

## Occupations in Agriculture

Many occupations in Ontario were related to, or depend on agriculture. Listed below are jobs that go hand in hand with farming. Can you find them?

Accountant  
 Baker  
 Banker  
 Butcher  
 Chef  
 Chemist  
 Equipment Dealer  
 Grocer  
 Lawyer  
 Manufacturer  
 Mechanic  
 Merchant  
 Milkman  
 Pilot  
 Processor  
 Reporter  
 Scientist  
 Teacher  
 Trucker  
 Veterinarian

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

## Livestock Word Scramble

You may want to ask your parents or a friend to quiz you on the meanings of these words after you have unscrambled them (taken from Alberta's Classroom Agriculture Program).

**rsehd** \_\_\_\_\_

**rlaocmblar** \_\_\_\_\_

**irdya** \_\_\_\_\_

**mbla** \_\_\_\_\_

**debsre** \_\_\_\_\_

**tcaetl** \_\_\_\_\_

**rsaacsc** \_\_\_\_\_

**doeflet** \_\_\_\_\_

**puurnod** \_\_\_\_\_

**sarupet** \_\_\_\_\_

**nziggar** \_\_\_\_\_

**cnhinagr** \_\_\_\_\_

## Beef Product Uses

A 454 kg (1000lb.) steer yields 197 kg (435 lbs.) of retail beef.  
HOW IS THE REST OF THE ANIMAL USED?

Bones/ Hooves	Hide/ Hair	Glands	Tallow (Fat)



Below is a list of inedible by-products that come from a beef animal. By-products are a way for the beef industry to reduce, reuse and recycle. Ontario farmers, the producers who raise the animals, are also a part of your community, and use meat products every day. They are committed to supplying safe, nutritious food and products of high quality. A look around our homes, our school, or the gym will show that beef, and its products are almost everywhere!

- Copy the name of each product into one of the 4 columns above depending on what part of the animal you think it comes from.

<ul style="list-style-type: none"> <li>• Gloves</li> <li>• Glue</li> <li>• Felt</li> <li>• Sandpaper</li> <li>• Industrial cleaners</li> <li>• Fertilizer</li> <li>• Candles</li> <li>• Football</li> <li>• Toothpaste</li> </ul>	<ul style="list-style-type: none"> <li>• Adhesives</li> <li>• Crayons</li> <li>• Artists' brushes</li> <li>• Lipstick</li> <li>• Leather sports equipment</li> <li>• Buttons</li> <li>• Shampoo/ Soap</li> <li>• Teacup</li> <li>• Chewing Gum</li> </ul>	<ul style="list-style-type: none"> <li>• Medicines (used in treatment of allergies)</li> <li>• Shortening/ Lard</li> <li>• Gelatin for marshmallows &amp; ice cream</li> <li>• Insulin (treatment for Diabetes)</li> <li>• Heart Valve</li> </ul>
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## Answers for Beef Product Uses Activity

<b>Bones/ Hooves</b>	<b>Hide/ Hair</b>	<b>Glands</b>	<b>Tallow (Fat)</b>
<b>Glue Sandpaper Fertilizer Buttons Gelatin for marshmallows &amp; ice cream Teacup</b>	<b>Gloves Felt Artists' brushes Leather sports equipment Football</b>	<b>Insulin (treatment for Diabetes) Medicines (used in treatment of allergies) Heart Valve Chewing Gum</b>	<b>Soap Industrial Cleaners Candles Adhesives Crayons Lipstick Shortening/ Lard Toothpaste Shampoo/ Soap</b>



This activity could also be done for pigs. Up to 70% of a pig can be used once it has been slaughtered. This is because pigs have one stomach instead of four and the feet and skin are left on the animal. There are also more edible parts to a pig than there are on a cow.

## **The Original Recycling Program - [www.ontariopork.on.ca](http://www.ontariopork.on.ca)**

### **Messages:**

1. Farmers care about the environment: their livelihood depends on it.
2. Farming is the original recycling program.

**Time required:** 5 - 20 minutes

**Target Audience:** Kindergarten to Grade 3

### **Materials needed:**

1. Blue recycling box
2. Green compost box (Loblaws green boxes work well)
3. Various household recycling items such as: pop can, newspaper, cardboard box, plastic bottle.
4. Various compostable items: egg shells, banana peel, coffee grinds
5. One sow, 20 piglets (pictures or toys)
6. Manure or fertilizer (picture or small bag full)
7. Corn and/or soybeans (feed samples)
8. Corn and/or soybean products for people: can of corn, soybean oil, etc.
9. Pork product (pictures or real)
10. Houseplant

### **Technique:**

1. "Let's talk about recycling. Why do we recycle some of our garbage?"
2. As a motivator, have the kids decide where the various items selected should go. Pick different children to put the items where they belong (e.g. a banana peel goes in a compost, a pop can goes in a recycling container etc.)
3. Expand their thinking and ask them what else is recycled in their day to day lives. (e.g. composts, plastics, hand-me-down clothing)
4. How is farming the original recycling program? Let's find out.
5. Pick different children to place the items from the nutrient cycle and the circle of life chart in order.

pigs ⊃ manure ⊃ crops ⊃ animal feeds ⊃ pigs & other animals

pigs ⊃ pork ⊃ people

pigs ⊃ manure ⊃ crops ⊃ people

pigs ⊃ manure ⊃ flowers & vegetables ⊃ people

### **How to make this activity great:**

- ✓ How much does the manure produced by one pig weigh?
- ✓ How much manure would that pig produce in one year?
- ✓ How much does a pig eat?
- What daily cycles take place in their classrooms?

## **Bread Experiments**

1. Students can work with grains (different types) and be given the challenge of finding a way to grind the grain into flour. They may use any device that they can think of but should be ready to explain why they chose their method and what the advantages and disadvantages were. This provides an opportunity to look at grinding of flour historically and investigating different tools/ machines that were used for this purpose. A hand mill could be introduced to the students. A coffee grinder also works.
2. Use the ensuing flour to make a recipe which the students can taste. Compare the flour which you have made with that bought at the store. Explain the differences.
3. Use a sifter to separate the flour from the bran and examine the differences. Look at the different types of breads (100% wheat, 60% whole wheat) and how they are made.
4. Taste and compare the different breads of the world. Look and compare them with respect to physical properties. Try to infer and research why they might be different.

## **Yeast Gas Experiment**

### ***Materials:***

- 1 package dry yeast
- ½ cup sugar/ handful of sugar
- Warm water (half fill your container)
- Big round balloon
- Soda bottle

### ***Method:***

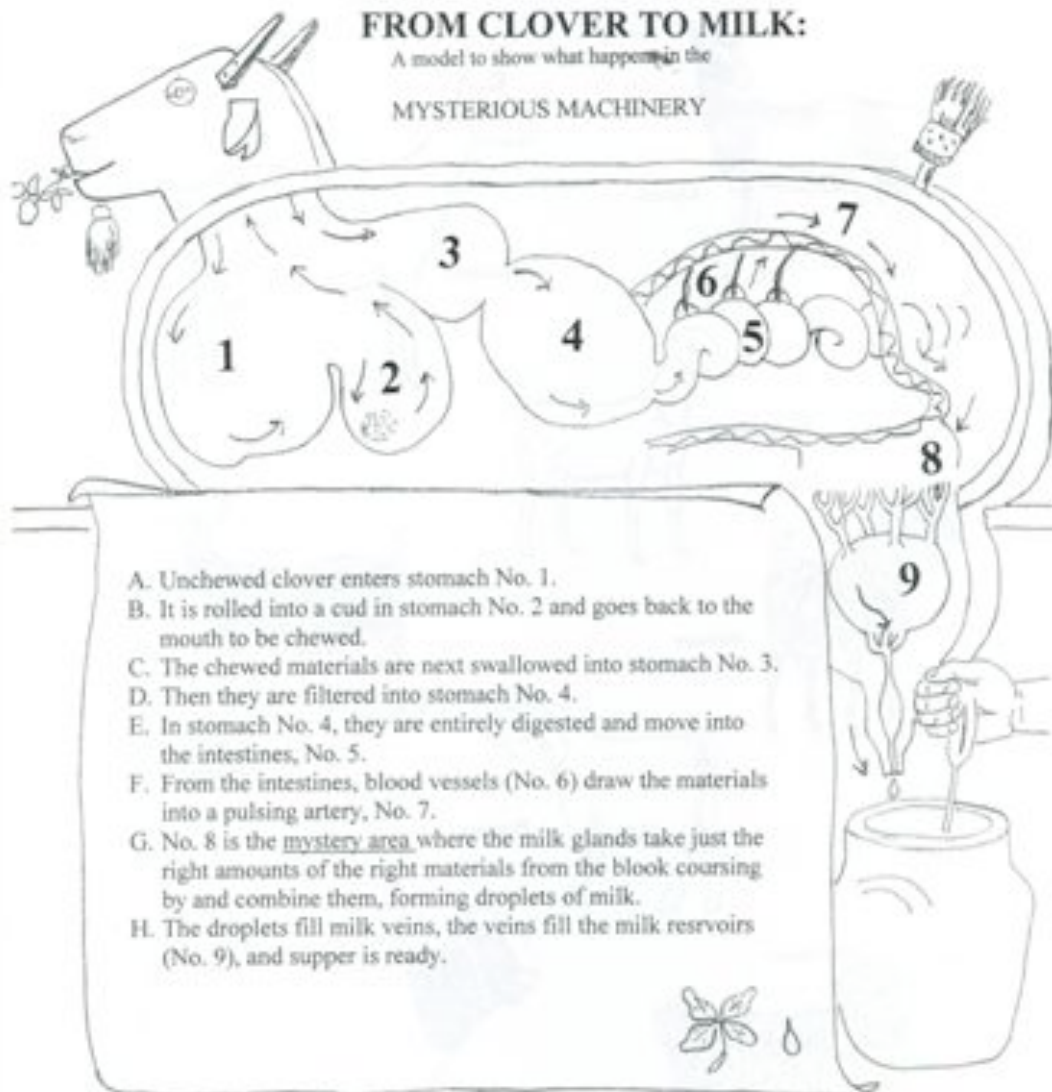
1. Mix sugar and yeast well with warm water in the bottle. Make sure the sugar has dissolved.
2. Put the balloon on top of the bottle and wait 15 minutes to half an hour to see results.

**Note:** This experiment can be done with or without sugar and then perform a comparison between the two experiments. What is the purpose of the sugar in the experiment?

**Questions:** What will you see? What will happen to the balloon? Why? How long does the solution bubble? Will there be enough gas to break the balloon? Why do you have to use warm water and not hot water?

## Egg Experiments

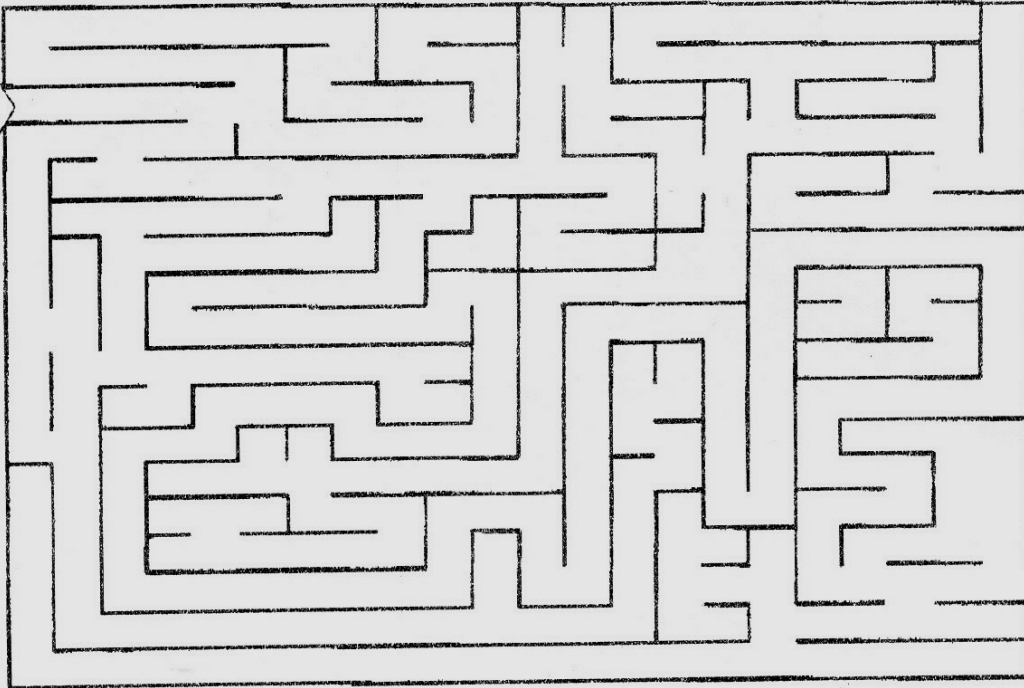
1. Gently remove about 1/3 from the narrow end of four boiled eggs. Be certain the edges are smooth. Place the egg shell domes on a smooth surface in a rectangle slightly smaller than a book you will later set on top of the four domes. Continue to gently add more books, one at a time. What happens?
2. Leave an egg in vinegar for a few days. What happens?
3. Compare:
  - i. Drop a fresh egg into a glass of lukewarm water. What happens?
  - ii. Drop a fresh egg into a glass of lukewarm water to which a handful of salt has been added. What happens?



# Fire Maze

Get to the extinguisher to put out the fire.

Enter Here



## One Day on the Farm - A picture story

A / **Start** a . When find a **I** day was  
 by the , w + out of a . M +  
 was in the + ing **2** put it **OUT**. **"GET OUT**  
**4 UR HURT!"** He **4** -pin! The + Ted  
 + cause of + less + . **U** should always

+ with **Answers**

A match can start a fire. When I find a fire, I shout 'FIRE!' One day I was walking by the barn when I saw fire shooting out of a window. My pop was in the barn helping to put it out. I shouted "Get out before you are hurt". He ran for safety. The fire started because of carelessness. You should always be careful with fire.

# Tractor Talk Find-A-Word

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

Find the words in the word list of things that can cause trouble or an accident to a tractor and operator on the farm. Look across, down, diagonally, forwards and backwards. Circle the words.

## Word List

ROLLOVER  
 POWER TAKE OFF  
 BRAKES  
 REFUELING  
 UPHILL  
 DITCHES  
 SPEED  
 RIDERS  
 HIGHWAYS  
 OPERATOR

# 55 Words to think about

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

## Word List

<b>A</b> ACCIDENT ANIMALS AXES	<b>H</b> HAZARD HELMET HELP HILL	<b>S</b> SAFETY SAVE SAWS SHOCK SLIP SMOKING
<b>B</b> BRUISES BURN	<b>I</b> INJURY INSPECTION INSULATION	<b>T</b> TERRAIN TRACTORS
<b>C</b> CHAIN SAW CHEMICALS COLLISION COMBINE COMBUSTION CUTS	<b>L</b> LABEL LAWN MOWER LAWS LOFT	<b>V - W - Y</b> VISES WAGON WIRE YIELD
<b>E</b> EXPLOSIVES EXTINGUISH	<b>M</b> MAINTENANCE	
<b>F</b> FALL FENCE FIRE FIREARM	<b>P</b> PESTICIDE PICKERS PLANTS PLOW POISON	
<b>G - H</b> GAS GREASE GUARD GULLY HARVEST	<b>R</b> RABIES ROLL ROTTEN RULES	



## Water – Word Search

Find the water-related words in this puzzle. Learn how to spell all the words and look up the definition for each.

air	groundwater	rain	transpiration
basin	hydrologic	recycle	use
condensation	ice	river	vapour
disperse	percolate	saturate	vital
dry	pour	snow	
evaporation	precipitation	tap	

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

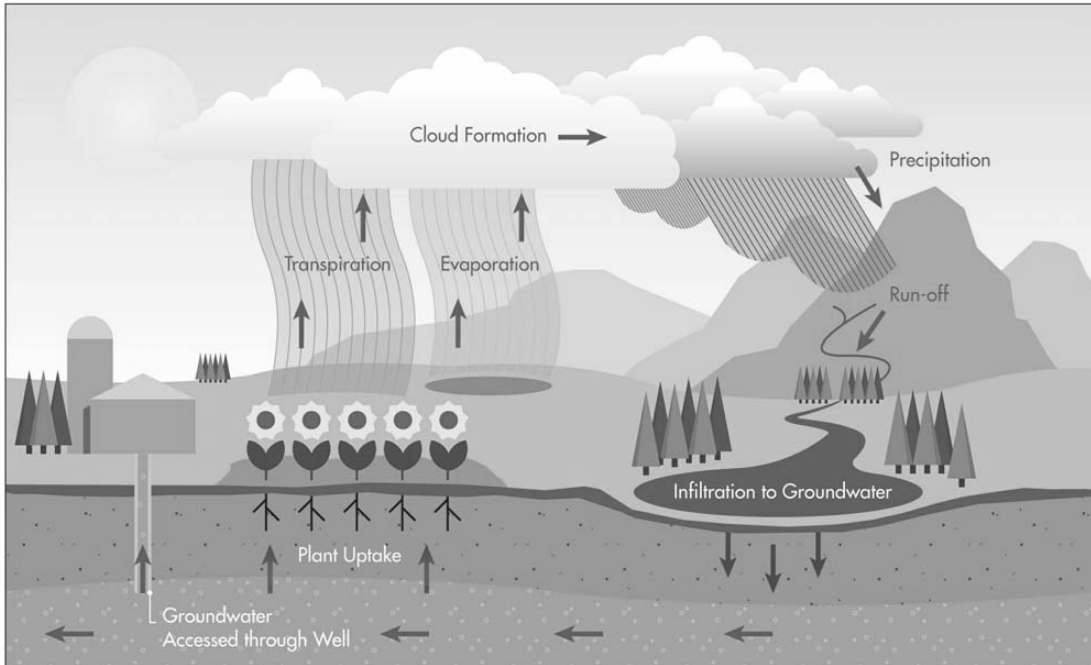
## Water Words - Match the Meanings

- |                  |     |                                                        |
|------------------|-----|--------------------------------------------------------|
| 1. evaporation   | ( ) | to filter down – how surface water reaches groundwater |
| 2. condensation  | ( ) | thoroughly wet, unable to hold any more liquid         |
| 3. precipitation | ( ) | method by which plants send water into the atmosphere  |
| 4. transpiration | ( ) | water vapour cools and changes to water droplets       |
| 5. saturated     | ( ) | process where liquid turns to a vapour                 |
| 6. percolate     | ( ) | water falling as rain, hail, sleet or snow             |

- |                |     |                                                            |
|----------------|-----|------------------------------------------------------------|
| 1. aquifer     | ( ) | gas formed when a liquid such as water is heated           |
| 2. vapour      | ( ) | to make dirty, pollute                                     |
| 3. erosion     | ( ) | safe to drink                                              |
| 4. pesticides  | ( ) | wearing down or washing away of soil by water, wind or ice |
| 5. potable     | ( ) | chemicals for killing insects and weeds                    |
| 6. contaminate | ( ) | underground rocks and soil where water collects            |

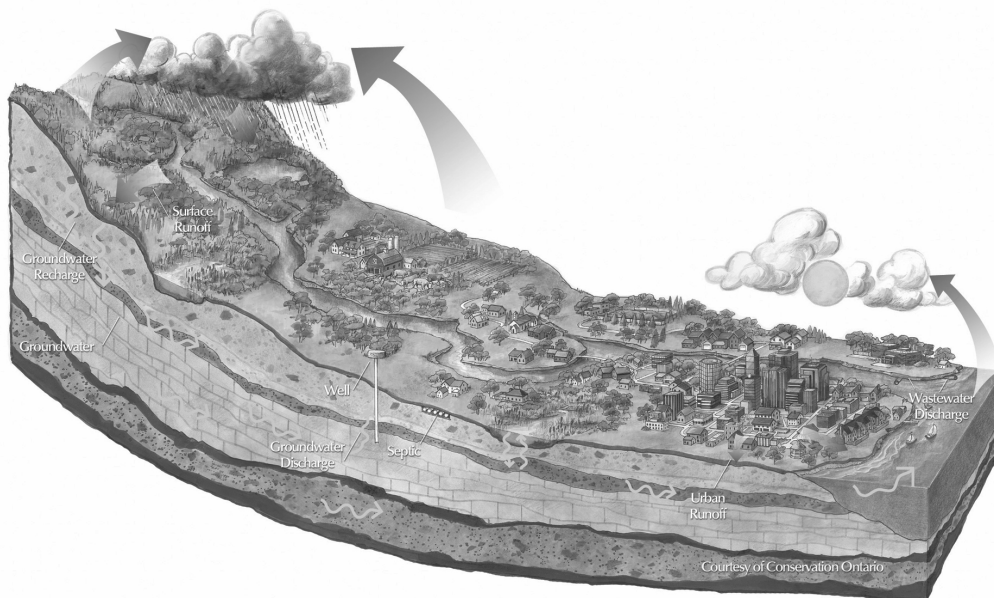
- |                     |     |                                                        |
|---------------------|-----|--------------------------------------------------------|
| 1. sediment         | ( ) | exchange of water between the earth and the atmosphere |
| 2. aquatic          | ( ) | to clean                                               |
| 3. purify           | ( ) | water that is underground                              |
| 4. hydrologic cycle | ( ) | growing in or living in water                          |
| 5. groundwater      | ( ) | a long period without significant precipitation        |
| 6. drought          | ( ) | matter that settles to the bottom of a liquid          |

**Water or Hydrologic Cycle** – Water is lost from the earth to the atmosphere through evaporation or transpiration. It then condenses and precipitates back in the form of rain, snow, hail, dew, frost or sleet.



Graphic courtesy of Pollution Probe

**Groundwater** – Most of us depend on groundwater for drinking and many other needs. Contamination of groundwater can occur from a number of sources (e.g. the earth's surface, water bodies or contaminated wells) and can flow underground, causing contamination of wells a significant distance from the source of contaminants.



Graphic courtesy of Conservation Ontario