



GROWING LITERACY

STEM Garden learning for Stage 2

Name: _____

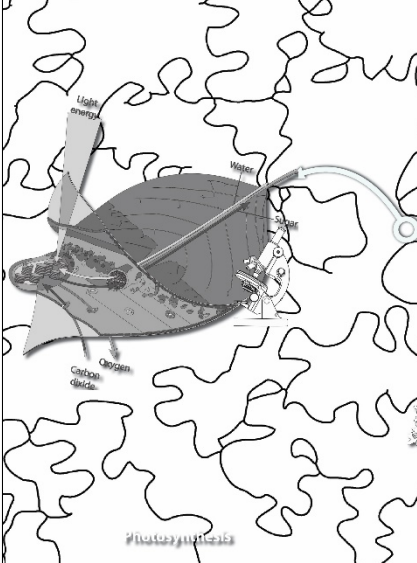
FOOD



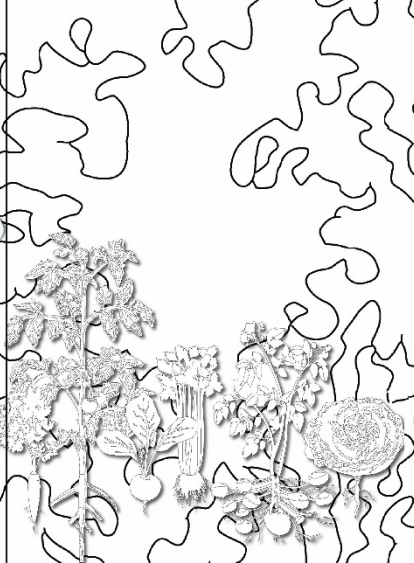
TEMPERATURE



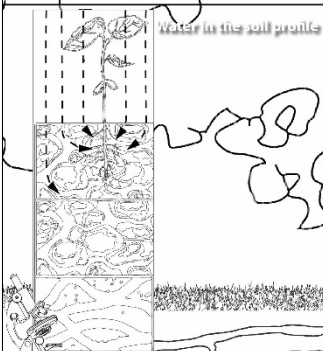
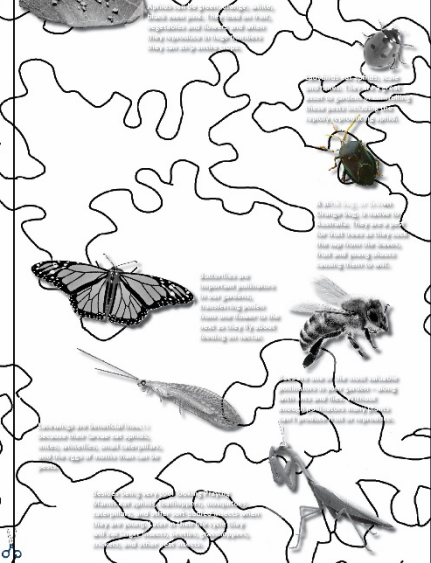
SUNLIGHT



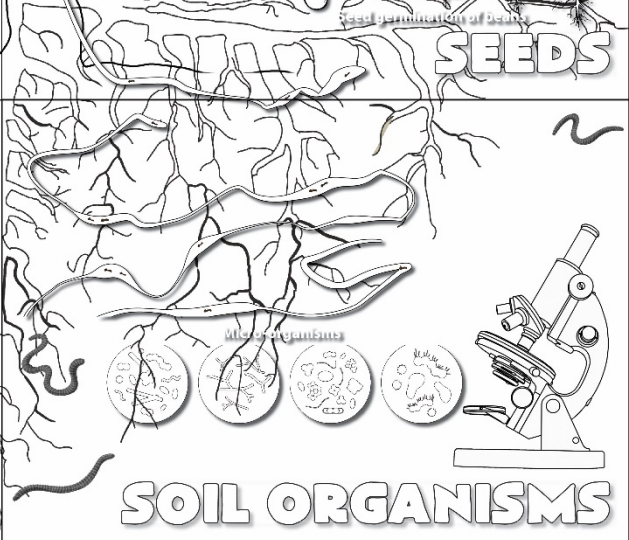
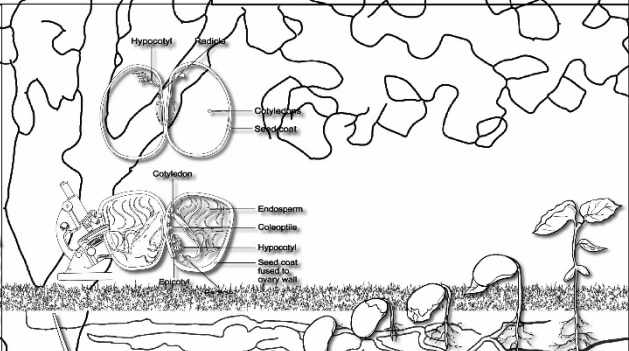
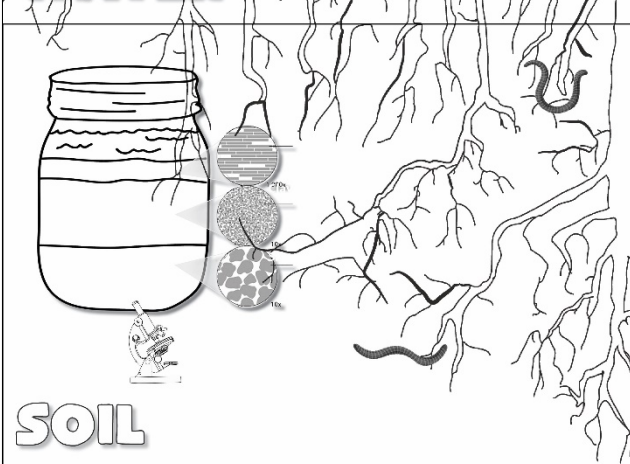
PLANTS



INSECTS



WATER



SOIL ORGANISMS

SOIL

IS SOIL ALL THE SAME?

Do you think all soils are the same? ☐ Yes ☐ No

These soil profiles are all from the same farm, Tocal. Soil profiles show us what the soil is like from the topsoil through the subsoil to the bedrock, and that gives us an idea of how well plants will grow in that soil.

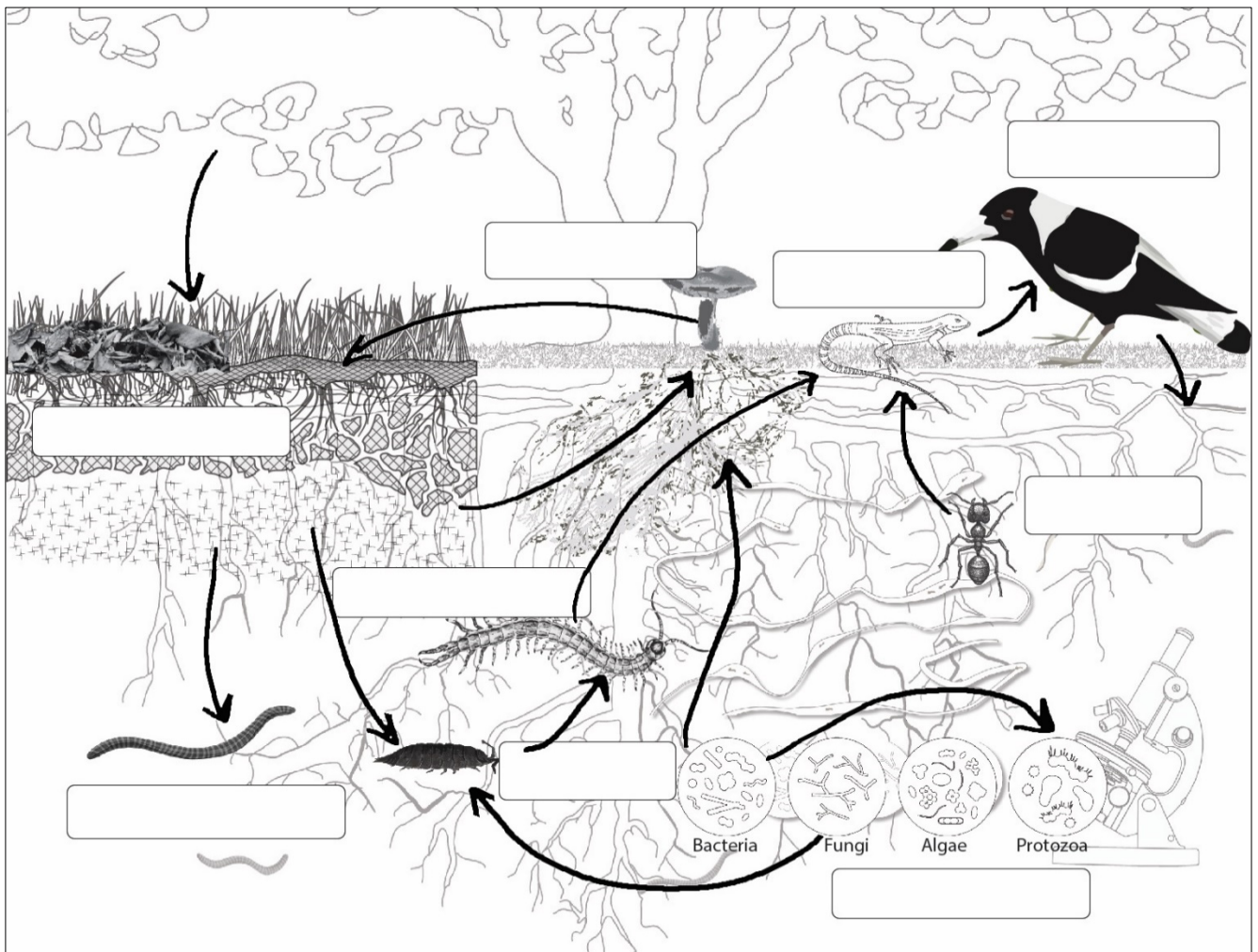


Write about the differences you can see between these soil profiles

WHO LIVES IN THE SOIL?

Soil is made up of living and non-living parts. The non-living parts come from the rocks that form this part of the Earth – this is the geology of the area. The living parts of soil – or those parts that come from living things – include animals and plants.

Label the parts of this soil.



Are they from living or non-living things?

Is soil a living thing or a non-living thing? Why?

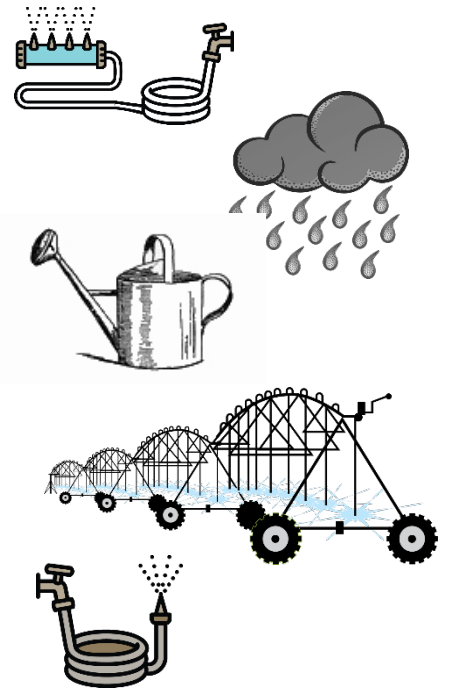
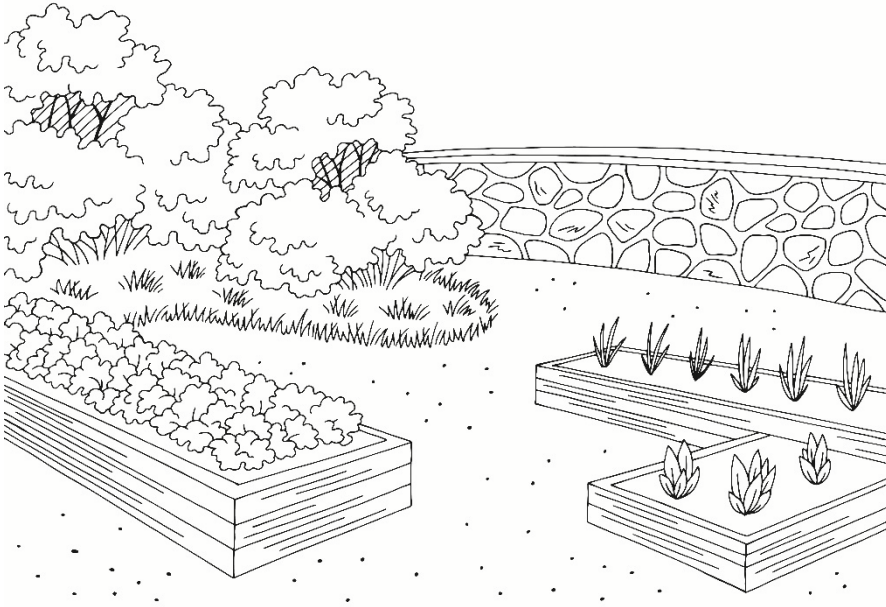
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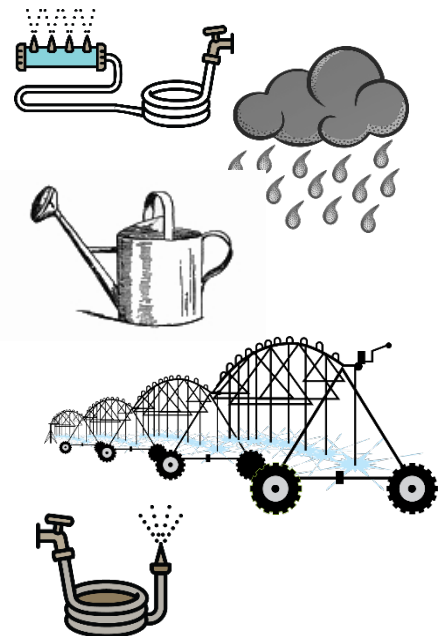
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WATER FOR GROWING

Circle which of these tools you would use to water this garden...



Circle which would be best for a farmer to water these plants...

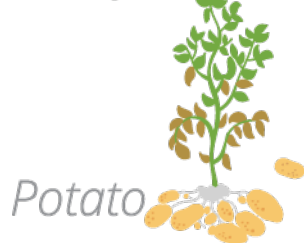


Colour the options that a farmer can use when there is not enough rain.

SEEDS

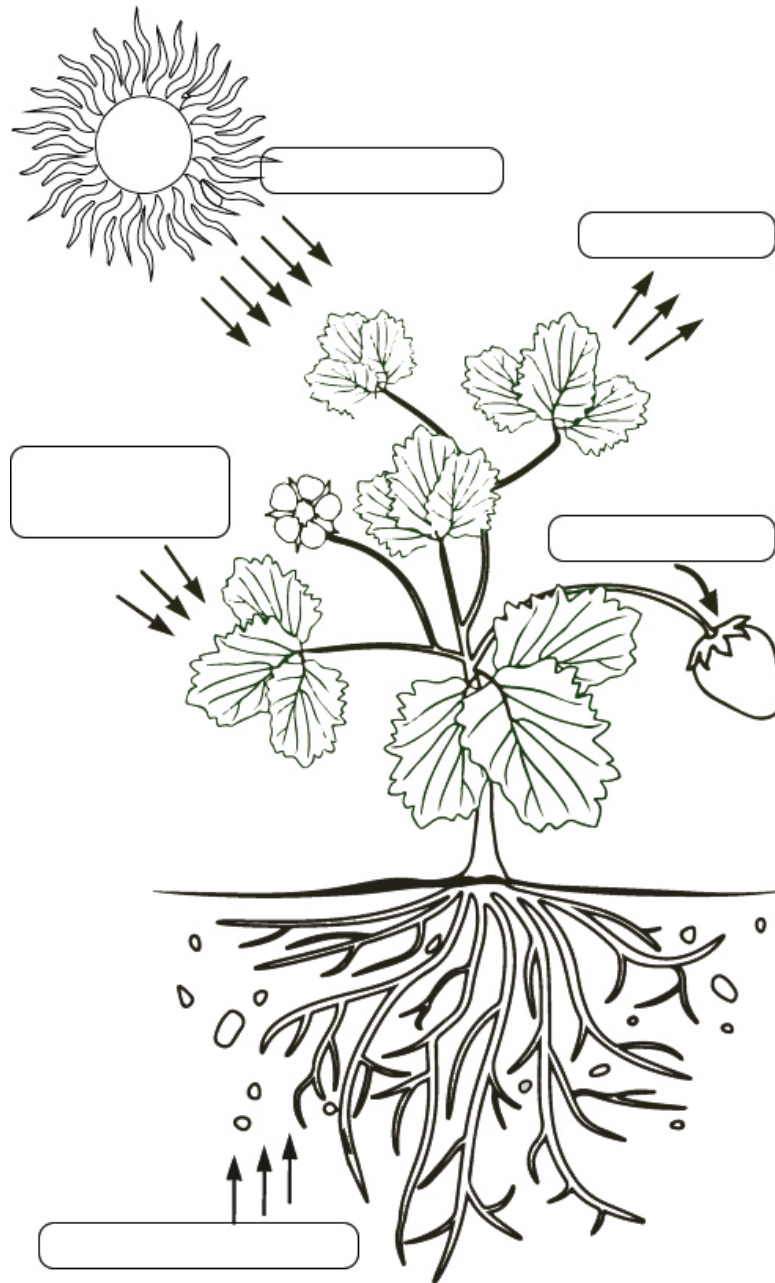
Seeds produced by plants grow into new plants. The new plant looks similar to the original. Not all new plants grow from seeds however some grow from part of the parent plant.

Connect the mature plants with their younger version



SUNLIGHT

Add labels to this diagram to show how a plant uses sunlight to make energy.



Why do plants need sunlight?

PLANTS

Draw an arrow from the plant to the animal that eats it. There may be some that are eaten by more than one animal.



Some animals eat animals too. Can you see any connections between animals in the diagram?

What would happen on this farm if the grass didn't grow?

What would the farmer need to do?

INSECTS

Connect the insect to the benefit that it gives in food gardens.

Lacewings	are decomposers so they feed on organic waste, insects, or other dead animals and this provides nutrients for plants, their nests also aerate the soil.
Lady beetles	pollinate plants and help biodiversity as they are prey animals for a number of other animals.
Ants	eat thousands of aphids in their lifetimes. Aphids are a pest insect capable of destroying whole crops.
Bees	eats aphids, leafhoppers, mosquitoes, caterpillars, and other soft-bodied insects when young. Later they will eat larger insects, beetles, grasshoppers, crickets, and other pest insects
Butterflies	are generalist predators meaning they will eat a wide range of pest insects including caterpillars, mealy bugs, aphids and psyllids.
Praying mantis	are well known for pollinating flowers and encouraging plants to set fruit

How many insects did you find in your school garden?

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Are they insects that are beneficial to the garden? Or ones that can cause problems when trying to grow food?

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FOOD

Research one of the Australian native foods (bush food) and complete the information.

Name:

What does it look like?

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What conditions does it like when growing?

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What can it be used for?

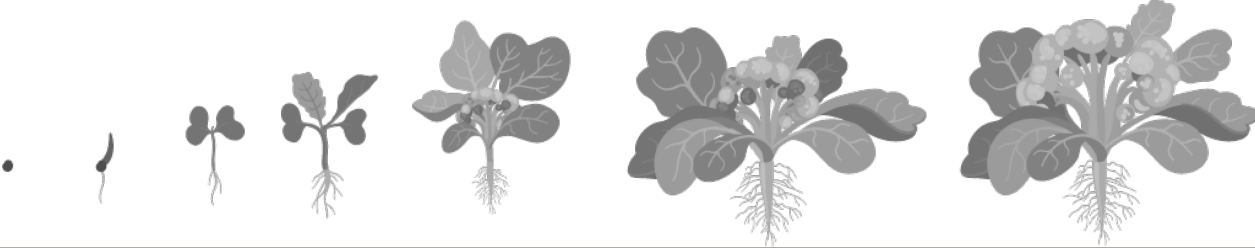
What would you like to eat it in?

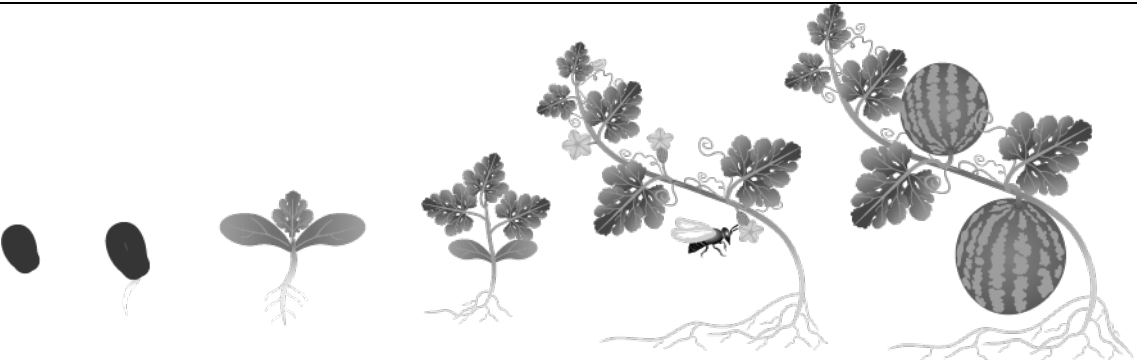
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Where can it be grown?



Which part of these plants do we eat? Cross out the wrong answers.
 Write a short description of what the harvesting equipment needs to be able to do the first one is completed for you.

Name of food	Part of plant we eat	Stage of life cycle
		
Onion	seed/stem/leaf/root/fruit	early/middle/late
The harvesting equipment needs to be able to dig in the ground.		
		
Broccoli	seed/stem/leaf/root/fruit	early/middle/late
		
Spinach	seed/stem/leaf/root/fruit	early/middle/late

Name of food	Part of plant we eat	Stage of life cycle
		
Celery	seed/stem/leaf/root/fruit	early/middle/late
		
Wheat	seed/stem/leaf/root/fruit	early/middle/late
		
Watermelon	seed/stem/leaf/root	early/middle/late

GROWING SEASONS

Record a class list of food you would like to grow in your garden.

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Research when to plant each of the food plants and when it will (hopefully) be ready to harvest.

Season	What to plant	Which month to plant it	When will be ready to harvest?
Summer			
Autumn			
Winter			
Spring			

Draw a plan of your garden showing where you will plant different foods. Make sure you allow enough room for the plant to grow to full size. Make sure to show how big the garden is.

PLANT TRIAL

Draw a diagram of the set-up of your plant trial in the first box - include labels. Over the next two weeks draw a new diagram twice a week to show how the plants grow.

Record your observations of the plants in the trial that are not receiving as much water. What is different about them to the control?

What would happen if you started watering them now? Will they catch up to the control?

Record your observations of the plants in the trial that are not receiving sunlight. What is different about them to the control?

What would happen if they were put in the sunlight now? Do you think they will they catch up to the control?

Record the results here:



CONGRATULATIONS

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(Name)
on completing

AGPATCH: GROWING LITERACY

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(Date)

You have completed the first stage of
food and fibre explorer training!

