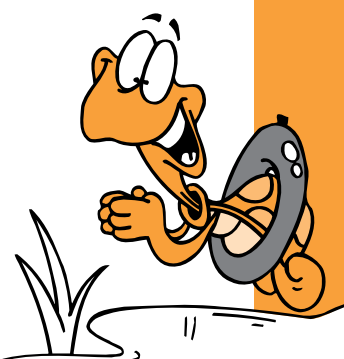
HPE - Contents



Taste Testing

A

FOCUS

- How does my body taste salt?
- What are EC levels and what do they mean?

OBJECTIVES

- Identify parts of the tongue that taste salt
- Relate EC levels to the taste of saline solutions

CSF II LINKS

HPE	4.1 Health of Individuals & Populations
SCIENCE	4.1 Biological
	4.2 Biological
	4.1 Chemical
ENGLISH	4.1 Reading
	4.4 Reading

BACKGROUND

Today, the most common and convenient way of measuring the salinity of a solution is to use an EC Meter. EC stands for Electrical Conductivity and an EC Meter measures the speed with which an electrical current is conducted through a solution. Higher concentrations of salt increase the speed of an electrical current and give a high EC reading.

NOTES

Test the salinity levels of the solutions with an EC meter prior to class. You may wish to invite a presenter from a local environmental agency to speak about salinity issues prior to this lesson. This activity will assist students in understanding EC readings from water samples collected from their local area.

LEARNING TASKS

1 **Mix and label the seven solutions as shown below. Make sure you measure solutions with an EC Meter to get accurate results.**
   - These may be prepared beforehand or with students.
   - You can loan a meter from your Waterwatch Coordinator

Bottle number	Amount of salt in 1 litre of water	Label for bottle approximate EC
1	Zero	0 EC units
2	1/2 pinch (about 15 grains)	250 EC units
3	1 pinch (about 30 grains)	830 EC units
4	2 pinches	1600 EC units
5	1 teaspoon	10 000 EC units
6	1 1/2 teaspoons	15 600 EC units

2 **Explain EC units as a measure of salt concentrations using the background information above.**

3 **Each student dips one end of a cotton bud into Solution # 7 and touch their tongue. Identify the most salt sensitive area.**
   - Refer to worksheet 1 on the taste zones of the human tongue.

4 **Using a cotton bud, students test the solutions in each of the containers. Rinse mouths with fresh water then repeat this process with a dry cotton bud for each solution.**
   - Can students detect the varying salt concentrations?
   - Can students put the solutions in order of their concentrations?

5 **Complete worksheets 2 & 3.**

MATERIALS

- ***'Taste Testing'* Student Worksheets 1 & 2**
- ***'Taste Testing'* Student Information Sheet**
- **Bottled water**
- **EC meter**
- **Table salt**
- **7 x 1 L containers with labels**
- **Metric teaspoon**
- **Cotton buds** (four per student)
- **Atlas** (optional)

EXTENSION

Conduct taste tests at home with salty, sweet, sour and bitter foods. Compare the salinity levels above with those recorded during testing of water samples during a presenter's visit.

ASSESSMENT

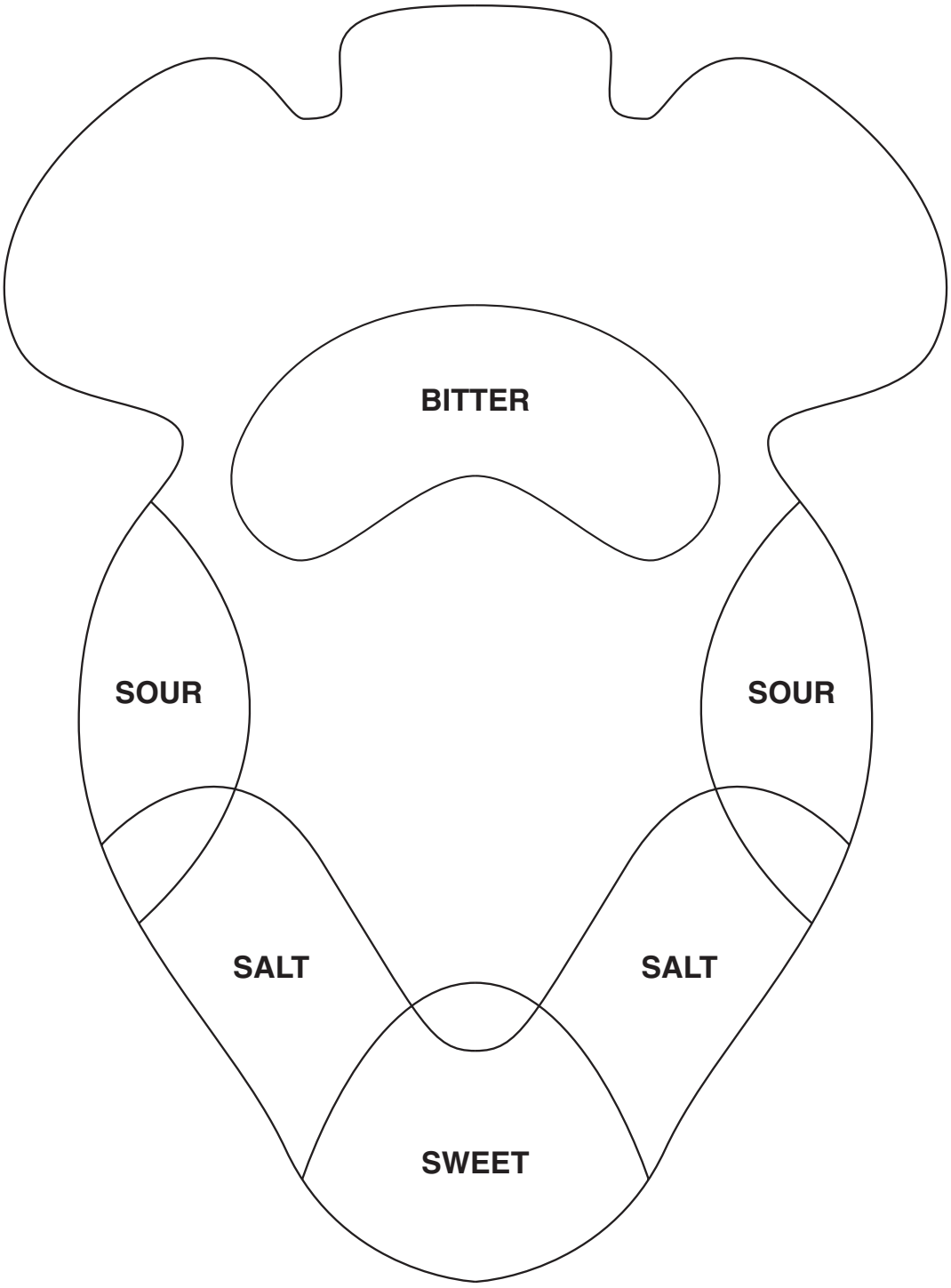
Did students test the solution as per instructions, were their results accurate? Could they interpret the Water Quality Standards to extract data and information?

Taste Testing - Student Worksheet 1

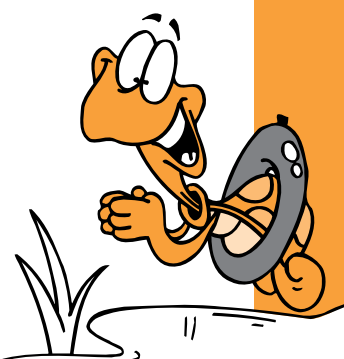
Name _____

Taste Zones

REVIEW the diagram below.



CHALLENGE Conduct taste tests at home with salty, sweet, sour and bitter foods.



Taste Testing - Student Information Sheet

Water Quality Standards

EC Units	Use
0-800	• Freshwater for human consumption (if is no organic material or bacteria) • Generally good for irrigation (beware of plant scorching > 300 EC) • Suitable for all livestock
	Specific
0	• Distilled water
>800	• Outside World Health Organisation (WHO) standards for human consumption
800-2500	• Can be consumed by humans (not recommended for drinking) • Requires special management for use in irrigation (soils and salt tolerant species) • Suitable for all livestock
	Specific
1250	• Murray River at Morgan, South Australia
1500	• Limit for pea, apricots
	• Humans can taste (detect by taste) salt in water
1500 - 3200	• Plant diversity in streams begins to reduce – 75% loss of plant species
1600	• Lethal effects on macrophytes and micro-algae (plants)
1700	• Adverse effects for salt sensitive aquatic invertebrates (insects)
	• Upper limit for citrus, legumes and garden plants
2500-10 000	• Not normally suitable for irrigation (up to 6000 EC OK on salt tolerant crops)
	Specific
4100	• Upper limit for cotton and lucerne
	• Low breeding success for waterbirds
4600	• Limit for poultry
5800	• Limit for pigs
7500	• Limit for Australian freshwater tortoises
7800	• Limit for horses, dairy cows, ewes with lambs
10 000	• Decreased carrying capacity and diversity of waterbirds
10 000+	
	Specific
15 600	• Limit for adult Australian fish
	• Tolerance of adult frogs for short periods
16 500	• Limit for beef cattle
23 000	• Limit for adult sheep on dry feed
25 000	• Groundwater, Loddon Plain North
50 000	• Tolerance of date palm
	• Upper limit for flushing toilets
	• Upper limit for making concrete
58 300	• Salt water in Pacific Ocean
550 000	• Dead Sea salt concentration

Please note that the figures above are range estimates only.

Taste Testing - Student Worksheet 2

Name _____

Use the Water Quality Standards to answer the following questions:

1 The salinity of solutions is measured in which unit? _____

2 What is the WHO limit for drinking water for humans? _____

3 At what level would salinity affect your bathroom at home? _____

4 At what salinity level is water suitable for all livestock? _____

5 A farmer tests the salinity of a water sample and obtains a reading of 1600 EC units.

Is this water suitable for watering his apricot trees? _____

6 What could happen to a freshwater tortoise if it moved into water measuring 9500 EC units?

_____

7a Where would you find the saltiest water? _____

7b Using an atlas, locate the answer to 7a and write the names of which countries it lies between.

_____

8 By the time salinity levels reach 5000 EC units, which animal life has been affected?

_____

9 What could a farmer use water with a salinity reading of 8000 EC units for?

_____

10 At what salinity concentration would you like to water your garden with? Why?

_____

11 Why is the information on the Water Quality Standards important?

_____

_____

CHALLENGE

1 Why is it easier to float in the Dead Sea than in fresh water? _____

_____

_____

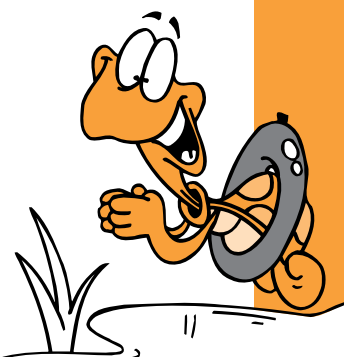
2 At 1500 EC, plant diversity in streams begins to reduce. How might this affect the entire ecosystem?

_____

_____

_____

_____



Catchment Calamity

I

FOCUS

- What is a catchment and how does it function?

OBJECTIVES

- Listen for key words in a story read aloud
- Use verbal cues to race a set course
- Gain a deeper understanding of catchments

CSF II LINKS

HPE	4.1 Movement & Physical Activity
SOSE	4.2 History
	4.3 Geography
	4.1 Economy & Society
	4.3 Economy & Society
SCIENCE	4.1 Biological

BACKGROUND

A catchment is an area of land where all water runs to one point. All elements of a catchment are, to a large extent, interdependent. Total catchment management involves the co-ordinated management of land, water and other physical resources and activities.

NOTES

As can be seen by the CSF II Links above, this is a cross-curricular activity that students will enjoy participating in time and time again at any stage throughout your Saltwatch Week.

LEARNING TASKS

1 **Revise what students know about catchments, discussing the relationships between each integral part.**

2 **Divide students into two groups and assign each group a catchment name, choosen from the four catchments in the North Central region of Victoria.**
- Campaspe, Loddon, Avoca and Avon-Richardson.
- If a student is left over, they can be the storyteller or judge.

3 **Follow the steps on task card 1 to prepare for and play the game (task card 2), using the catchment story to provide the verbal cues for student action.**
- Vary to suit time available.

SAFETY Students must keep their hands by their side to avoid their fingers being trampled by others.

4 **Following this activity discuss the story.**
- What did the game tell us about catchments?
- Why are catchments important?
- How we can keep them healthy?

MATERIALS

- ***'Catchment Calamity'* Teacher Task Cards 1 & 2**
- **Four chairs** / markers

EXTENSION

Alter the storyline and / or alter the player groups and play again. Write a catchment story in the future.

ASSESSMENT

What did students' discussion or Learning Journal entries indicate about their understandings of catchments and their historical, economic, social and environmental influences and impacts.

Catchment Calamity - Teacher Task Card 1

The Catchment Calamity Game

Materials
- Four chairs / markers
- Catchment Story

Preparation

DIVIDE the class into two groups. Choose a name for each group from the four catchments in the North Central region: Campaspe, Loddon, Avoca and Avon-Richardson.

SELECT students from alternate catchments to form pairs. Pairs sit facing each other with outstretched legs, feet meeting in the middle so that parts of each catchment are now lined in straight rows.

SAFETY Students must keep their hands by their side to avoid trampled fingers.

PLACE markers, a few metres from both ends of each row.

ASSIGN each pair with a name from the following list. Each name is an important part of a catchment;

River	Hills	Water	Farmers	Stock	Crops
Trees	Soil	Land	Wildlife	Rain	Community

Playing the game

READ task card 2. As parts of the catchment are read (in bolded text), pause where indicated as the pair/s involved take action.

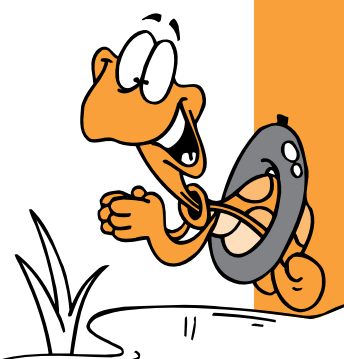
PAIRS
- jump up from their place and step as quickly and carefully between the legs of other pairs
- run around the markers on their catchment's side
- proceed down the outside of their catchment
- go around the marker at the end
- step back over everybody's legs and sit back down in their place.

NOTE that any form of pair names is a cue for action, whether the name is singular or plural (e.g. community / communities) or if part of the name is mentioned (e.g. land / Landcare group, water / Waterwatch)

WHEN the word **CATCHMENT** is read, all pairs must rise, run around the end marker, around the marker at the opposite end and back to sit in their original place.

Scoring

- If one pair is in action, the first person to sit back down in their place wins a point.
- Two or more pairs – a point is earned for the team with all participants sitting first.
- All pairs – the entire catchment to be sitting first wins a point.
- The catchment with the most points is the healthiest and most successful catchment.



Catchment Calamity - Teacher Task Card 2

READ the following story clearly, emphasising the **bolded** words and pausing where indicated by a ♦ .
MAKE sure students listen very carefully for their cue.

The Catchment Calamity Story

The year was 1780 and North Central Victoria was a vastly different place than today. Aboriginal tribes lived in harmony with the **land**. ♦ Nature provided food, medicine, shelter and spirit and the Indigenous people, respected the earth only taking what their **community** needed. ♦

The **rains** flowed down from the **hills**, ♦ filling the **rivers** and growing fresh shoots for **wildlife**. ♦ **Rain** seeped through the **soil** and was used by the **trees**. Small amounts entered the **watertable**. ♦ Nature was balanced and the **CATCHMENT** was healthy. ♦

The year was 1851 and the Gold Rush had hit North Central Victoria. The population exploded and the **land** was altered as **trees** were cut down. **Hills** ♦ were left bare as timber was taken for fuel and building materials. Gold miners dug up the **soil** and washed their pans, clothes and animals in the **river** ♦ . **Farmers** cut down **trees** ♦ and replaced them with **crops**. More **rainfall** began to enter the **soil** ♦ and seep into the **watertable**. ♦ The **CATCHMENT** was changing. ♦ **Communities** were not aware of the damage they were doing.

The year was 1965. Towns had grown and **farmers** prospered and rural **communities** thrived and grew ♦ . But Mother Nature was tired and sick. Clearing for **crops** and **stock** stripped the **land** of vegetation. ♦ **Rains** sent **water** pouring down the **hills**, gouging out **riverbanks**. ♦ **Farmers** praised the **rain** ♦ , but, underground, the true story could be found. **Watertables** were rising. ♦ The **CATCHMENT** was degrading. ♦

The year was 1983. The few **trees** left began to die ♦ , **crops** and **stock** began to die ♦ and **wildlife** began to disappear. ♦ **Farmers** began to ask why, as their businesses went **downhill**. ♦ Local **communities** dwindled in towns ♦ and rural schools closed as people moved away. ♦ **Watertables** ♦ brought the salt all the way to the **soil** surface in many areas. ♦ The **CATCHMENT** was crying out for help. ♦ Landcare Groups began to spring up across the country and **communities** came together to tackle environmental issues.

The year is 2003. **Farmers** understand that they must respect the **land** ♦ if it is to look after them. The North Central **CATCHMENT** Management Authority ♦ is working to improve the health of the Campaspe, Loddon, Avoca and Avon-Richardson areas. ♦ **Hills** are revegetated and ♦ **rivers** are rehabilitated. ♦ **Soils** are stabilised ♦ and deep-rooted **crops** like Lucerne are planted to lower **watertables**. ♦ **Stock** are fenced off from discharge areas where salt tolerant species are planted. ♦

Landcare Groups assist **farmers** in planting **trees** to make the most of **rain**. ♦ Children learn about caring for **wildlife** and their environment. **Waterwatch** is a fantastic way for students and **farmers** to monitor the quality of **rivers**. ♦ In fact, it might be your local **Waterwatch** Co-ordinator who visits your school during Saltwatch Week!

Caring for our **land** is now more important than ever. ♦ Our **rivers**, **hills**, **trees**, **wildlife**, **watertable**, **soil**, **stock**, **crops**, **farmers**, and **communities** ♦ all depend on a future where **rain** ♦ will once again mean the start of a never-ending cycle in a healthy **CATCHMENT**. ♦

The Salt Inside Us All

M

FOCUS

- Why do our bodies need salt?
- What happens if we have too much salt in our diets?

OBJECTIVES

- Understand how our bodies use salt and react to salt
- Complete a PMI about salt and the human body

CSF II LINKS

HPE	4.1 Health of Individuals & Populations
ENGLISH	4.1 Reading
	4.4 Reading

BACKGROUND

Salt is the common name for a chemical called 'Sodium chloride". Other 'chloride' compounds are sometimes called 'salts' as well e.g. 'Potassium chloride', 'Magnesium chloride'. Salt content in foods may be recorded as 'sodium'. See *'The Salt Inside Us All'* Student Worksheet for all the necessary background information.

NOTES

This activity works well as a prerequisite to the HPE activity, *'Salt At The Supermarket'* as health and body requirements play a vital role in evaluating salt content in food products and making healthy dietary choices. This activity can be completed individually or in pairs.

LEARNING TASKS

1 **Gauge students' knowledge by discussing salt as a natural part of the environment and the human body:**
   - Do our bodies have salt in them?
   - How do you know? (tears and sweat)
   - Which foods are high and low in salt?

2 **Categorise discussion points using PMI (positives, negatives or points of interest).**

3 **Students complete the worksheet, by reading the text and identifying key points / terms by underlining.**

4 **Students then complete a PMI exercise, classifying information describing a positive impact on the body, negative impact on the body or an interesting fact or issue.**
   - Students often find the 'interesting' column difficult to define.

5 **Conduct a sharing session of PMIs and conclude the session by discussing foods to limit and other strategies to promote well being.**

MATERIALS

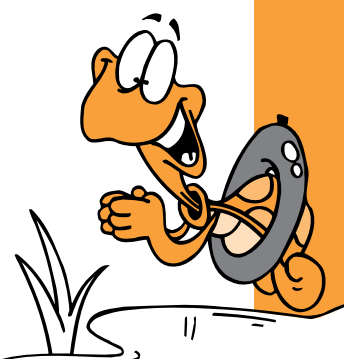
- ***'The Salt Inside Us All'* Student Worksheets 1 & 2**

EXTENSION

Research the triggers and prevention of high blood pressure, stroke, heart failure, asthma or osteoporosis on the Internet. Relate this to the affects of salt on plants and other animals.

ASSESSMENT

Could students locate main points and interpret information on an unfamiliar topic? Were they able to classify information? Did they demonstrate an awareness of salt in their own bodies?



The Salt Inside Us All - Student Worksheet 1

Name _____

READ the text below.

The salt inside us

Blood, tears and sweat are all salty. Indeed, salt makes up one part in every hundred of human blood and body cells. Like any creature, a human being needs salt to stay healthy.

Salt regulates the flow of blood through a person's veins and arteries. It also maintains the right amount of water in the body's cells. Salt aids digestion and makes the heart beat properly. It is important in the formation and functioning of the nerve fibres that carry signals to and from the brain. It helps muscles work and can prevent the loss of too much water through perspiration (sweating).

Salts effect on the body

Many people eat more salt than their body requires.

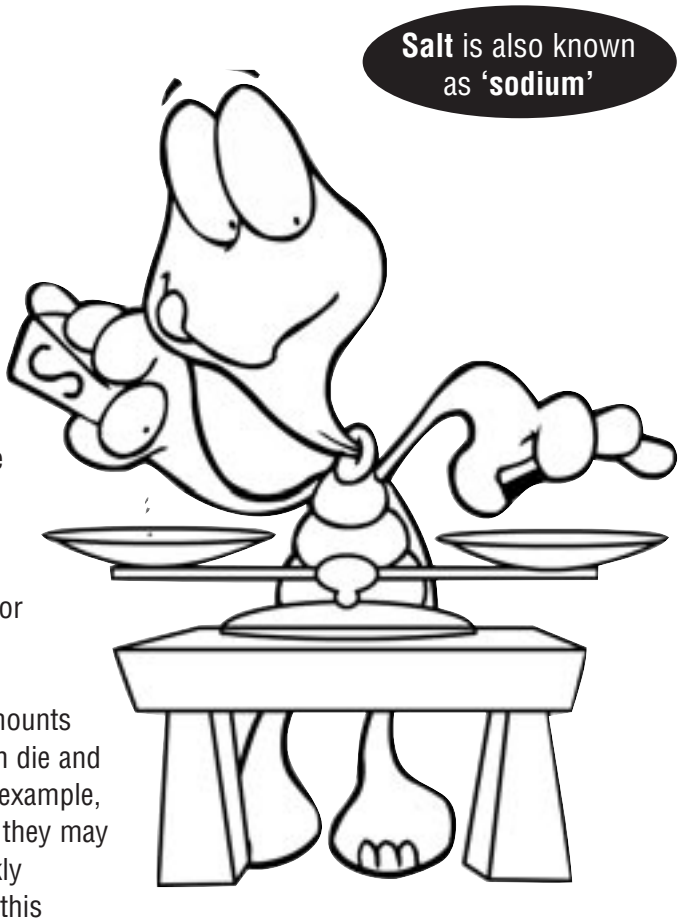
When there is too much salt, the kidneys work harder to get rid of it, the heart pumps more blood through the kidneys and people's blood pressure goes up. If blood pressure is too high, a blood vessel may burst in the brain causing a stroke. Strokes can cause paralysis or even death. With the heart pumping so hard, heart failure can be another side effect. Too much salt is also linked to stomach cancer and may make asthma worse. It can cause loss of calcium from the body, which is a major factor leading to osteoporosis (brittle bone disease).

A lack of salt can also impact on the body. If the amounts of salt and water become unbalanced, body cells can die and cause serious illness. When marathon runners, for example, lose excessive amounts of salt through perspiration they may suffer severe muscle cramps unless the salt is quickly replaced. Saline drips are often given to patients in this instance.

How much salt do we need?

We cannot store the salt that runs through our veins. Each day the kidneys filter salt, which is then excreted as urine. Some salt is also lost through perspiration. Most people need to take in about 1 gram of salt a day to make up for the salt they naturally lose.

Some of us need more salt. People performing heavy exercise lose more salt by sweating. People who live in hot countries perspire more than people living in cooler climates.



The Salt Inside Us All - Student Worksheet 2

Name _____

READ through *'The Salt Inside Us All'* student worksheet 1.
REREAD the worksheet, this time looking carefully for

- Pluses (ways our bodies use salt, reasons why we need it)
- Minuses (effects of too much salt), and
- Interesting facts

UNDERLINE key words or sentences to help identify information.
WRITE information as dot points under the heading it matches below.

+ PLUS	- MINUS	INTERESTING
•		
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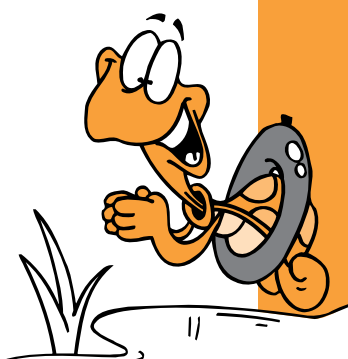


Salt At The Supermarket

M

FOCUS

- How much salt is in the foods we eat?
- What foods should we avoid?

OBJECTIVES

- Read nutritional information labels on food products
- Classify foods using the Healthy Diet Pyramid

CSF II LINKS

HPE	4.1 Health of Individuals & Populations
	4.2 Health of Individuals & Populations
MATHS	4.1 Chance & Data
	4.2 Chance & Data

BACKGROUND

When salt is described in food products it is referred to as 'sodium' and is measured in milligrams. The Healthy Diet Pyramid encourages us to 'eat less salt' as statistics show that Australians eat far beyond their body's daily requirements of 1 gram.

NOTES

Students will be required to collect labels from a variety of food products, making sure that a nutritional information table is present and that sodium is represented. This can be done at home. This activity works well as a prerequisite to the Maths activity, *'Bars of Salt'*.

LEARNING TASKS

1 **Discuss the salt facts on the student worksheet and revise the Healthy Diet Pyramid, taking note of salt's position.**

2 **Brainstorm reasons why salt is added to foods and predict the foods most likely to have a high / low salt content.**

3 **Discuss how to read nutritional information tables to make the most accurate comparisons of foods.**
- Students need to refer to sodium per 100 g rather than per serve, as serving sizes vary.
- Compare and discuss sodium content based on serving sizes.

4 **Using the labels, students read sodium contents and place labels in ascending order across their table.**

5 **Complete the table by inserting food products and sodium contents.**

6 **Categorise the food products by sodium content.**
- Keep in mind the amount of each food that we eat.

7 **Students shade their table and complete the salty food pyramid.**
- Red for 'eat less', blue for 'eat moderately' and green for 'eat most'.

MATERIALS

- ***'Salt At The Supermarket'* Student Worksheet**
- **Nutritional information labels** students collect >10 from a variety of food types.
- **Coloured pencils**

EXTENSION

Keep a record of the foods you eat during one day / week, calculating how much sodium you have ingested. How does your diet rate? How could you make positive changes?

ASSESSMENT

Could students collect and record data using a tabular display? Were they able to extract and interpret information and construct categories to answer specific questions?

Salt At The Supermarket - Student Worksheet

Name _____

Salt Facts

Salt in foods is called '**sodium**'

Sodium is measured in milligrams (mg) 1000 mg = 1 g

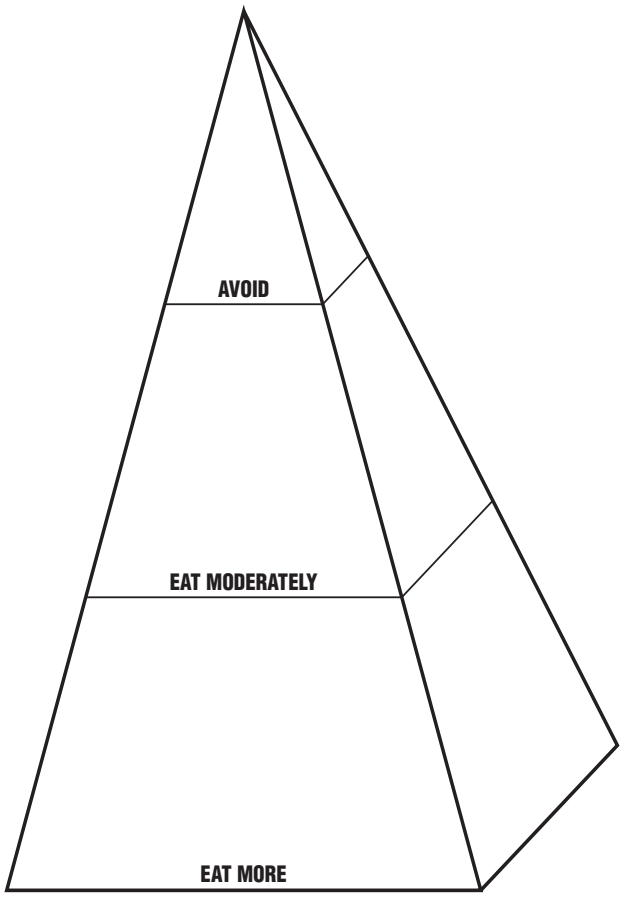
Your body only needs **1 g per day**

COMPLETE the table below, placing foods in ascending order (lowest sodium content to highest).
SHADE each food. Red = avoid (greater than 1 g sodium). Blue = eat moderately (0.1 g – 1.0 g) Green = eat more (less than 0.1 g).
WRITE or draw food products from the table into the category you feel it belongs:

Sodium content of foods

Food product	Sodium (mg) per 100 g serve

Salty food pyramid



Creeping Watertables

M

FOCUS

- How do trees and watertables interact?

OBJECTIVES

- Understand the relationship between trees and watertables

CSF II LINKS

HPE	4.1 Movement & Physical Activity
SCIENCE	4.1 Biological

BACKGROUND

'Creeping Watertables' is based on the notion that one of the most effective ways of preventing and managing salinity is to retain remnant vegetation and promote revegetation. Trees maintain stable watertables, the more trees, the less chance of rising watertables.

NOTES

Played inside, markers (witches hats) as obstructions would be an effective way of modelling the way groundwater moves among rock and soil particles. The game may be played by groups of any size and for any length of time, indoors or out.

LEARNING TASKS

1 Gauge students' existing knowledge base by discussing what they know about how salinity occurs.

- This game may either be an active way of introducing, consolidating, or revising the concept of salinity and rising watertables, or all three.

2 Play the game, following the instructions on the task card.

3 During the game or at the end of the game discuss what has happened.

- What would happen if 15 players started as trees?
- What would happen if the whole class, except one student, was the watertable?
- How do the scenarios above relate to salinity in our environment?
- Where might we see real examples in our area?
- How might it affect our wildlife, economy or community?
- What message does the game provide us with?
- How could our class / school help prevent salinity in our area?

MATERIALS

- ***Creeping Watertables'*** **Teacher Task Card**
- **Playing area** (size may vary)

EXTENSION

Can students create other scenarios or variables? Play the game again to see what happens.

ASSESSMENT

What strategies did players use, either as trees or as part of the watertable? What level of physical skill did they demonstrate? Were students able to identify relationships between the game's variables and draw parallels with salinity as an environmental issue?

Creeping Watertables - Teacher Task Card

Game Instructions

CHOOSE four players to be trees. These players stand at one end of the playing area with their backs to the players at the opposite end.

MAKE all other players parts of the watertable and face the trees.

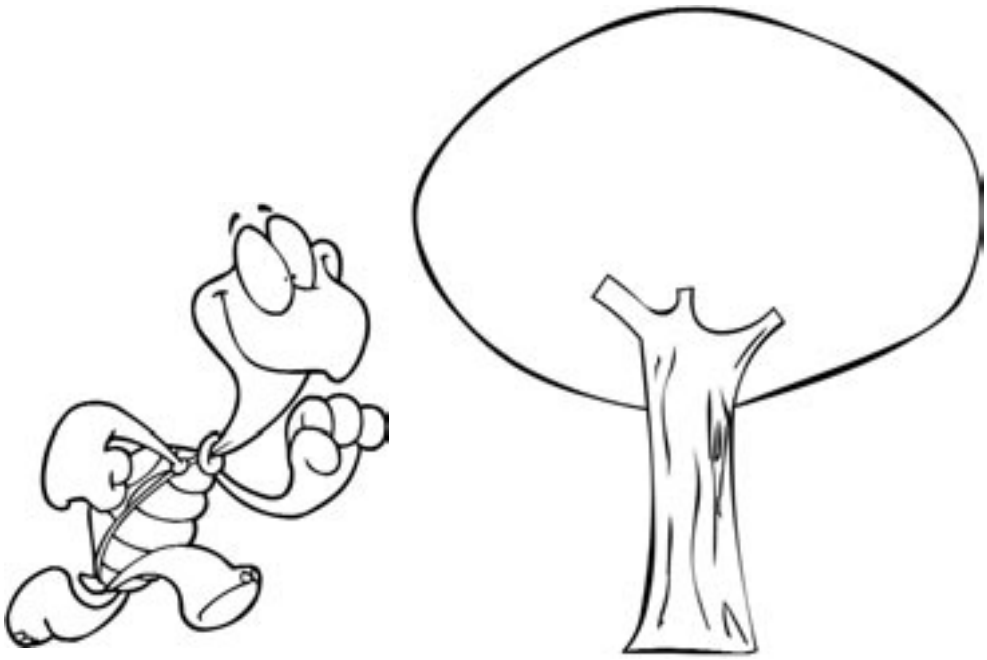
THEN the watertable must try to quietly sneak up and touch a tree. The trees turn around at intervals. If they see a part of the watertable moving, that part (person) becomes a tree.

NOTE Those captured are then part of the solution, not the problem. The more trees, the harder it is for the watertable to progress.

IF a tree is tagged, they sit out of the game and the 'successful' part of the watertable returns to the opposite end of the playing area.

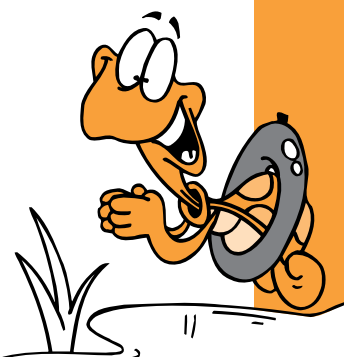
NOTE this has simulated saline groundwater waterlogging the tree's roots, creating a discharge area and causing the tree to die. With the watertable remaining in the game, there are now fewer trees and more chance that the watertable will rise. The salinity problem is thus worsening.

CONTINUE the game until either all the trees have died, the watertable has been eliminated or you are out of time.



CHALLENGE

- Plant more trees (parts of the watertable now become trees)
- Clear some trees (trees now become part of the watertable)
- Experience a wet season (watertable takes two steps forward)
- Groundwater is pumped (watertable takes two steps back)



Saltwatch Sports

FOCUS

- What can we do about salinity?

OBJECTIVES

- Play a variety of games with a salinity theme
- Improve ball skills, coordination, accuracy and balance

CSF II LINKS

HPE 4.1 Movement & Physical Activity

BACKGROUND

This activity involves traditional sports modified to include the salinity theme. Changing behaviour of the community is closely linked to their knowledge and understanding of an issue. By including salinity issues in all elements of the curriculum it is more likely to inspire students.

NOTES

Choose one game to be played during sport time to focus on specific skills; break the class into small groups; or run a 'saltwatch sports' session. Similar to a tabloid sports, you can rotate around activities and accumulate points. Encourage parents to participate.

LEARNING TASKS

1 **Choose activities and prepare all necessary materials.**
   - Construct a score sheet to tally groups' points
   - Set a time limit for each activity (5 minutes, plus time for changeovers, scoring and cleaning up)
   - A timekeeper will monitor time on each game.

2 **Divide students into groups and assign local names for teams such as creeks, towns, streets, plants or animals. The activity choices are as follows:**
   - Orange skittles
   - Save the trees
   - Work together for the watertable
   - Sow the seeds

3 **Groups participate in each activity, with a leader keeping score. At the end of each time limit, leave equipment as it was found, record scores and move to the next activity for an explanation before starting.**

4 **At the end of the session the group with the most points is declared the winner and the most successful Salt Crusaders!**

MATERIALS

- ***'Saltwatch Sports'* Teacher Task Cards 1 & 2** (materials are listed on the task cards)
- **Whistle**
- **Stopwatch**
- **Score sheet**

EXTENSION

Adapt games to make them more challenging. Encourage follow-up activities in other curriculum areas.

ASSESSMENT

What did you observe of students' skill levels and attitude to activities? Were they effective team players, displaying sportsmanship and encouraging others?

Saltwatch Sports - Teacher Task Card 1

ORANGE SKITTLES

MESSAGE Oranges trees are sensitive to soil salinity. Students consider what life would be like without oranges and 'knock salinity over'.

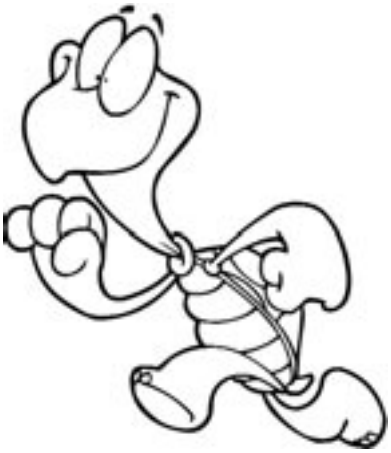
AIM To knock down the skittle as many times as possible.

EQUIPMENT
- skittle (plastic bottle) marked 'S' for salinity
- orange (a spare orange may be needed in case of damage)

INSTRUCTIONS
1. Students line up behind a line facing the skittle (distance away from the skittle is flexible).
2. Each student takes turn to aim and roll the orange at the skittle.
3. The orange is retrieved, thrown to the next team member and the skittle is restored if need be.
4. Students rotate through this activity until time is up.

SCORING Allocate a point each time the skittle is knocked over.

SAVE THE TREES



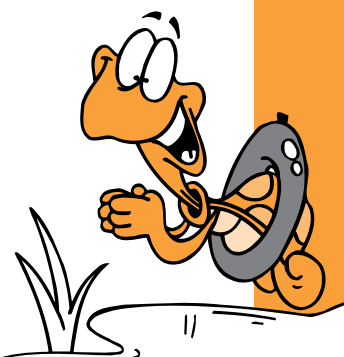
MESSAGE Salt and trees don't mix! Salt must be removed from the root zone of crops and vegetation if they are to reach their potential.

AIM To remove as much salt as possible from one bucket to another using a plastic cup.

EQUIPMENT
- four buckets
- salt (or sand / soil to act as salt)
- plastic cup
- tree or pot plant
- ruler

INSTRUCTIONS
1. Two buckets full of salt, sand or soil are placed around a tree with the two empty buckets located several metres away (the distance will depend on the size of the student group).
2. Students line up in single file between the two groups of buckets.
3. The student closest to the tree starts with the plastic cup in hand.
4. When the time begins, salt is to be scooped out of one of the buckets, transferred as quickly as possible along the line and emptied in a bucket at the opposite end.
5. The end student then runs to the tree, the group shuffles down and the process is repeated.

SCORING A ruler is used to measure the height of the 'salt' in the end buckets and a point is scored for every centimetre.



Saltwatch Sports - Teacher Task Card 2

WORK TOGETHER FOR THE WATERTABLE

MESSAGE High watertables are the cause of salinity and must be lowered.

AIM To remove as much water as possible from one bucket to another using a plastic cup.

EQUIPMENT
- four buckets
- salt (or sand / soil to act as salt)
- plastic cup
- tree or pot plant
- ruler

INSTRUCTIONS
1. Two buckets of water are placed around a tree or pot plant with the two empty buckets located several metres away (the distance is flexible, the greater distance, the more challenging).
2. Students line up in single file behind the empty buckets.
3. The student at the front of the line starts with the plastic cup in hand.
4. When the time begins, they run to the buckets of water, scoop up as much water as possible and empty into buckets at the opposite end.
5. Then cup is handed to the next person and the process is repeated until the time is up.

SCORING A ruler is used to measure the height of the water in the end buckets and a point is scored for every centimetre.

SOW THE SEEDS

MESSAGE Planting deep-rooted trees or crops is one of the most effective ways to lower watertables and combat salinity.

AIM To throw as many tennis balls into the bucket as possible.

EQUIPMENT
- bucket
- bucket of tennis balls

INSTRUCTIONS
1. Students stand in single file behind a line and beside the bucket of tennis balls.
2. In turn, they pick up a tennis ball, aim it at the empty bucket and try to get it in. This process simulates the sowing of a seed.
3. After one go, students move to the end of the line. This is repeated until the time is up.
4. A parent helper may need to stand the bucket up if it is knocked over.

SCORING 1 point is scored for every ball that goes into the bucket.