

Water! Water!

How much water?

Name:

Class:

Date:

Use the table below to calculate how much water you use at home. Choose a day when everyone is at home.

Survey date:

Water use activity	How many times we carried out each activity	Volume of water used (litres)	Total volume of water used per day(litres)
Shower		40	
Bath		80	
Washing hair		4	
Cleaning teeth with the tap running		10	
Flushing the toilet		10	
Drinking water per glass		0.25	
Cooking per pan		1	
Washing dishes using a bowl		5	
Washing dishes using a dish washer		40	
Cleaning the house per bucket		5	
Washing clothes in a washing machine		65	
Watering the garden per 10 mins		55	
Grand total			

How much water on average does each person use? Calculate by dividing the total volume of water by the number of people at home.

Water! Water!

Water choices

Only 20 litres a day



In developing countries across the world individuals only have access to 20 litres per day!

Imagine you only have access to 20 litres of water per day. Read your Diamond 9 cards. Each card has a different everyday use of water.

In your group discuss, agree and arrange the cards in the diamond 9 shape.

Your highest priority card goes at the top followed by the next highest priorities down to the lowest priority at the bottom.

In your group discuss the following questions :

1. Which activities are essential?
2. Why are these activities essential?
3. How could you reduce the amount of water you use for each activity?
4. How could you reuse some water?

Your group is now going to produce a poster to show how you would manage with only 20 litres of water per day. Use the answers to the questions above to help you with your poster.

Cut out the cards below to use in your diamond 9 activity

Showering



**Watering
the garden**



**Cleaning
teeth**



**Washing
clothes**



**Cleaning
the house**



**Washing
dishes**



Drinking



Cooking



**Flushing
the toilet**



Water! Water!

Saving water

Name:

Class:

Date:

Research methods for reducing water use at home. You could use the following outline table to summarise your ideas.

Water use	How will you reduce the use of water in each activity?	The water saving you will make per day
Having a bath	Have a shower instead.	Around 40 litres.

When you have recorded as many activities as you can calculate the total saving you will make per day. How much is this in a week?

Water! Water!

Cleaning water

Name:

Class:

Date:

Cleaning river water

One of the problems with the water collected from a river is that it may not be clean. And even if it looks clean there may be bacteria and other disease-causing organisms in it!

1 in 6 people in the world do not have access to clean water. What problems may this cause for them and for us?



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What are your two best ideas for killing any bacteria in the water?

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Water! Water!

Chingondole School

Study the information below from people at Chingondole School.



"Before the project we were forced to fetch water with our daughters in 25 litre containers from 2 kilometres away three times a day. We spent more time fetching water and leaving very little time to do anything else."

A mother of one of the students



"We now have piped water at the school and we no longer have to walk long distances when we feel thirsty during school days. The water is safe to drink and we can now wash our hands after using the toilets."

Anna, a pupil at the school



"The situation has now improved and the students have toilets to use during lessons. Before they used to go behind nearby bushes. We are making the children more of hygiene practices such as washing hands after going to the toilet and drinking safe water. There number of students is growing and there are more girls."

A school teacher

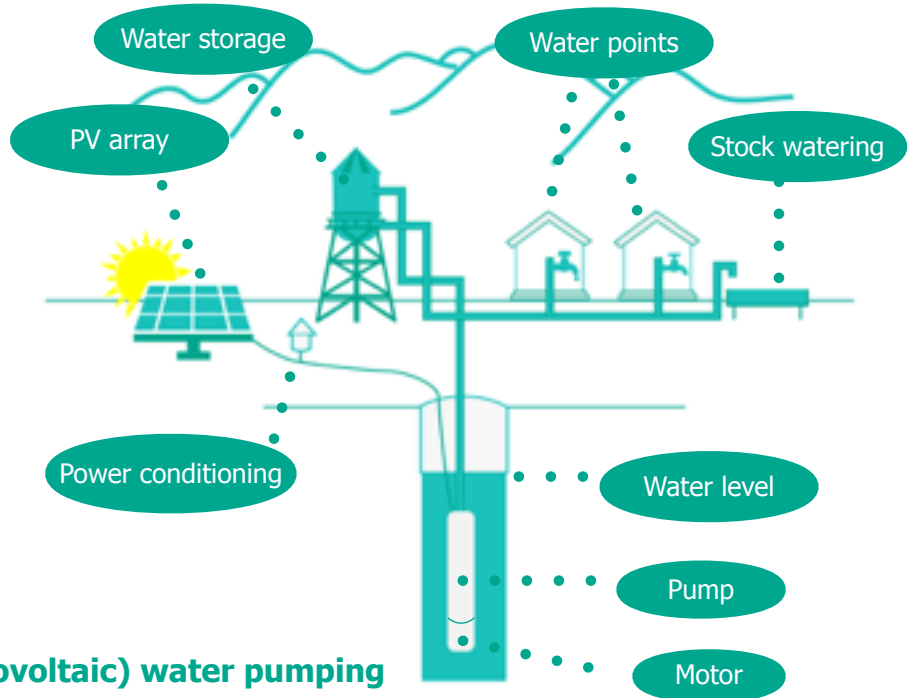


"The school children used to walk distances of up to one kilometre just to get drinking water. This used to disrupt lessons. The school is the only one in the district with this innovation and the children are now motivated to come to school. It is also likely to attract more qualified teachers to the school and increase our attendance figures"

The school head teacher



Solar water pump



Solar (photovoltaic) water pumping

Look at the diagram of the solar powered pump.

1. Describe how the pump works and how it could benefit the communities.

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Water! Water!

Water can kill

Name:

Class:

Date:

Find out about three water borne diseases and add your ideas to the table below.

Name of disease		What causes it?	
How many people does it kill each year?		Where is it found?	
How does it affect the body?			
How can the disease be prevented?			

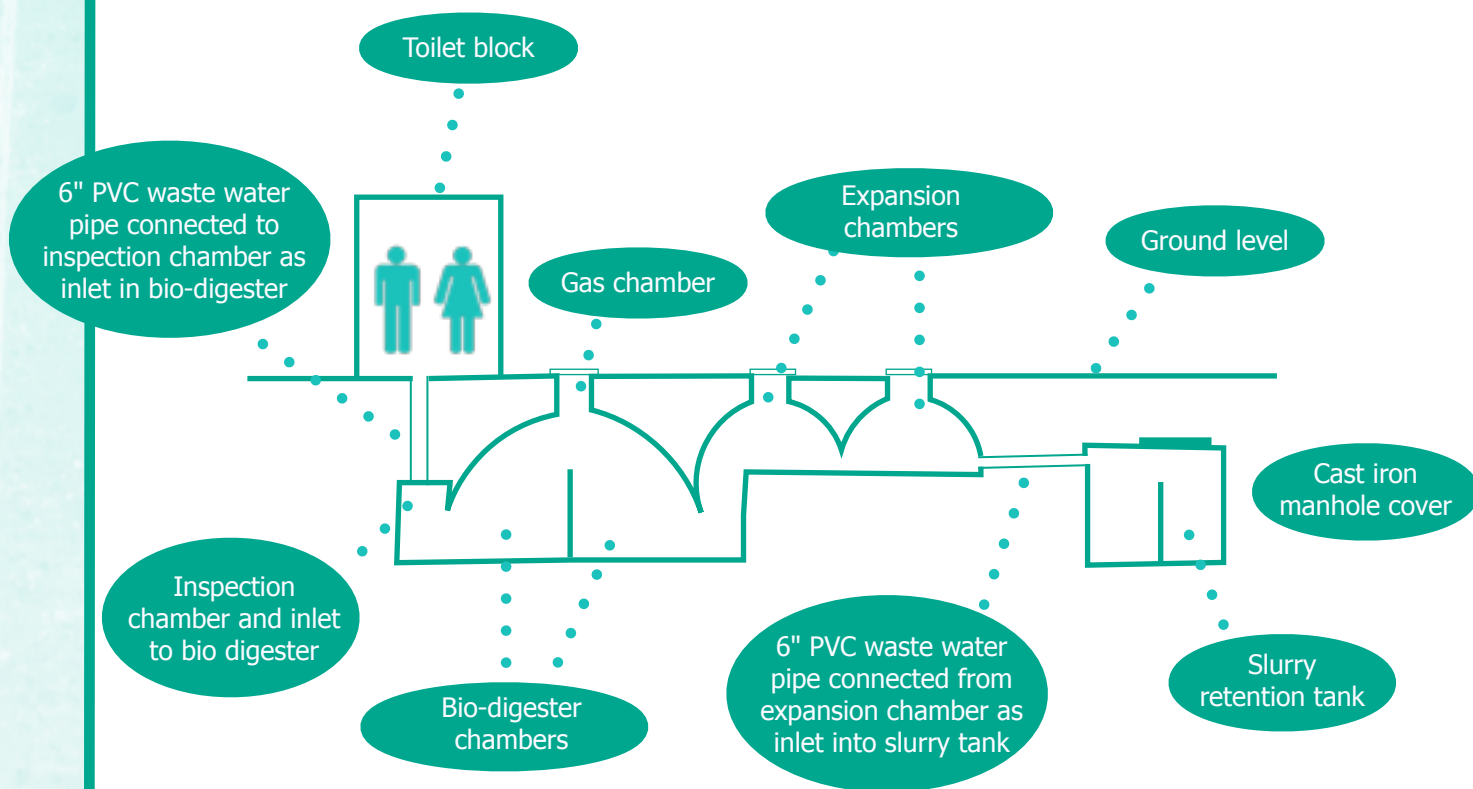
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Water! Water!

Top toilets

Biolatrine



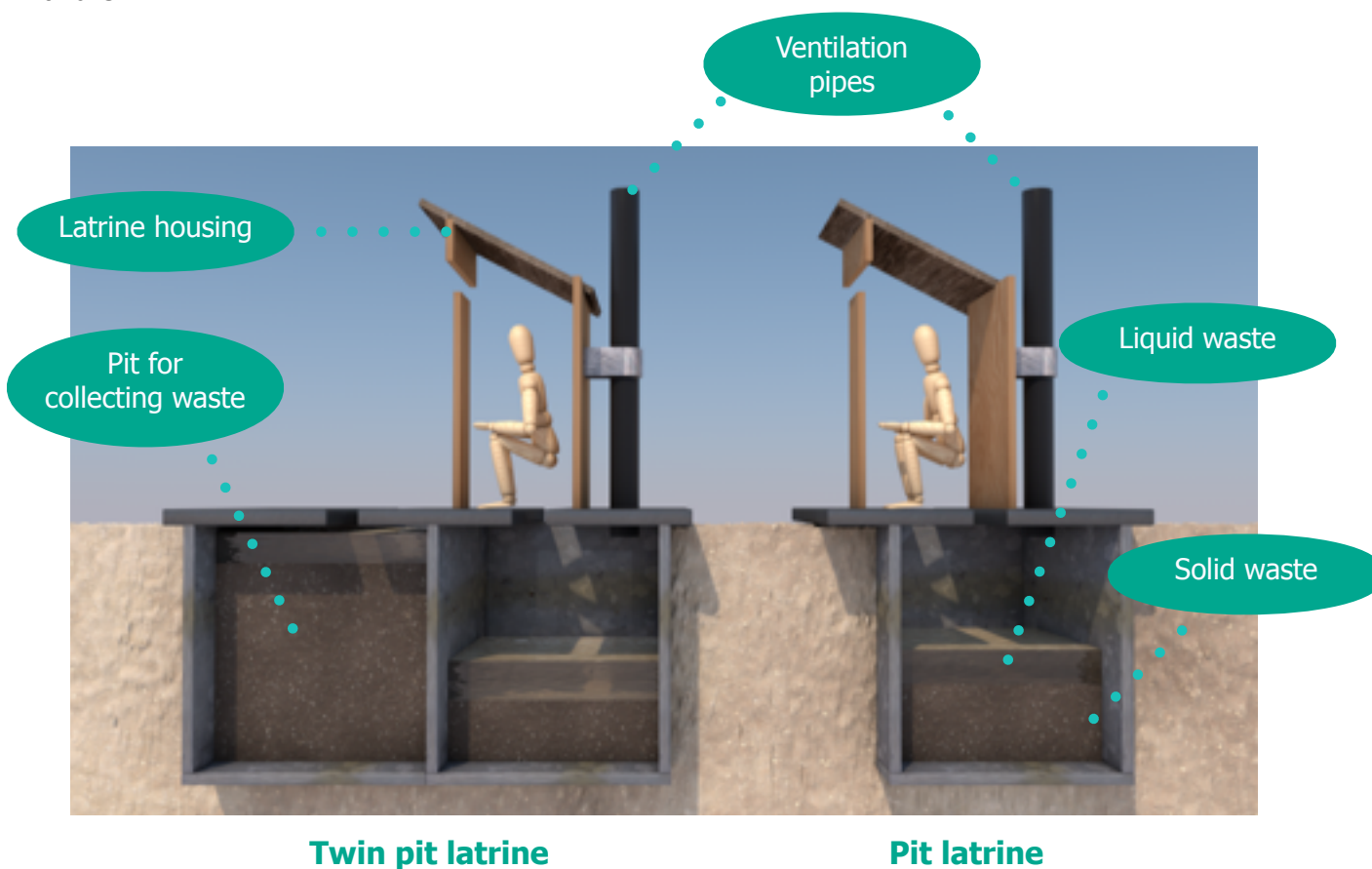
Bio-latrines do not need water to operate and produce organic manure (suitable for use as fertiliser). As the waste biodegrades, the digester captures methane gas which can be used for lighting and cooking.

Advantages	Disadvantages
<ul style="list-style-type: none"> • Makes a profit once the original costs have been paid by sales of organic fertiliser and methane gas. • Toilet blocks can also house showers to help with washing. • Methane gas can be used for cooking and lighting. 	<ul style="list-style-type: none"> • Quite expensive to build in the first place. • Difficult to provide a biolatrine for every house in an area.

Ventilated pit latrines

Ventilated pit latrines

Ventilated latrines have ventilation pipes which get rid of flies and smells. They can have a single pit or a twin one. The twin pits are useful because when one has filled the top can be capped and the waste removed to be treated to make organic manure.



Advantages	Disadvantages
<ul style="list-style-type: none"> • Cheap to build. • Simple technology - easy to understand and maintain. • No running costs, maintenance is very simple. • Does not need water to operate. • Controls flies and smells. • The inside of the latrine can be lit normally as the waste is not accessible to flies. • The twin pit latrine also makes it easier to manage the waste when one pit is full. 	<ul style="list-style-type: none"> • Materials can leak from the pit if it is not lined. • Not easy to build in rocky or unstable ground. • Vent pipe can be expensive and make building the latrine more complicated. • In twin pit latrines the housing needs to be moved when one pit is full.

Name:

Class:

Date:

When you have made your list look at the three different toilet designs you can find on the information sheet Top toilets.

Things a toilet should do	Bio-latrines	Pit latrine	Twin pit latrine
Total score			

In your group:

1. Discuss the designs in your group.
2. Give each toilet design a score for each of your criteria. (5 excellent, 0 bad).
3. Which toilet had the highest score?
4. Decide which toilet design you will choose.

Prepare a presentation for your community informing them

- which toilet design you recommend
- how that toilet design works
- why you chose that particular design

Water! Water!

Water action

Name:

Class:

Date:

You have learnt a lot about water and sanitation in the previous lessons. What action can you, your class or your school take?

As an individual

How could you reduce your use of water at home?

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From this list pick two and explain how you should go about doing them

Way of reducing water usage	How we can do this as a family

As a group

1. Discuss how you think the school could reduce its use of water and become more water sustainable. Prepare a presentation of your ideas to present to the class.
2. Discuss what you think the class or school could do to help a community in Kenya to have access to clean water or better toilets. Prepare to present your ideas as a class

Water! Water!

Water action

Name:

Class:

Date:

Listen to the group presentations. Give each group a mark out of 5 (5 being excellent) for each of the criteria. Add up your score, and put in the total box.

Group	How well did the speakers make their point of view clear?	How well did the speakers argue well against their opponent(s)?	Were you persuaded by the speakers' arguments?	Total