PARKHURST PRIMARY SCHOOL

"Great oaks from little acorns will grow"

Term 2 Grade 6: Natural Science Worksheet

Topic: Mixtures and water resources. (Notes)

1. Introduction.

Every day, South African rivers are being poisoned by pollution. Water pollution is anything that is put into a river, stream, lake or ocean that harms the plants, animals and fish that live there. Our water supply gets polluted by everything we put on or in the ground, as well as in the air. Clean water is water that is not polluted or contaminated by anything.

Polluted beach.

Dead fish in polluted water

Pollutants are substances which are not found naturally in water and can harm humans and the environment.

We have seen that many substances can mix with, or dissolve in, water. Therefore, water can be polluted in many ways, for example, by:

- ***insoluble pollutants*** such as oil, plastics, tyres, tins, glass and toilet waste (sewerage).
- ***soluble substances*** such as soaps, fertilizers, insecticides, acids and other poisons.
- ***micro-organisms*** (germs) from sewerage which can cause water-borne diseases such as diarrhoea.

Contaminated water

When we pollute rivers, lakes and wetlands, we are destroying the ecosystems that supply us with water.

Rivers and dams in South Africa are important water resources. Without rivers and dams we would not have a water supply, and therefore, no water to drink, no water for industry and no water to grow crops.

2. How our water supply becomes polluted?

In many rural areas, there are no toilets and often sewerage pipes leak, so the sewerage ends up in rivers and streams. People not only take their drinking water from these sources but also wash themselves and their clothes in the same water. Children play and swim in the water and animals contaminate the water. This can cause serious illnesses such as cholera and typhoid for anyone who drinks the contaminated water.

Waste Water Flowing into a River

Metal and chemical waste from factories and industry get into our rivers and oceans. Pollutants from industry include asbestos, lead, mercury, nitrates, phosphates, sulphur, oils and petrochemicals.

In our homes, if we pour harmful chemicals into our drains, sinks and toilets, or use pesticides in our gardens, these pollutants can end up in our rivers.

Harmful Chemicals Deposited into River

Dirty Water Discharging into River

When it rains, chemicals, oil and rubbish, wash into drainage systems, enter rivers and eventually reach the ocean. Leaves and grass cuttings, swimming pool chemicals, soaps and detergents, litter, animal waste, dirt, oil and other chemicals from cars, pesticides and fertilisers, can all find their ways into the water system and cause pollution.

Farmers pollute water by using pesticides and chemicals to spray crops. These can end up in the water supply. Fertilisers used in farming kill fish and marine plants and can disrupt the whole marine ecosystem. Fertilisers can also cause algae to produce harmful toxins.

Pesticides Being Used

Spraying Fertiliser

Air pollution also causes water pollution, through acid rain which ends up in our marine habitats.

Oil spills pollute our oceans. They are a catastrophe to marine wildlife, as the oil cannot dissolve in the water and gets caught in the feathers of birds, stopping them from flying. The oil also suffocates and kills fish, plants and other marine animals.

Bird covered in oil

Nuclear waste can get into our water system from nuclear power stations, as well as from medical and scientific processes that use radioactive materials.

Nuclear Power Station

Marine dumping is putting litter into the sea. This litter gets caught on marine animals and can kill them. Rubbish such as cigarette lighters and toothbrushes have been found in the stomachs of dead seabirds.

Plastic bag in ocean

Water pollution affects not only our health but also destroys our environment. Only 1% of all water on Earth is available for drinking and every time we pollute our water supply, the water then has to be purified and this is an expensive process. So we can see why it is so important not to pollute water.

3. <u>What can you do?</u>

- Do not throw litter in the street.
- Do not pour pollutants down the drain.
- Avoid using pesticides, chemicals and fertilisers.
- Help out in your local community with clean-up campaigns.

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"Great oaks from little acorns will grow"

Term 2 Grade 6: Natural Science Worksheet

Topic: Mixtures and water resources. (Notes)

1. What is a wetland?

A wetland is a low lying area of a catchment where the soil is waterlogged or saturated by a lot of water. ***Permanent wetlands*** are wet all the time, but some wetlands are not always wet. A ***temporary wetland*** remains wet for 1 to 4 months a year and a ***seasonal wetland*** is only wet in the rainy season of the area that it is located in.

Wetland

A wetland is a complex ecosystem which supports a wealth of animal and plant life. The variety of animals found in wetlands includes amphibians, reptiles, birds, insects and mammals.

Wetlands include swamps, _oodplains, lakes, marshes and bogs and covers a range of inland and coastal habitats, such as swamps in forests, river banks and estuaries that are linked by rivers and streams.

2. Where are wetlands found?

Wetlands are usually found in gently sloping areas with a high water table.

Most of the world's wetlands are located in temperate zones. This means that they are midway between the North and South Pole and the Equator. They have warm summers and cold winters, without extremes of temperatures. Wetlands are also found in the tropics (around the Equator) and always experience warm weather. The largest wetland in the world is found in Pantanal, bordering both Bolivia and Paraguay in South America.

The amount of rainfall in a wetland depends on its location. Some wetlands in Scotland, Western Ireland and Wales receive about 150 cm of rain a year. Wetlands in Southern Asia, where heavy rains occur, receive up to 1000 cm of rain per year. In some areas of North America, wetlands receive as little as 18 cm of rainfall per year.

Flooded wetland

3. Uses of wetlands.

Wetlands have many important uses, including:

- Grazing for wildlife and cattle.
- Provision of materials such as reeds used in construction and handicrafts.
- Fishing – wetlands provide a food source which many people depend on as their staple diet and source of protein.
- Cultivation of crops which can be grown in waterlogged conditions, for example, rice.
- A water source for irrigation of crops, as well as domestic use and livestock.
- Treating polluted wastewater – artificial wetlands can be created to treat wastewater.
- Recreation and wildlife appreciation – wetlands are usually areas of natural beauty that support diverse wildlife and so are sometimes turned into nature reserves and game parks.
- Over 6 million people in South Africa do not have access to a safe supply of drinking water, so they often depend on wetlands for this supply.

4. The importance of wetlands

Wetlands play a very important role in cleaning our water supply. Wetlands trap sediments, nutrients and disease-causing bacteria, so help to purify water. Water is filtered as it flows through a wetland by plants that trap and remove soluble and insoluble substances.

Wetlands act as huge water sponges and can, therefore, store water, by holding it back in summer and releasing it in winter. In this way, wetlands help to replace groundwater.

Wetlands play a very important role in maintaining biodiversity, as an abundant variety of species are found in wetlands. Wetlands are considered the most biologically diverse ecosystem and provide a vital habitat, as well as a breeding site for wildlife.

In South Africa, several species of endemic birds, such as the Cape Shoveller and the Wattled Crane are found in wetlands. Wetlands are also visited by migratory birds which migrate to the northern hemisphere during winter months.

A variety of plants that have adapted to a water environment, such as reeds, sedges and bulrushes and the Arum Lily, grow in wetlands. Plants that live in wetlands are known as hydrophytes (water-loving plants).

Wetlands play a vital role in the food web of many animals and plants. They also provide oxygen to the soil and water.

Wetlands have a critical role in reducing the impact of climate change because they are able to absorb atmospheric carbon.

Wetlands also reduce the impact of storms and rising sea levels, as well as the severity of floods and droughts by regulating water flow. They help to spread out and slow down moving water because a wetland is usually sloped and has dense vegetation, so flood water slows down when it enters a wetland. During times of drought, water from wetland areas can be diverted to other areas where it is needed to keep rivers flowing and thus enable wildlife to survive.

Despite their importance, wetlands are still being drained or destroyed by the planting of crops and alien vegetation, forestry, disposal of waste, building dams, overgrazing, mining and by reclaiming land for development. 50% of the wetlands in South Africa have been destroyed so far.

Climate change is having a major impact and results in drainage and drying up of wetlands. This can lead to the collapse of the food chain and the possible extinction of species that live in this ecosystem.

Destruction of wetlands results in:

- Destruction of the habitat of birds, fish and animals – many of which are indigenous.
- Removal of natural filters which take out chemicals and other pollutants in water.
- Destruction of natural dams which can lead to flooding.
- Reduction of water quality.
- Less reliable water sources.

The South African government, through the Department of Environmental Affairs and Tourism, is supporting the conservation and rehabilitation of wetlands, through the ***Working for Wetlands*** programme.

Other international organisations, such as Wetlands International are key to halting the destruction of wetlands.

South Africa is a member of RAMSAR which is a global treaty that deals with the conservation of wetlands. This organisation has 119 member countries and just under 1000 wetlands throughout the world have been designated as RAMSAR sites, of which there are 23 in South Africa.

About 10% of wetlands in South Africa are fully protected, with another 8% partly protected.

The ***Greater St Lucia Wetlands Park*** is one of the protected wetlands in South Africa. It is the oldest proclaimed nature reserve in South Africa.

St Lucia has a sub-tropical climate with hot summers and mild winters. 60% of the rainfall is in summer, with the wettest period being from January to March. The strong north wind and the high cirrus clouds are features in the region and are associated with the rainfall.

St Lucia has the highest vegetated sand dunes in Africa. These deflect the warm, moist air from the Indian Ocean and cause condensation and rainfall.

PARKHURST PRIMARY SCHOOL

"Great oaks from little acorns will grow"

Term 2 Grade 6: Natural Science Worksheet

Topic: Mixtures and water resources. (Exercises)

Exercise 1: Water pollution.

Look at the pictures below and answer the questions that follow.

1. Where can water pollution occur?

   _____

2. What pollutants can you see in the photos?

   _____

3. List two main types of water pollutants in addition to bacteria and give two examples of each type.

Type of water pollutant	Examples
1.	
2.	

4. What other pollutants might be in water, apart from the ones that you can see?

   _____

5. How do soluble pollutants get into the water?

   _____

   _____

   _____

6. How do insoluble pollutants get into the water?

   _____

   _____

   _____

7. How does bacteria from sewerage get into water?

_____

_____

8. What is the negative impact of water pollution?

_____

_____

9. Who causes water pollution?

_____

_____

10. What is clean water?

_____

_____

Exercise 2: Wetlands

Answer the questions below.

1. What is a wetland?

_____

_____

2. In what type of environment are most of the world's wetlands found?

_____

_____

3. List three examples of plants found in wetlands.

_____

_____

_____

4. List three examples of animals found in wetlands.

_____

_____

_____

5. List three ways that wetlands are being destroyed.

_____

_____

_____

6. List three uses of wetlands.

_____

_____

_____

7. How are wetlands being affected by climate change?

_____

_____

8. What is RAMSAR?

_____

_____

9. How many RAMSAR sites does South Africa have?

_____

PARKHURST PRIMARY SCHOOL

"Great oaks from little acorns will grow"

education
Department: Education
GAUTENG PROVINCE

Term 2 Grade 6: Natural Science Worksheet

Topic: Solutions and dissolving. (Exercises)

Exercise 1: Solutions and Mixtures.

1. Identify if the following mixtures are also solutions. Answer Yes or No.

Mixtures	Solution? Yes or No?
a. Sugar and water	
b. Sand and water	
c. Salt and water	
d. Oil and water	
e. Oil and vinegar	
f. Vinegar and water	
g. Sand and salt	

2. Identify the solute and the solvent in the solutions listed below.

Solution	Solvent	Solute
a. Sugar and water	Water	Sugar
b. Sparkling water		
c. Cup of black coffee		
d. Sea water		
e. Vinegar		
f. Custard		

3. Answer True or False to the following statements.

Statement	Answer
a. A solute dissolves slower in a warm solution.	a.
b. A solute dissolves faster when shaken or stirred.	b.
c. A solute dissolves slower if the grain sizes are large.	c.

Exercise 2: Analysing Solutions.

Answer the questions below.

1. Give an example of the solutions below.

Solution	Example
a. solid solute and liquid solvent.	a.
b. liquid solute and liquid solvent.	b.
c. gas solute and liquid solvent.	c.

2. Look at the photo of a cup of tea below (sugar has been added) and answer the questions that follow.

a. Is the tea a mixture, a solution or both? _____

b. What is in the mixture? _____

c. What is the solvent? _____

d. What is the solute? _____

e. What does the rate of dissolving mean? _____

_____

f. List three things you can do to make the sugar dissolve quickly.

_____

_____

_____

<u>Exercise 3: Solutions match up.</u>

Use the words from below and match them to the correct statement.

Stir	Solvent	Decrease	Evaporation	Insoluble
Solution	Soluble	Increase	Saturated	Solute

Statement	Word
1. When a solid cannot dissolve any more in a solution.	
2. A substance that does not dissolve in a liquid.	
3. A substance that dissolves in a liquid.	
4. Method used to reverse a soluble solution.	
5. The substance in the smallest quantity in a solution which dissolves in the solvent.	
6. The substance in the largest quantity in a solution.	
7. We can do this to tea to make the sugar dissolve quickly.	
8. A mixture of a solvent and a solute.	

9. If we raise the temperature of the solution, the rate of dissolving will do this.	
10. If we use sugar lumps instead of castor sugar, the rate of dissolving will do this.	

Exercise 4: Soluble or Insoluble?

Answer the following questions.

1. Complete the table below to indicate whether the substance is soluble or insoluble in water.

Substance	Soluble or Insoluble?
a. sugar	
b. salt	
c. flour	
d. sand	
e. mealie meal	
f. maize flour	
g. samp	
h. curry powder	
i. custard powder	

2. What happens to the particles of a solute when it dissolves?

_____

_____

Exercise 5: Will it dissolve?

Read the statements below and decide if they are ***true*** or ***false***.

Statement	True or False?
1. Sugar does not dissolve in tea.	
2. Sugar will not dissolve in milk.	
3. Sand will dissolve in cold water.	
4. Sand will dissolve in hot water.	
5. Sugar and sand are a solution.	
6. Oil dissolves in water.	
7. Oil dissolves in vinegar.	
8. Sugar dissolves in lemon juice.	
9. Salt dissolves in water.	
10. Sugar dissolves in tea.	

PARKHURST PRIMARY SCHOOL

"Great oaks from little acorns will grow"

Term 2 Grade 6: Natural Science Worksheet

Topic: Solutions and Dissolving. (Notes)

1. Solutions.

A solution is a mixture, but not all mixtures are solutions.

A ***solution*** is a combination of two or more substances in an even distribution. Solutions are uniform in appearance and the solid cannot be seen once it has been mixed. The solution looks like the substance has disappeared.

A solution can be a mixture of two liquids, for example, water and bleach, or a liquid and a solid, for example, sugar and water or salt and water.

Salt + Water = Saltwater Solution

Dissolving takes place when a substance dissolves in a liquid and seems to disappear, for example, dissolving sugar or salt in water. The solid is still present in the solution but has been broken down into smaller particles which are invisible to the naked eye. Dissolving is a temporary change, as the change can usually be reversed.

When sugar dissolves in water, the solution is sugar water, which is a mixture of a solvent and a solute. The sugar is called the ***solute*** as it is the substance being dissolved. The water is the ***solvent***, which is the substance in which the solute is dissolved. The solvent and the solute together are called the ***solution***.

In a solution of water and salt, the salt is the solute and the water is the solvent. The solvent is usually the substance in the largest quantity. The solute is the substance that is present in the smallest quantity.

When substances dissolve, the solute particles become dispersed in the spaces between the solvent particles. These substances cannot be separated by sieving, filtering, hand sorting or

settling and decanting. Some solutes can be recovered (separated) by evaporating the solvent, for example, recovering salt from seawater. Seawater is a solution of salt and water.

Salt from the Sea.

Dissolving is different from melting, as it involves two materials being mixed together. ***Melting*** involves heating one material to change its state from a solid to a liquid, for example, melting ice or chocolate.

Painkiller dissolving in water

Melting Ice

All materials can be classified according to whether they are soluble or insoluble in various solvents.

Solubility is the ability of a solid to dissolve in a liquid.

A solid (solute) that dissolves in liquid (solvent) is ***soluble***. When you add a soluble substance to a liquid, it will seem to disappear, but will still be there. You can reverse this solution by evaporating the liquid to leave the solid behind.

Some solids cannot dissolve in liquid. These are called ***insoluble*** substances. They will float or sink in the liquid.

Plastic is Insoluble – It Floats

Once dissolved in a solution, the solute cannot be seen, but the solution might take on a ‘glassy’ or cloudy appearance. It does not separate out, however.

In a mixture, as opposed to a solution, the solid can be seen in the liquid, which can appear cloudy. The solid settles in the mixture and forms a layer at the bottom of the container, for example, a mixture of sand and water.

Water is not the only solvent. Other liquids also act as solvents. Some substances which cannot dissolve in water can dissolve in other substances. For example, enamel paint dissolves in turpentine, but not in water. Wax cannot dissolve in water but dissolves in methylated spirits.

Some solids can dissolve in liquids in any proportion or amount. However, salt dissolved in water, for example, will reach a level of saturation where it cannot dissolve any more. The solution is then known as a ***saturated solution***.

A ***saturated solution*** is when no more solute can dissolve in the given amount of the solvent.

2. <u>Factors affecting solubility.</u>

Some substances are more soluble than others. The ***rate of dissolving*** means how quickly a solute will dissolve in a solvent.

Solubility can be affected by various factors as described below.

1. <u>Temperature of the solution</u>
   The temperature of the solution affects the solubility of the solute. When water is ***hot***, the substance ***dissolves quicker*** than in cold water. For example, sugar dissolves faster in hot water than in cold water.

2. <u>Grain of the solute</u>
   The size of the grain of the solute will affect the rate of dissolving. ***Granulated*** or castor sugar ***dissolves faster*** in water than cubes of sugar, as it has smaller grains and therefore a larger surface area. Breaking a solute into smaller pieces decreases the size of the grains and increases the solute's surface area, helping it to dissolve quickly.

Granulated sugar

Sugar cubes

3. <u>Stirring or shaking</u>
   Stirring or shaking a liquid and a solid solute also helps to bring the solvent into contact with the solute, thus increasing the rate of solution.

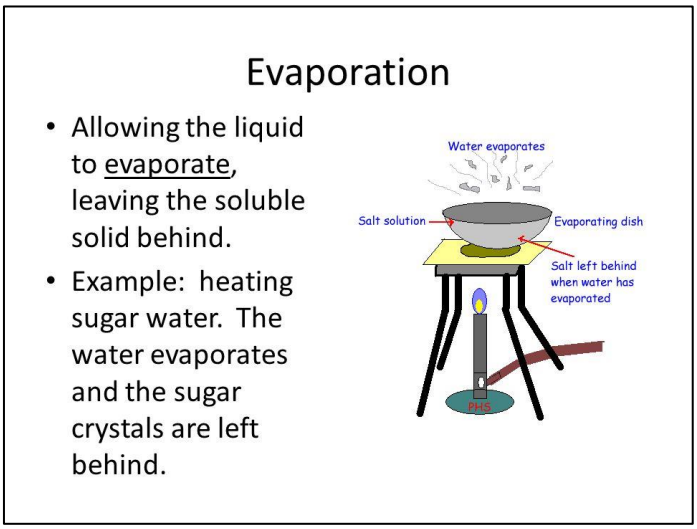
Stirring coffee

3. **<u>Separating solutions</u>**

The substances in solutions cannot be separated in the same way as mixtures can, i.e., by hand sorting, sieving, filtering, settling and decanting. However, a solution can be separated by ***evaporation***.

Evaporation is used to separate solutions which consist of a soluble solid (solute) and a liquid (solvent), for example, salt and water. When heated, the liquid changes into water vapour (gas), removing the water and leaving the solid solute remaining.

So by heating a solution of salt and water (or leaving it in the Sun), the water evaporates and leaves the solute, the salt as residue.



To summarise:

In a solution:

- The solute cannot be seen as the particles of the solute and solvent have become mixed.
- The solution cannot be separated by filtering, hand sorting, sieving or decanting.
- The solution can only be separated by evaporation, as the liquid evaporates and leaves the solute.

PARKHURST PRIMARY SCHOOL

"Great oaks from little acorns will grow"

Term 2 Grade 6: Natural Science Worksheet

Topic: Processes to purify water. (Notes)

1. Introduction.

A clean supply of water is essential for the survival of humans, as well as animals and plants. According to the World Health Organisation, an estimated 1,1 billion people do not have access to clean, drinking water and 88% of the cases of diarrhoea are due to the consumption of unsafe water and inadequate sanitation.

Although water is freely available in the water cycle, in South Africa and many other parts of the world, it is a precious and often polluted resource. Water has to be stored in dams and purified. Wastewater also has to be treated before it can be put back into the water cycle. All of this is very expensive. Wasting and polluting water increases these costs.

2. Where does our water come from?

In South Africa, water comes from rivers and dams. The Vaal River, for example, supplies water to Johannesburg. The Vaal Dam was built in 1938 and stores water from the Vaal River. This water is transported in pipes to a purification station where it is cleaned and treated so we can drink it.

Vaal Dam during 2010 flooding

When it rains, water flows from mountain streams and rivers, through a pumping station, where it is diverted to a storage dam. The government has built these storage dams to make sure that we get enough water to supply all of our needs. These dams are built across rivers and block the flow of the river, storing the water behind a dam wall. About half of South Africa's rainfall is stored in this way.

In earlier times, small dams were built to irrigate farms. Today, large dams are built to supply domestic and industrial water.

There are over 500 dams in South Africa which help to ensure that there is a water supply in times of drought and also to prevent flooding. When there is little rainfall for a sustained period of time, the dams become empty and water restrictions are put in place.

The biggest dam in South Africa is the Gariep Dam in the Free State, which was built in 1972 and stores water from the Orange River. It is over 100 km long and the dam wall is 88 m high.

3. Purify water

Water purification is the removal of chemicals, contaminants, solids and gases from water. The aim of purification is to produce water that is fit for human consumption. The government sets standards of water quality. You cannot tell by looking at water if it is safe to drink. Even natural spring water is now tested to see if it needs to be treated.

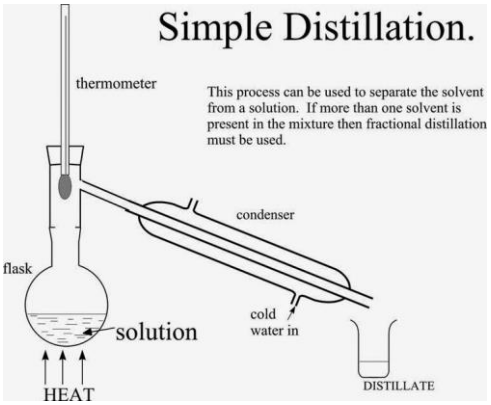
There are various processes that can be used to clean water. These are:

- **Boiling** – High temperatures will kill some micro-organisms in water but do not remove all of the pollutants and chemical toxins. However, the World Health Organisation (WHO) states that boiling and cooling water is enough to kill the dangerous bacteria and recommends that water should be boiled for at least one minute. At higher elevations, (over 2000 m) water should be boiled for up to 3 minutes.

- **Settling and Decanting (Sedimentation)** – This process allows solid particles to settle and then separates the solids from the water by decanting. The germs are not removed from the water.

- **Sieving** – This method separates large solid particles from the water, but does not remove dissolved substances and micro-organisms.

- **Distillation** – In the 1970s, distillation was a popular method of home water purification, involving both evaporation and condensation. Evaporation is the process through which liquid becomes a gas and condensation is the opposite. In the distillation process, water is heated until it evaporates and becomes water vapour. It is then cooled until it condenses back to its liquid form. The contaminants remain behind in the original container. This process removes heavy metals, bacteria and viruses.



- **Filtering** – This is used to separate smaller solid particles. Activated carbon filters can be used, but this is not a sufficient method on its own to treat potential contaminants. Disinfection by chemicals is still required after filtration. Homemade water filters can be made from sand and charcoal, but these are not always completely reliable.

Water purification filter with activated charcoal

- **Chemical disinfecting** – Chemicals, such as chlorine and iodine, are added to contaminated water to kill micro-organisms. Chlorine tablets can be used to treat water in emergency situations.

Portable water purification systems are used by the military, for example, when they need access to drinking water from an untreated source, like a river. The methods of purification used in these systems include a combination of boiling, filtration, activated charcoal absorption, chemical disinfecting, ultraviolet purification, distillation and flocculation.

For hiking and camping enthusiasts, commercial portable water purification and chemical additives, like water purification tablets can be used.

Potable Water Purification System, Used by International Red Cross

4. <u>Commercial water purification</u>

The local municipality is responsible for cleaning water before and after we use it and supplies our household water.

From the storage dam, the water is transported in enormous pipes to a water treatment/purification plant, where treatment and purification of the water take place.

Water purification plant

At the purification plant, a number of methods are used to change the polluted water into clean drinking water.

<u>Step 1 – Screening</u>

When water reaches the plant, it is passed through metal screens (like large sieves) so the large, solid particles, for example, live / dead animals, plants and litter, remain behind.

<u>Step 2 – Coagulation and Flocculation</u>

This process removes any suspended particles by adding chemicals, calcium hydroxide, slaked lime and sodium silica. The slaked lime attracts particles of soil, sand, some of the small living organisms and germs, to form clumps. The flocculation then causes these particles to form heavier particles called '***floc***'. Heavy metals, organic materials, as well as some bacteria and viruses, are removed in this way.

Step 3 – Sedimentation

This is one of the oldest methods of purifying water. The water flows into large tanks and the floc settles to the bottom and forms 'sludge', which is medium-sized pieces of solid matter. The remaining water at the top then contains only small pieces of solid matter.

Sedimentation tank

The sludge is pumped into a disposal site where the solids and liquids are separated. The water is returned to the purification plant and the sludge is pumped into drying beds, where it evaporates and dries out.

Step 4 – Carbonation

After sedimentation, the water flows into a carbonation bay and pure carbon dioxide is added to lower the pH to between 8,0 and 8,4.

Step 5 – Filtration

The water is now passed through filter beds made of sand, gravel and pebbles. Any suspended particles and some bacteria are removed during filtration. The water is clean but germs and bacteria are still present.

Step 6 – Chlorination

This process disinfects the water by adding chlorine to kill any remaining microorganisms.

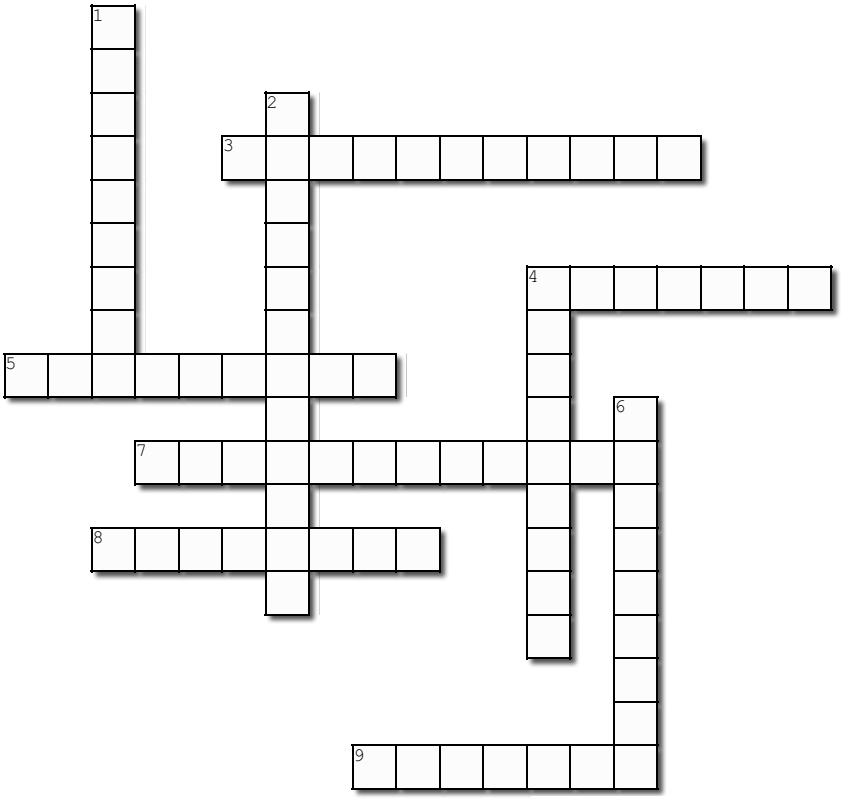
Step 7 – Water Purification

The purification process is now complete and the water is clean and fit to drink.
The water is then pumped in pipes and stored in reservoirs. From these reservoirs, the water is transported to huge storage tanks, where it is kept until it is needed. The purification process is now complete and the water is clean and fit to drink.
When the water is needed, it is transported along mains pipes to cities and then smaller pipes to homes and businesses.

Name:_____

Water Pollution

Complete the crossword puzzle below



Created using the Crossword Maker on TheTeachersCorner.net

Across

3. We are destroying this by polluting our water sources.
4. A serious waterborne disease.
5. This causes pollution when people throw their rubbish in the street.
7. The process that water goes through to make it fit to drink.
8. These living germs cause waterborne diseases.
9. These pollutants dissolve in water.

Down

1. A substance or material that causes pollution.
2. Farmers use these to kill insects on crops and this can pollute the water supply.
4. We use these in our homes and they can pollute the water supply.
6. These are pollutants that do not dissolve in water.