(r) pləʊɪŋ/ noun phrase to turn over the soil before putting seeds into it on the outside edge of a hill or slope to restrict water erosion.
cooled	/kuːld/ adj rather cold, often in a pleasant way.
corn	/kɔː(r)n/ noun [C/U] crops such as wheat and barley.
crack	/kræks/ noun [C] a line on a surface where something is beginning to break apart.
crevice	/ˈkrevɪs/ noun [C] a narrow crack usually in rock.
crop rotation	/kɹɒp rəʊˈteɪʃ(ə)n/ noun phrase a regular change in the type of crop that you grow on a particular area of land, in order to keep the soil healthy.
crumbling	/ˈkrʌmb(ə)lɪŋ/ adj referring for something being broken into very small pieces.
cultivation	/ˌkʌltɪˈveɪʃ(ə)n/ noun [U] the process of growing crops or plants.
cut into	/kʌt ˈɪntə/ verb phrase create gullies in the surface of soil.
D horizon	/diː həˈraɪz(ə)n/ a layer in the earth below the soil which is mainly made up of rocks.
decay	/diːˈkeɪ/ verb [I] to be gradually destroyed as a result of a natural process of change.
decomposer	/ˌdiːkəmˈpəʊzə(r)/ noun [C] a living thing, especially a bacterium or fungus that causes something to decay by a slow natural process.
dissolve	/dɪˈzɒlv/ verb [T/I] mix a solid substance into a liquid so that it becomes included in it.
downpour	/ˈdaʊn.pɔː(r)/ noun [C] a large amount of rain that falls quickly.
drainage	/ˈdreɪnɪdʒ/ noun [U] a system of pipes and passages that take away waste water from an area.

drain	/dreɪn/ verb [T] let liquid flow away from something.
drill	/drɪl/ verb [I/T] make a hole using a special tool or machine.
dry season	/draɪ 'si:z(ə)n/ noun phrase a period during which rain does not usually fall in some countries.
earthworm	/'ɜ:(r)θ,wɜ:(r)m/ noun [C] a type of worm that lives in soil.
essential nutrients	/ɪ'senʃ(ə)l 'nju:triənts/ noun phrase substances in food that are completely necessary for plants, animals, and people to live and grow.
excess moisture	/ɪk'ses 'məɪstʃə(r)/ noun phrase a larger amount of water than is usual or necessary.
excessive use	/ɪk'sesɪv ju:z/ noun phrase the act of using something much more than is reasonable or necessary.
faeces	/'fi:si:z/ noun plural solid waste from your body.
fertile	/'fɜ:(r)taɪl/ adj able to produce good crops or plants.
float	/fləʊt/ verb [I/T] move in a very soft and graceful way.
flowering	/'flaʊərɪŋ/ noun [C] the time when something becomes successful and completely developed.
forest	/'fɒrɪst/ noun [C/U] a large area of land covered by trees and other plants growing close together.
freeze	/fri:z/ verb [I/T] get very cold and changes into ice.
fungi	/'fʌŋi/ noun plural a type of plant without leaves, flowers, or green colour that grows mainly in wet places or on decaying substances, <i>types of fungi include mushrooms, yeasts, and moulds.</i>
grainy	/'greɪni/ adj made up of small spots.
gravel	/'græv(ə)l/ noun [U] small pieces of stone used for making paths and roads.
grind up	/graɪnd ʌp/ verb [T] to break something into very small pieces, <i>worms grind up the soil in their gut.</i>
grit	/grɪt/ noun [U] very small pieces of stone or sand.
gully erosion	/'gʌli ɪ'rəʊʒ(ə)n/ refers to when flowing water cuts very deeply into the earth creating channels.
gut	/gʌt/ noun [U] the tube in your body that carries food away from your stomach.
hard	/hɑ:(r)d/ adj stiff, firm, and not easy to bend or break.
harvest	/'hɑ:(r)vɪst/ noun [C] the activity of collecting a crop.
hoe	/həʊ/ noun [C] a tool with a long handle used for turning over the soil in a garden.
humus	/'hju:məs/ noun [U] plants and leaves that decay on the ground and make things grow better.

implement	/ˈɪmplɪmənt/ noun [C] a tool, or a simple piece of equipment.
indication	/ˌɪndɪˈkeɪʃ(ə)n/ noun [C/U] a sign that something will happen, is true, or exists.
inorganic	/ˌɪnɔː(r)ˈɡænɪk/ adj not consisting of or produced from any living thing.
installation	/ˌɪnstəˈleɪʃ(ə)n/ noun [U] the process of putting a new system or piece of equipment in its place and making it ready for use.
layer	/ˈleɪə(r)/ noun [C] an amount or sheet of a substance that covers a surface or that lies between two things or two other substances.
leaching	/ˈliːtʃɪŋ/ noun [U] the process of removing a chemical or mineral from something such as soil as a result of water passing through it.
leaf litter	/liːf ˈliːə(r)/ noun [U] thin green parts of a tree that are fall and decay to become part of the soil.
legumes	/ˈlegjuːm/ noun plural seeds such as a pea or bean that grow in a pod.
levelling	/ˈlev(ə)lɪŋ/ noun [U] the process of making something flat.
liming	/ˈlaɪmɪŋ/ noun [U] putting a white substance into the soil for helping plants to grow.
loam	/ləʊm/ noun [U] a type of soil that is especially good for plants to grow in.
machete	/məˈʃeti/ noun [C] a large knife with a long wide blade, used as a weapon or tool.
manure	/məˈnjuə(r)/ noun [U] solid waste from farm animals, often mixed with other substances and used on crops to help them to grow.
moisten	/ˈmɔɪs(ə)n/ verb [T] make something slightly wet.
moisture	/ˈmɔɪstʃə(r)/ noun [U] a small amount of water or another liquid in the air, on the surface of something, or in a substance.
mulch	/mʌltʃ/ noun [C/U] decaying organic material for protecting plant roots and improving the soil.
nitrate	/ˈnaɪtreɪts/ noun plural a chemical substance containing nitrogen for improving the quality of soil.
organic	/ɔː(r)ˈɡænɪk/ adj connected with, produced by, or obtained from living things.
overgrazed	/ˌəʊvə(r)ˈɡreɪz/ adj characteristic of land where animals are put to eat the grass too frequently as to expose the topsoil.
parent rock	/ˈpeərənt rɒk/ noun phrase refers to the original rock from which something else was formed.
penetrate	/ˈpenəˌtreɪt/ verb [I/T] get into the soil by getting through the surface.
phosphate	/ˈfɒsfet/ noun [C/U] a chemical that contains phosphorus, used especially for making plants grow.
photosynthesis	/ˌfəʊtəʊˈsɪnθəsis/ noun [U] the process in which green plants combine carbon dioxide and water, by using energy from light, to produce their own food.
physical breakup	/ˈfɪzɪk(ə)l ˈbreɪkʌp/ noun phrase the division of something such as soil into smaller parts because of mechanical action.

physical weathering	/ˈfɪzɪk(ə)l ˈweðə(r)ɪŋ/ noun phrase erosion when there is action between the agents: wind, ice, temperature change and water and rocks, also know as <i>mechanical weathering</i> .
ploughing	/ˈplʌʊŋ/ the process of turning over the soil before putting seeds into it using a plough.
poor drainage	/pɔː(r) ˈdreɪnɪdʒ/ noun phrase the inefficient taking away of water from land.
porous	/ˈpɔːrəs/ adj a porous substance has a lot of very small holes in it so that air and water can pass through it.
potassium	/pəˈtæsiəm/ noun [U] a soft white metal that is used, combined with other substances, for making soap and fertilizer.
rainwater	/ˈreɪn,wɔːtə(r)/ noun [U] water that falls to the ground in the form of rain.
rake	/reɪk/ verb [I/T] use a rake to make an area of soil level or to remove leaves from the ground.
react	/rɪˈækt/ verb [T] a chemical change which happens when two substances come into contact.
reap	/riːp/ verb [T] get something as a result of something that you do.
reforestation	/ˌriːfɒrɪˈsteɪʃ(ə)n/ noun [U] the act of putting new trees into a place where the original trees have been cut down.
replenish	/rɪˈplenɪʃ/ verb [T] make something full again, or to bring it back to its previous level by replacing what has been used.
rill erosion	/rɪl ɪˈrʊʒ(ə)n/ noun phrase when flowing water gradually cuts into the earth creating shallow channels.
root	/ruːt/ noun [C] the part of a plant growing underground, through which the plant gets water and food.
rope	/rəʊp/ noun [C/U] a type of very thick string that can be used for tying or pulling things.
row	/rəʊ/ noun [C] a series of things arranged in a straight line, <i>a row of crops</i> .
runoff	/ˈrʌnɒf/ noun [C/U] a flow of water or chemicals from one place to another, especially when this damages the environment.
sandy soil	/ˈsændi sɔɪl/ noun phrase the substance in which plants grow consisting mostly of sand.
sedimentation test	/ˌsedɪmenˈteɪʃ(ə)n test/ noun phrase a test where soil is mixed with water and left to settle so that the constituent parts separate and can be seen.
seed bed	/siːd bed/ noun phrase an area of ground that has been prepared for growing shoots.
settle	/ˈset(ə)l/ verb [I/T] to come to rest, describes constituents of soil during a sedimentation test.
sheet erosion	/ʃiːt ɪˈrʊʒ(ə)n/ noun phrase refers to when only a thin layer of soil is removed by flowing water.
shovel	/ˈʃʌv(ə)l/ noun [C] a tool used for lifting and moving something such as snow or soil. It consists of a long handle with a curved metal end.
shrink	/frɪŋk/ verb [I/T] become smaller in size.
silty soil	/ˈsɪltɪ sɔɪl/ noun phrase the substance in which plants grow consisting mostly of silt.

slope	/sləʊp/ noun [C] the side of a hill or a mountain.
smooth	/smu:ð/ adj completely even with no rough areas or lumps.
soak into	/səʊk 'ɪntə/ verb phrase [T] penetrate into, be absorbed by something for example, the ground.
soft	/sɒft/ adj easy to press or shape and is not hard or firm.
soil conservation	/sɔɪl ,kɒnsə(r)'veɪʃ(ə)n/ noun phrase the act of protecting the soil to prevent erosion.
soil crumbs	/sɔɪl kɹʌmz/ noun phrase humus binds the soil into clumps referred to as soil crumbs.
soil erosion	/sɔɪl ɪ'rəʊʒ(ə)n/ noun phrase the process by which the surface of land is gradually damaged by water, wind etc and begins to disappear.
soil horizons	/sɔɪl hə'raɪz(ə)nz/ noun phrase different layers of the soil structure on earth, also known as <i>zones</i> .
soluble	/ 'sɒljʊb(ə)l/ adj able to dissolve in a liquid and become part of the liquid.
sowing	/səʊɪŋ/ noun [U] the process of planting seeds in the ground.
sterilizing the soil	/ ,sterə'laɪzɪŋ ðə sɔɪl/ noun phrase risk caused by putting too much lime into the earth.
stick	/stɪk/ verb [I/T] push something long and thin into or through something else.
sticky	/ 'stɪki/ adj covered with a substance that sticks to things.
strip planting	/stri:p plɑ:ntɪŋ/ noun phrase involves planting narrow lines of two or more different crops alternately.
substances	/ 'sʌbstənsɪz/ noun plural particular type of liquid, solid or gas.
swell	/swel/ verb [I/T] become larger than normal, usually because of liquid collecting inside.
termite	/ 'tɜ:(r)mɑɪt/ noun [C] a small insect that eats wood and can damage buildings.
terrace	/ 'terəs/ noun [C] a row of houses all of the same type, built so that they join together.
texture	/ 'tekstʃə(r)/ noun [C/U] the way that something feels when you touch it.
thicker	/θɪkə(r)/ comparative form of thick, a thick object or material has a long distance between two opposite sides, edges, or surfaces.
topsoil	/ 'tɒp ,sɔɪl/ noun [U] the layer of soil that is near the surface of the ground.
tractor	/ 'træktə(r)/ noun [C] a vehicle used on farms, for example to pull machines.
uncultivated land	/ʌn'kʌltɪ ,veɪtɪd//lænd/uncultivated area, field that has not been used for growing crops or has not been changed in order to make it suitable for farming.
urine	/ 'jʊərɪn/ noun [U] liquid waste from a person's or animal's body.

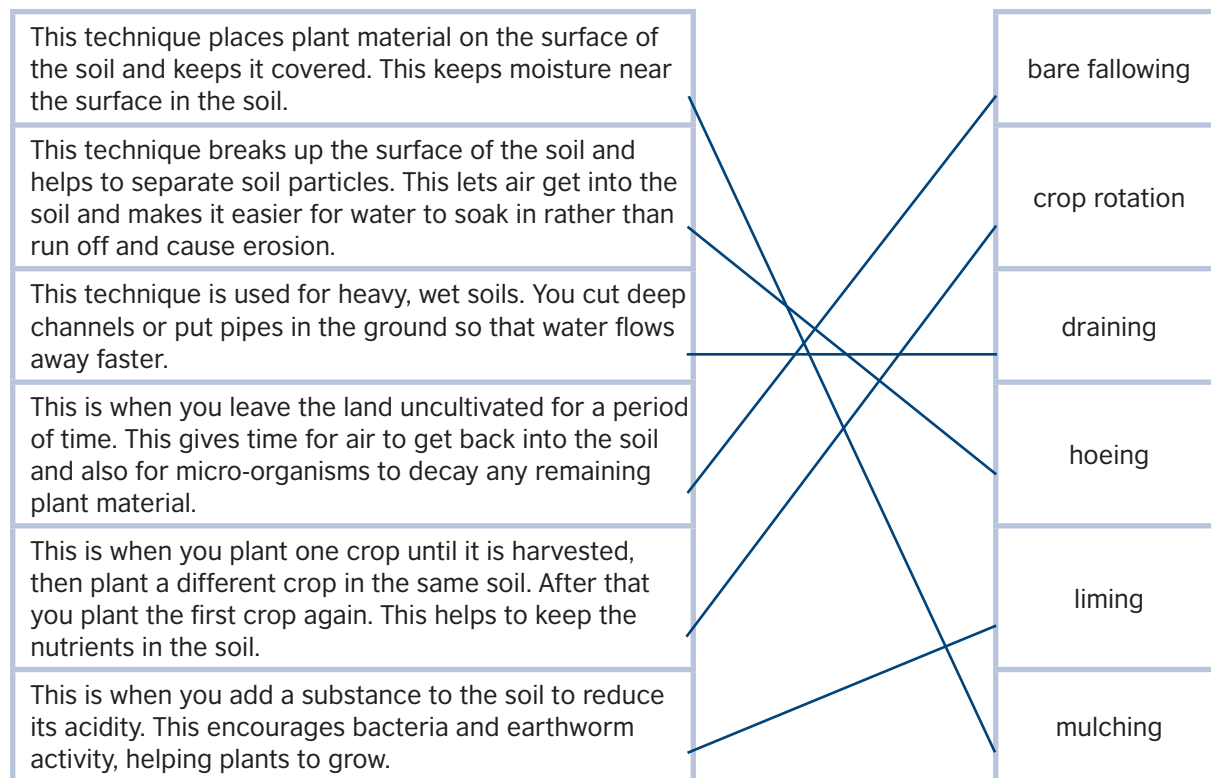
vegetation	/ˌvedʒəˈteɪʃ(ə)n/ noun [U] plants and trees.
weak acid	/wi:k ˈæsid/ noun phrase a chemical substance with a ph value of less than 7 and not very strong.
weeding	/wi:diŋ/ noun [U] the process of removing weeds from the ground.
wet season	/wet ˈsi:z(ə)n/ noun phrase a period during which rain falls heavily in some countries.
wheelbarrow	/ˈwi:l bærəʊ/ noun [C] a large open container with one wheel that you use outside for moving loads. It has two long handles at the back that you use for pushing it.
windbreak	/wind breɪk/ noun [C] something such as a line of trees or a fence that protects against the wind
worm	/wɜ:(r)m/ noun [C] a creature with a long soft body and no bones or legs.

Key:

1. a) rill erosion, b) gully erosion, c) sheet erosion, d) wind erosion

2. a) smaller, b) break up, c) rains, d) rock, e) Oxygen, f) products

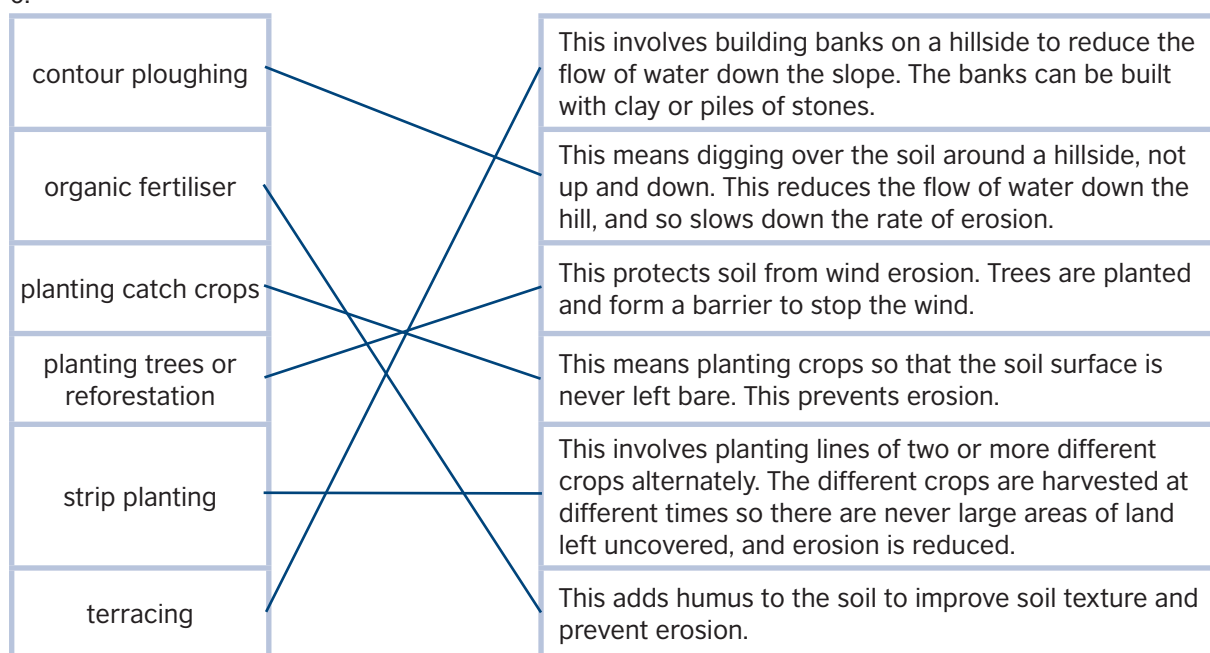
3.



4. a) organic, b) faeces, c) termites, d) fungi, e) decomposers, f) phosphates, g) soluble, h) texture, i) clumps, j) aeration

5. a) mostly large, b) medium size, c) tiny, d) hold very little water, e) porous, f) hold more water than sandy soils, g) good for growing crops, h) not easily drained, i) sticky heavy soil

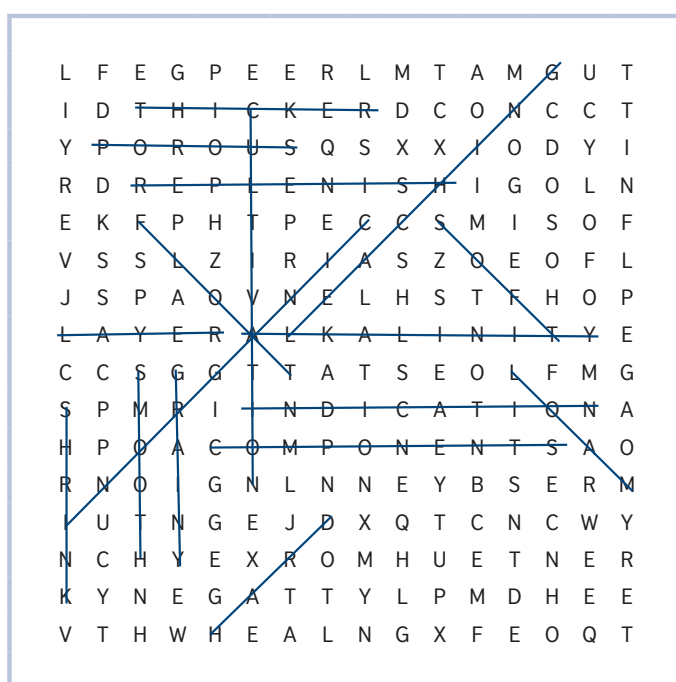
6.



7. a) Water, b) Ice, c) Wind, d) Temperature changes

8 a) leaf litter, decaying humus, b) fertile soil, c) weathering parent rocks, d) bedrock

9.



10. **Across:** 2. sowing, 5. clearing, 6. tractor, 7. photosynthesis, 9. levelling, 10. implement;
Down: 1. weeding, 3. wheelbarrow, 4. cultivation, 7. potassium, 8. shovel