

## Extras - Contents

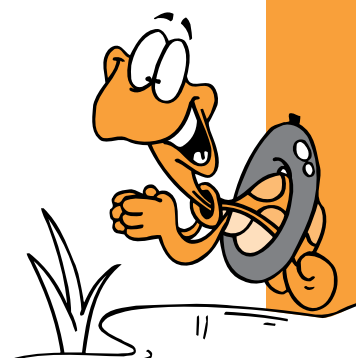
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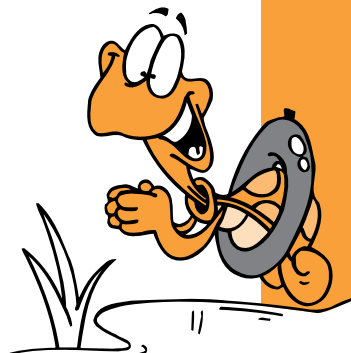




# Salinity Quiz

USE the following cards to conduct a fun salinity quiz!

<p><b>Q</b> What units do we use to measure the concentration of salt in water?</p> <p><b>A</b> EC (Electrical Conductivity)</p>	<p><b>Q</b> If you look at salt crystals under a magnifying glass, what shape are they?</p> <p><b>A</b> Cubic</p>	<p><b>Q</b> What is Waterwatch?</p> <p><b>A</b> It is a national program to educate and involve the community in environmental issues affecting catchments.</p>
<p><b>Q</b> Name the three types of salinity that affect the land.</p> <p><b>A</b> Dryland, irrigation and urban</p>	<p><b>Q</b> Can bricks be affected by salinity?</p> <p><b>A</b> Yes they can fall apart, so can the mortar that holds them together</p>	<p><b>Q</b> Which parts of the land show signs of salinity discharge first?</p> <p><b>A</b> Low points, especially wetlands and rivers</p>
<p><b>Q</b> What do you call an area where water seeps into the ground to become groundwater?</p> <p><b>A</b> A recharge area</p>	<p><b>Q</b> The upper surface of groundwater is called...</p> <p><b>A</b> The Watertable</p>	<p><b>Q</b> Where does salt in the soil come from (three sources)?</p> <p><b>A</b> From ancient inland seas, salty rainfall and natural salts in soils and rocks</p>
<p><b>Q</b> Name three things we can do to help reduce salinity and it's impacts.</p> <p><b>A</b> Use water wisely, plant native 'deep-rooted' plants, modify land use in recharge and discharge areas.</p>	<p><b>Q</b> What is the week called in which we complete a salinity snapshot?</p> <p><b>A</b> Saltwatch Week</p>	<p><b>Q</b> How much of the world's water is fresh water that we can use?</p> <p><b>A</b> 1%</p>
<p><b>Q</b> Since European settlement what percentage of native vegetation has been cleared?</p> <p><b>A</b> About 70%</p>	<p><b>Q</b> What are some facts about the history of salt?</p> <p><b>A</b> It was an extremely valuable preservative. Used in trade instead of money</p>	<p><b>Q</b> True or false; 55 000 ha of farming land in Victoria is affected by dryland salinity?</p> <p><b>A</b> True</p>



# Bits And Pieces

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**USE** the following tasks during your salinity studies.

## Scattegories

Establish approximately five categories such as a salinity cause, an affect of salinity on a waterway, a salt tolerant plant, a positive action that could be taken and an action / behaviour that should be avoided.

A letter of the alphabet is chosen at random and students have a specified time limit to brainstorm something for each category that begins with the chosen letter.

Points are awarded for original ideas not given by other students.

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## Twenty Questions

One student is chosen to sit at the front of the class and must think of a mystery item. It might be a practice that causes salinity, a salt tolerant / sensitive plant, a plant / animal that is affected by salinity etc.

The class only has twenty questions available with which to identify the item. Only yes / no answers can be given, therefore, questions must be phrased appropriately.

Alternately, the class may know the identity of an item with a chosen student required to guess it.

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## Endless Chain

Name a broad topic such as plants, animals, catchment features, salinity impacts etc.

Begin with an example. Students must add to the list with an example from that category that begins with the last letter of the previous word.

For example, 'Lets make an endless chain of aquatic animals'. Platypus, Snake, Egret, Trout etc.

----- ✂ -----

## Mix Master

Name two concepts or items that are related in some way. They could have things in common or be opposites. For example, tree clearing and low watertables, discharge and recharge, mulch and native plants.

Student are to combine both concepts or items into one sentence.

Can students create a variety of sentences using the same prompts?

----- ✂ -----

## Ticket Out The Door

This is a good activity to use the few extra minutes at the end of a session or day, and promotes meaningful processing of recent learning. It can be completed orally or written on scrap paper and handed in. Questions students might be asked to respond to as a 'ticket out the door' might be:

- **What is one thing you learnt today?**
  - **When you get home, what is one thing you might tell your parents about today?**
  - **What is one reason why your learning today may help you in the future?**
  - **Describe one thing you felt good about today.**
- ✂ -----



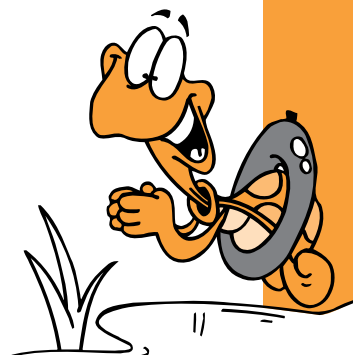
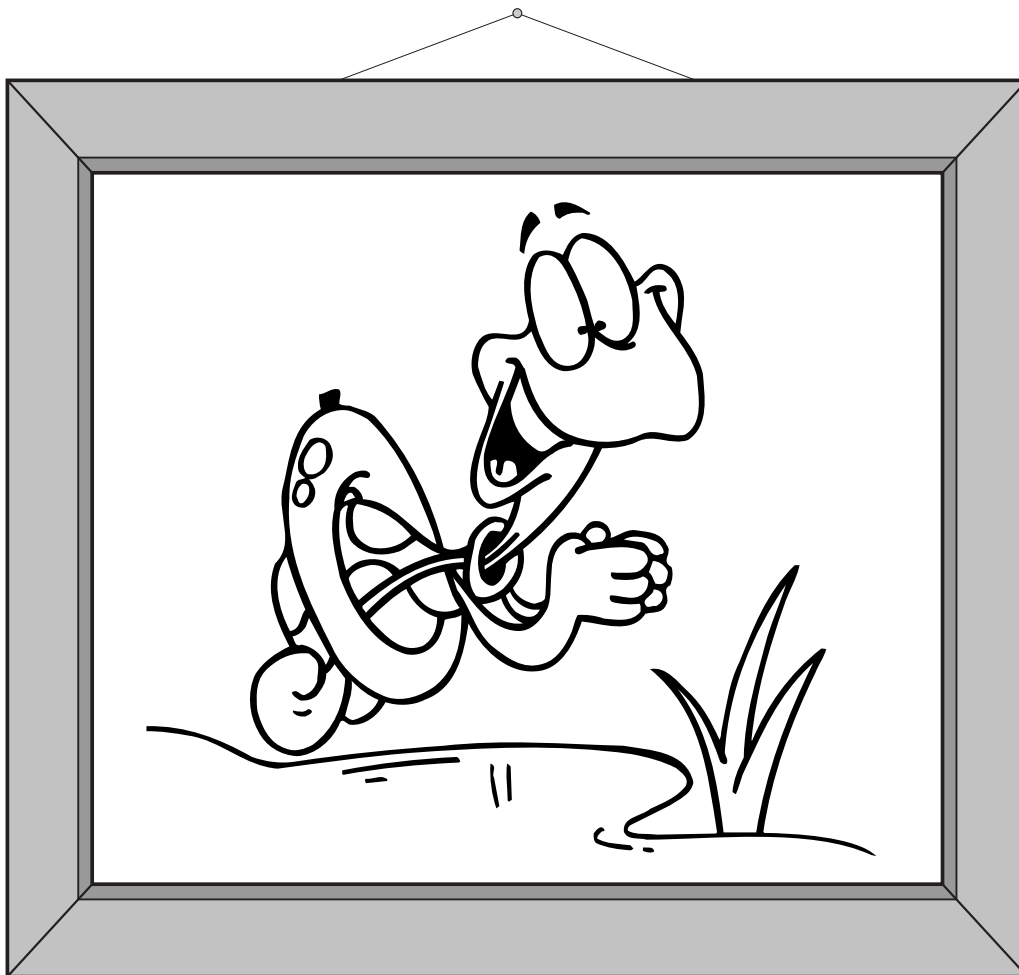
# Salinity Snapshot Photos

**OPEN  
COPY**

the file labelled 'Photos' on the attached CD.  
one or multiple photos on a colour printer. These can provide visual stimulation throughout the salinity unit, or during student comprehension activities.

Questions could include:

- What potential salinity sources can you see in the picture?
- What values are affected by salinity?
- Who do you think is responsible for the salinity problem?
- How could you reduce the impact of salinity here?
- What positive actions can you identify?
- What messages could you give land users about the salinity problem?





# CONGRATULATIONS

You have successfully  
completed the  
Salinity Snapshot Program.  
You are now armed with  
the knowledge necessary to help  
combat the salinity problem.



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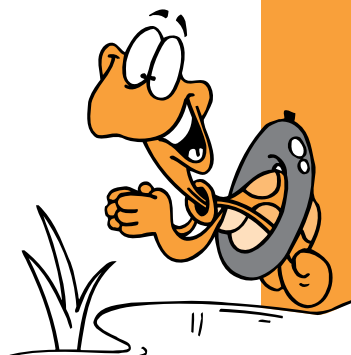


Name \_\_\_\_\_

# MY SALINITY



# BOOKLET



# Salinity And Me - Student Worksheet

Name \_\_\_\_\_



**Things I know about salinity**

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**Things I feel about salinity**

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**Things I want to find out about salinity**

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**Ways I could find out about salinity**

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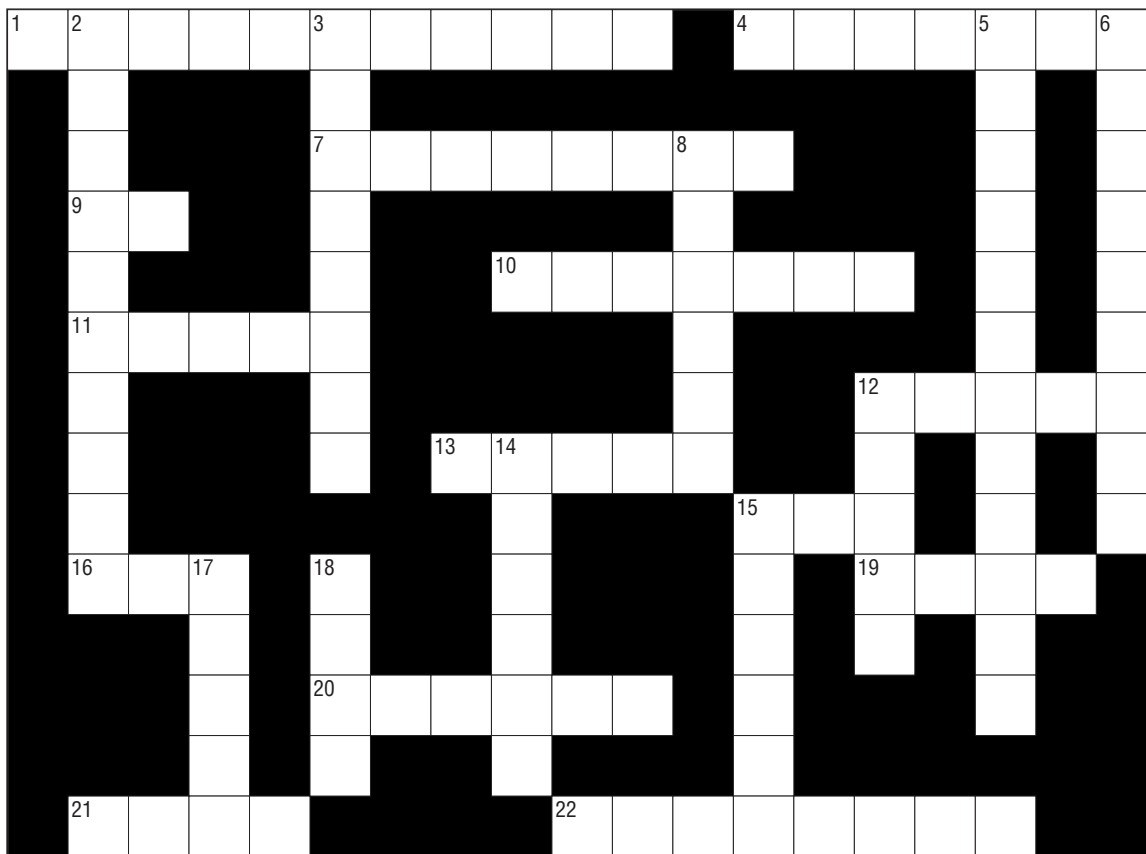
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# Salinity Crossword - Student Worksheet

Name \_\_\_\_\_



## ACROSS

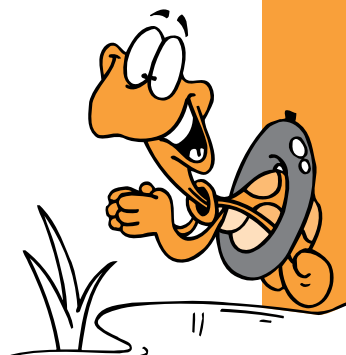
- 1 The process of water being heated and becoming vapour is \_\_\_\_\_.
- 4 Type of salting which occurs in non-irrigated areas
- 7 Salt \_\_\_\_\_ can form in brine.
- 9 \_\_\_\_\_ units are used to calculate salinity levels.
- 10 The most saline body of water in the world.
- 11 Watertables begin to rise \_\_\_\_\_ nature's water pumps have been removed.
- 12 \_\_\_\_\_ energy creates the heat that causes evaporation.
- 13 The salinity that occurs in towns and cities.
- 15 Trees gradually do this when salt affected.
- 16 \_\_\_\_\_ industries are being developed all the time to farm successfully in salt-affected areas.
- 19 Each and every \_\_\_\_\_ of a catchment affects the rest in some way.
- 20 The Loddon and Campaspe rivers both flow into the \_\_\_\_\_ River.
- 21 We must all learn to \_\_\_\_\_ for our environment
- 22 Saline water is \_\_\_\_\_ by it's electrical conductivity.

## DOWN

- 2 Early settlers cleared large amounts of this.
- 3 \_\_\_\_\_ areas are places where water enters the watertable.
- 5 Salinity costs \_\_\_\_\_ areas millions of dollars per year.
- 6 When saltwater reaches the soil surface, a \_\_\_\_\_ area occurs.
- 8 This catchment is one of four within the North Central Region.
- 12 Rainwater \_\_\_\_\_ down through the soil to join groundwater.
- 14 \_\_\_\_\_ are like the earth's veins.
- 15 Water vapour con\_\_\_\_\_ when it comes into contact with something cooler than itself.
- 17 The top level of groundwater is called the \_\_\_\_\_ table.
- 18 Water samples can be collected from creeks, rivers, lakes and \_\_\_\_\_.

ACROSS 1 evaporation, 4 dryland, 7 crystal, 9 ec, 10 dead sea, 11 after, 12 solar, 13 urban, 15 die, 16 new, 19 part, 20 murray, 21 care, 22 measured.  
DOWN 2 vegetation, 3 recharge, 5 agricultural, 6 discharge, 8 loddon, 12 seeps, 14 rivers, 15 denses, 17 water, 18 dams.

COVER AND COPY



# Salinity Find-A-Word - Student Worksheet

Name \_\_\_\_\_



**CIRCLE** each letter of the words on the right as you find them in the grid. Remember that words may appear horizontally, vertically, diagonally or even backwards !!

**Did You Know** . . . . . that there are many superstitions about salt. In history, spilling salt was considered to be extremely bad luck. To reverse the bad luck, something special had to be done. . . . .

To find out, scan each row of the grid from left to right and list the uncircled letters.

Answer \_\_\_\_\_

- AGRICULTURE
- CATCHMENT
- CLEARING
- CREEK
- CROP
- CRYSTAL
- CYCLE
- ENVIRONMENT
- EVAPORATION
- EUCALYPT
- FARM
- GROUNDWATER
- HECTARE
- IRRIGATION
- LANDCARE
- LUCERNE
- MILLIGRAM
- NCCMA
- PERENNIAL
- PLANT
- PRECIPITATION
- RECHARGE
- RIVER
- ROOTS
- SALINE
- SALT
- SALTBUSH
- SEEP
- SOIL
- STOCK
- TASTE
- TREES
- URBAN
- VEGETATION
- WATERTABLE

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

**COVER AND COPY** They would have to throw a pinch of salt over their left shoulder.



# Acrostic Poem - Student Worksheet

Name \_\_\_\_\_



**COMPLETE**

the acrostic poem below by making words or sentences using each letter.



S

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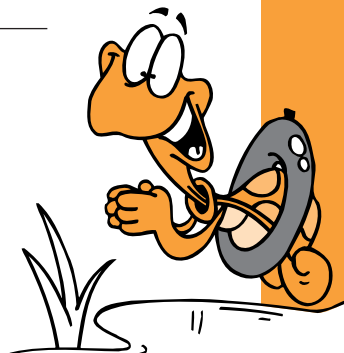
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# Salinity Mini Tasks - Student Worksheet

Name \_\_\_\_\_

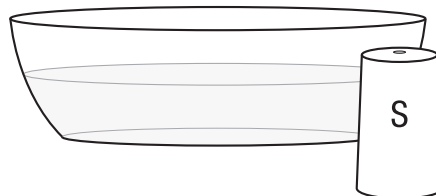


## Potato Slices

**You will need:** 2 shallow bowls, salt, 2 slices of raw potato (the same size)



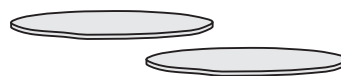
**1** Fill one bowl with plain water.



**2** Fill the other bowl with very salty water.



**3** Place one potato slice in each bowl and leave to stand for several hours.

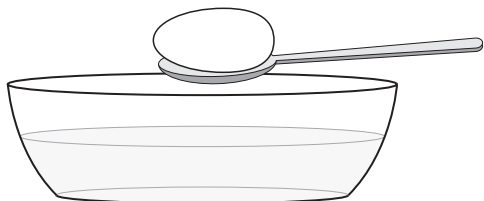


**4** Take the slices out and compare them.

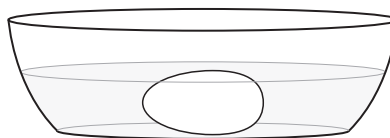
**Where's the science?** The cell walls of the potato allow plain water to pass in and out freely, but do not allow salty water in. The potato slice in the salty water shrinks because liquid leaving the potato cannot be replaced.

## Suspended Egg

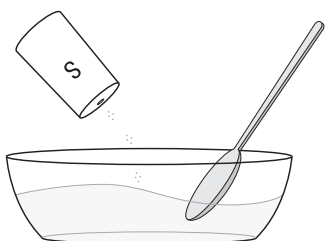
**You will need:** a small clear container, a fresh egg, a spoon, salt



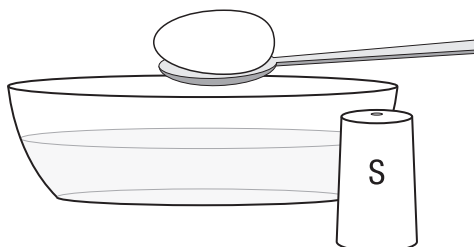
**1** Fill container with cold water and lower in the egg on the spoon.



**2** Remove the spoon, note the position of the egg, then take it out again.



**3** Add salt to the water and stir. Keep adding and stirring until no more can dissolve. You may need to use a large amount of salt.



**4** Carefully lower the egg back into the salt water solution. What do you notice?

**Where's the science?** The water and salt are 'in solution', which means the water has dissolved all the salt it can hold. The egg floats because it is less dense than water.

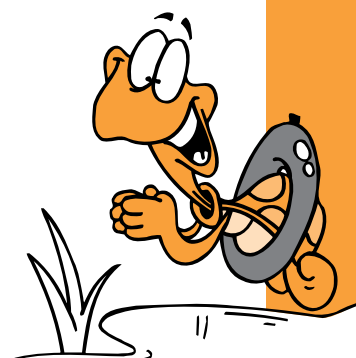


# Salinity Cartoons - Student Worksheet

Name \_\_\_\_\_



**COLOUR** in these four salinity cartoons.

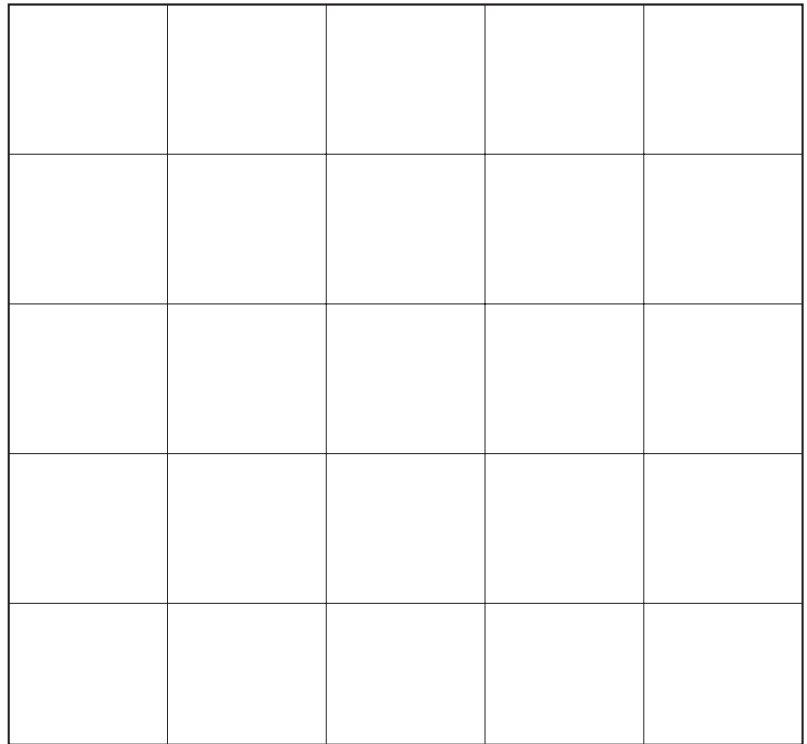
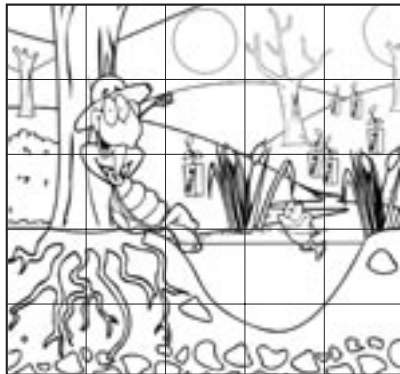


# Salinity To Scale - Student Worksheet

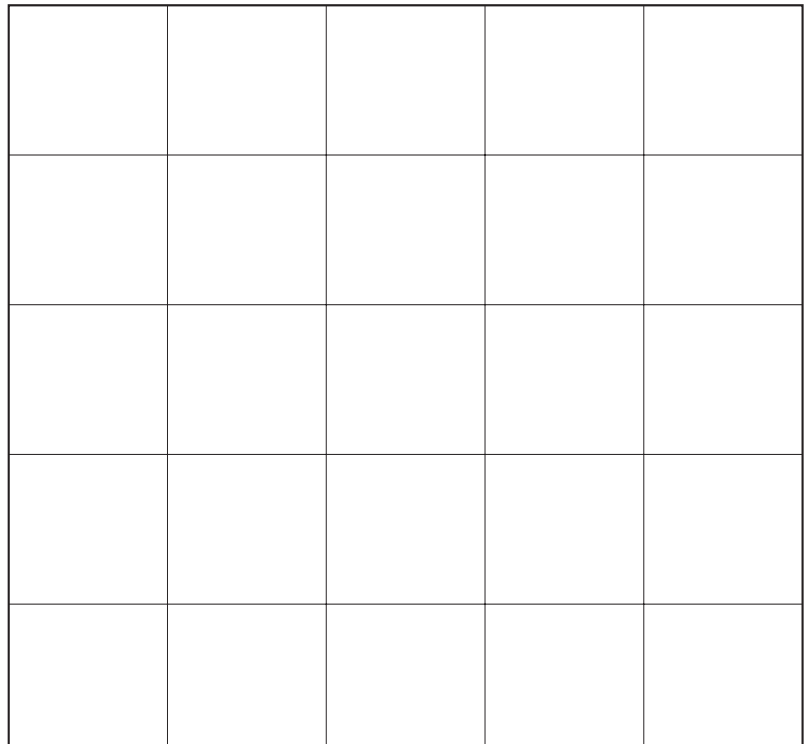
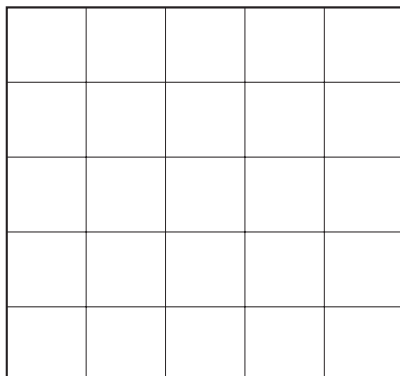
Name \_\_\_\_\_



**USE** the grid below to help you enlarge this picture and draw it onto the grid to the right.



**DRAW** your own design below and ask a friend to enlarge it.

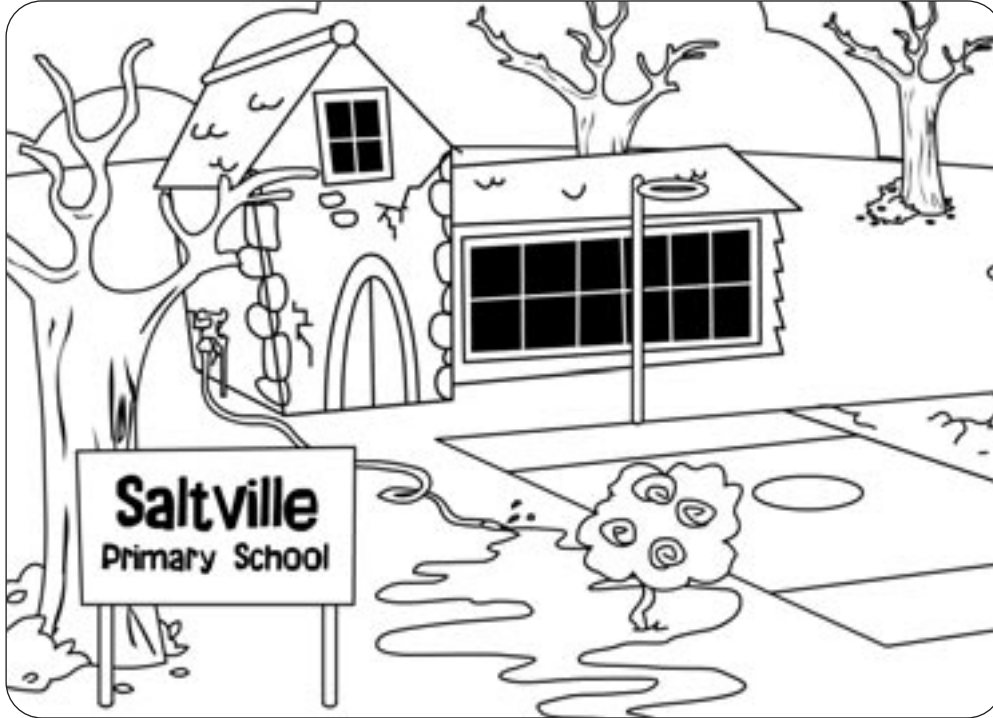


# Spot the Difference - Student Worksheet

Name \_\_\_\_\_



Both scenes below depict a school yard, however one school is much better at preventing salinity problems and keeping their catchment and waterways healthy. List the differences you spot in the space provided. Maybe you could take this home to challenge your family.



**Saltville**

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**Healthytown**

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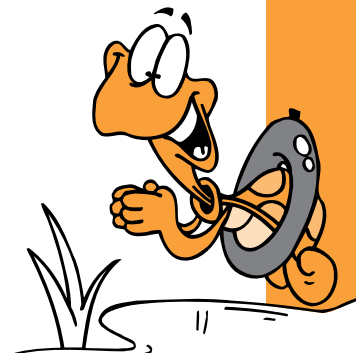
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# Spot The Difference - Student Worksheet

Name \_\_\_\_\_



Both scenes below depict a household yard, however one household is much better at preventing salinity problems and keeping their catchment and waterways healthy. List the differences you spot in the space provided. Maybe you could take this home to challenge your family.



**Saltville**

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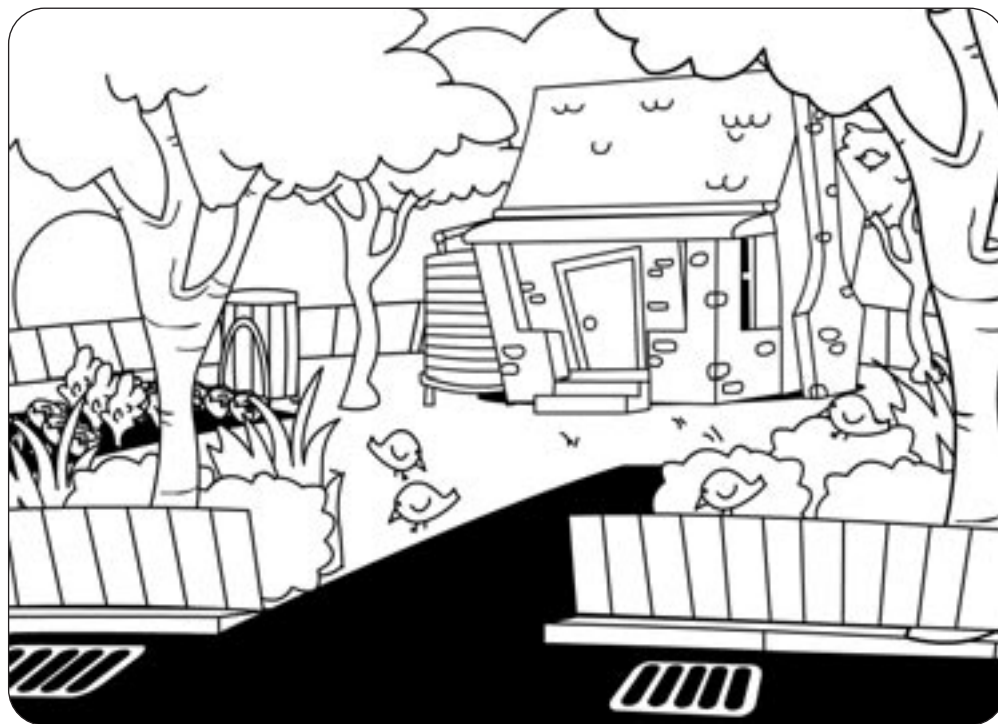
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**Healthytown**

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