

“think about water”

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Provide access to clean water

girls worldwide say
“world thinking day”
2008

1. Hold a ‘Clean up day’ – clean litter from a local pond, lake or riverbank.
2. How do the effects of pollution in rainwater affect your environment? Invite a science teacher, or a person who works for a wildlife or public health agency to attend a ‘Question and Answer’ session with your unit.
3. Produce a play or puppet show called ‘Life in the Water.’ Think about how water creatures might feel when water is polluted. Invite the people of your community to attend and use it as a fundraising event.
4. Learn about maintenance of water pumps. Then see if there is any way your troop can provide help to your village.
5. Find out how industrial development affects whether there is an adequate water supply. Give a short presentation to the rest of your unit. You can do this with other members of your patrol as a group presentation if you wish.
6. Visit a plumber or sanitation shop and discover how tricky it is to keep toilets, sinks, pipes, etc from leaking.
7. Design your dream toilet and bathroom with all amenities you can think of. Draw a picture or plan.
8. **For older members:** Research an environmental disaster at sea such as an oil spillage and write a short article entitled: ‘One drop of oil can spoil a million drops of water’.
9. **For older members:** Discover any plans which might affect rivers and lakes in your area. Raise awareness of the issue in your community in a creative way.
10. **For older members:** Talk to the people responsible for storage and distribution of water in your area. Learn how it is protected and safely distributed. Report back to your unit, patrol or family.
11. **For younger members:** Create a jig-saw puzzle showing images of water creatures and how pollution might affect them for your unit.
12. **For younger members:** PLAY! ‘Litterbug! Litterbug!’, a swimming pool game.
 - a. Half fill 12 plastic bottles and put the lids on so they float (this is the litter).
 - b. One player is the Litterbug. The other players stand around her in a circle and take it in turns to hit the litter bottles by throwing a ball at them. The Litterbug must catch the ball or hit it back in the direction it came from.
 - c. If a litter bottle is touched, it is removed from the pool and the person who threw the ball becomes the Litterbug.
 - d. Play ends when there is no litter left in the swimming pool.

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Drink water for health

1. Design a poster to highlight one source of water contamination and realistic suggestions for its prevention.
2. Visit a water treatment centre. Ask questions and make a quiz for your family members or friends.

3. Find out how to filter water and demonstrate this at camp. Make a series of filters which look like the one in our picture. You will need:

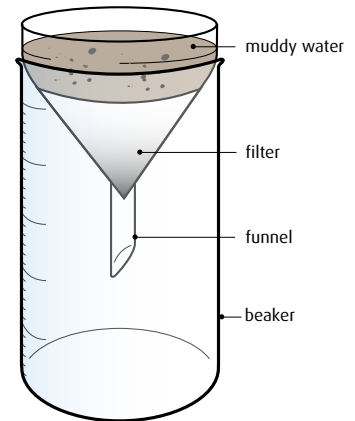
- Funnels
- Beakers (ideally, marked with millimetres)
- Filter paper
- Different types of cloth
- Blotting paper
- Ordinary paper
- Cotton wool

Make some muddy water by mixing tap water with soil and gravel.

Put a filter membrane (paper, cloth, etc) inside each of the funnels and put each funnel into a beaker.

Pour the same amount of muddy water into each of the funnels and record the time it takes to let all the water drain through.

Note how clean the water is when it runs through. Is it dirty, quite dirty, quite clean or clean?



4. Research a country whose economic situation is different to your own. Part of your research could be interviewing someone from that country. Describe the life of a girl of your age who lives there. What things do you share? How is life different? What water problems do your communities share? What problems are different? Is there a way you can make the world a better place for both of you?
5. Find out about different diseases that are carried by water in your country and other parts of the world. Make a checklist on how to prevent contamination.
6. Design a leaflet which explains how to purify water in at least two ways when camping or in an emergency situation such as in a flood, storm or earthquake.
7. List ways to avoid polluting water on a camping trip. Practise these methods on your next trip.
8. Find out the recommended daily amount of water you should be drinking for your age. Challenge yourself to drink that amount of water every day for a week.
9. Drinking water example. Did you know the average person consists of approximately 65 per cent water? Weigh yourself and find out how much water that would be in your case. Use buckets to demonstrate.

10. **For older members:** Take the Water Quiz!

Link to the BBC's website and take the water quiz. <http://news.bbc.co.uk/1/hi/sci/tech/3747588.stm>
From the BBC website, Science and Nature section.

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Drink water for health *continued*

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Question 1

The average Sub-Saharan African uses the same amount of water in a day as someone in a developed country uses when they do what?

- A: Brush their teeth for two minutes with the tap running
- B: Run a lawn sprinkler for a minute
- C: Flush a toilet
- D: Any of the above

Question 2

The number of people dying from waterborne disease is equal to how many large passenger jets crashing every day.

- A: 8
- B: 24
- C: 46
- D: 69

Question 3

Most of the Earth is made up of sea. But exactly what proportion of our planet’s water is not salty?

- A: 0.5 %
- B: 15%
- C: 4.2%
- D: 2.5%

Question 4

It takes between 0.4 and three cubic metres of water to produce a kilogramme of cereals. How much does a kilo of grain-fed beef need?

- A: 3
- B: 5
- C: 10
- D: 15

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Question 5

How many people in the world do not have access to clean drinking water?

- A: 1 in 3
- B: 1 in 6
- C: 1 in 10
- D: 1 in 20

Question 6

What proportion of the world's major rivers are seriously polluted or depleted?

- A: 10%
- B: 25%
- C: 50%
- D: 75%

Question 7

Which of these countries uses most water per person per year?

- A: Russia
- B: India
- C: Egypt
- D: Germany

Question 8

The World Commission on Water estimates that it would cost an extra \$100bn a year to tackle global water scarcity. What is this roughly equivalent to?

- A: The amount spent on ocean cruises, make-up and ice-cream yearly
- B: The net worth of Microsoft chief Bill Gates
- C: The estimated value of the worldwide bottled water industry
- D: A quarter of the US budget deficit

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Answers

Question 1: The answer was D

The average Sub-Saharan African uses 10-20 litres of water a day – compared to 600 litres used by urban dwellers in the US and Japan, and Europeans, who use about 300 litres. Running a tap uses 7-12 litres a minute, sprinklers and hoses use about 20 litres a minute, and flushing a toilet uses 6-20 litres.

Question 2: The answer was C

An estimated seven million people die a year from waterborne diseases, including 2.2 million children under five. That means a child under five dies every 14 seconds.

Question 3: The answer was D

Of the 2.5 % of water that is not salty, only about 0.3% is actually available for people to use. The rest is locked up in ice and in groundwater.

Question 4: The answer was D

It takes at least five times as much water to produce grain-fed beef than cereal. It takes three to four times as much water to produce a kilo of lamb from a sheep fed on grass.

Question 5: The answer was B

An estimated 1.1 billion people do not have access to safe drinking water, nearly two-thirds of whom are in Asia. An estimated 2.6 billion worldwide lack access to improved sanitation.

Question 6: The answer was C

According to the World Wildlife Fund, there are an estimated 12,000 cubic kilometres of polluted water worldwide, which is more than the total amount contained in the world’s 10 largest river basins at any given moment.

Question 7: The answer was C

Egypt uses most per person, followed by India. Countries where water is scarce tend to need more for irrigation than water-rich countries. The US uses almost twice as much water per person as Egypt, however.

Question 8: The answer was D

It is roughly twice Bill Gates’s net worth, and also roughly twice the amount spent on cruises, make up and perfumes yearly. The worldwide bottled water industry is worth an estimated \$22bn – just over a fifth of \$100bn.

11. **For older members:** Find out what the effects of pesticide spraying are on the surface and groundwater. Discuss the problem with officials. Organize a campaign to inform the community on the side effects of it and find out how you can make changes (such as switching to use of organic products).

12. **For younger members:** What are the pleasures and dangers of water? Make up a short play to express this and perform it to your family members or unit.

13. **For younger members:** PLAY! ‘Why did the frog cross the river?’

- All the players except one form two lines, facing one another with a ‘river’ (a real stream or a piece of cloth) between them. They are the frogs. The other player is the carp. She moves constantly up and down the river between the two lines.
- The carp chooses one frog to cross the river. This frog chooses another frog to swap places with. They have 60 seconds to do this without the carp catching either of them. If a frog is caught, she becomes the carp.
- Play this game for 15 minutes or until all players have been the carp.

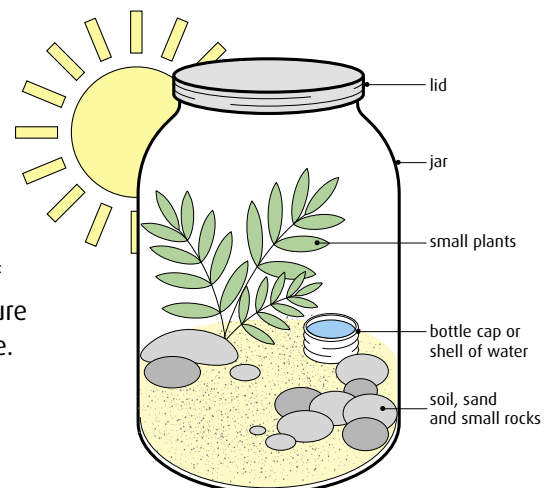
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Conserve water for the world

1. Keep a water diary for the week, recording how much water you, your family or your unit use. You can use these facts to help you work out your water use:
 - A shower uses 30 litres of water every five minutes.
 - A bath uses 90 litres of water.
 - Flushing a toilet uses nine litres of water.
 - Flushing the toilet with a brick in the cistern uses seven litres of water.
 - Using the washing machine uses 95 litres of water.
 - Washing dishes in a dishwasher uses 40 litres of water.
 - Washing the dishes in the sink uses 15 litres of water.
 - Washing the car with a bucket uses ten litres of water per bucket.
 - A watering can holds four litres of water.
 - A sprinkler uses 540 litres of water per hour.
 - Cleaning your teeth with the tap running uses six litres of water.
 - Cleaning your teeth with the tap off uses one litre of water.
 - Washing your hands and/or face uses four litres of water.
 - A paddling pool holds 400 litres of water.
 - Filling a kettle uses 2.5 litres of water.
2. Hold a competition to reduce water use (not including drinking water!) with your family members or unit. You can use your diary to compare.
3. **For older members:** Visit a water company website of three different countries and find out how much ten litres of water cost in each country.
4. Learn about the water cycle. As you walk around your community, identify elements of the water cycle that you can see.

5. Collect a glass jar, some small plants, a bottle cap or shell of water, soil, sand and some small rocks. Fill jar as in the picture and put the lid on to seal the jar. Put the jar in a sunny place. See how the water cycle works in miniature!



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6. Conduct a rainfall survey for a week or a month in your area. Research local weather patterns to see whether your results are in line with annual averages.
7. Collect newspaper articles about weather issues in your area or other parts of the world. Do you notice anything unusual happening? Why might this be?
8. Water conservation day – In the morning, allocate a limited amount of water on a camp for you to use for the day. This does not include drinking water. Observe whether you find this activity challenging and write a short description of how you measured up to the challenge.
9. Interview a grandparent or elderly friend to find out what it was like when they were children. What type of home did they live in? Did they have television, electricity, running water in their home? What did they do for entertainment? How is your life different? How is your use of water different?
10. Keeping Water Clean: Discover the kinds of household wastes your family might dispose of through sinks, toilets, bathtubs and washing machines. Make a poster to show what you have found out.
11. Compare the prices of a selection of cleaning products (e.g. washing up liquid, washing powder, floor cleaner) which are made in an environmentally conscious way and compare them to the cheapest cleaning products available. How much extra might a family have to pay in order to ‘go green’ with their household chores?
12. Learn from a specialist craftsperson how to make natural soaps or use our recipes below (don’t handle chemicals without adults supervision!). Make them and sell them during a campaign against pollution of a river or pond in your area.

Window cleaner

You need: baking powder and old newspaper

Put baking powder on a damp cloth and use for cleaning windows. Rinse with clean water and use old newspaper or pantyhose to shine.

Cleaning baking tray

You need: salt, cooking oil, paper

Pour salt on the tray and rub with paper clean. If it is very dirty heat it in the oven. Polish with oil afterwards.

Multipurpose cleaner

You need: 900 ml water, two tablespoons baking soda, one tablespoon soft soap, two tablespoons denatured alcohol (methylated spirit)

Mix all ingredients and use like any multipurpose cleaner. This can also be used for dishwashing.

Cleaning product for floors

You need: 900 cl warm water, one lemon including peel, three tablespoons baking soda, two or three tablespoons soft soap

Heat water, lemon juice, lemon peel and baking soda together, add soft soap. Use sparingly.

Lime scale remover

You need: 1.5 table spoons citric acid, 300 cl water, one drop dishwashing liquid or multipurpose cleaner

Mix until citric acid is dissolved, then add dishwashing liquid or multipurpose cleaner. Put in spray bottle and spray on surface to remove lime scale.

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13. The power of water power: Find out how water can be used to create energy. Demonstrate the methods using each other's bodies in a mime.

14. **For older members:** Organize a role play game including a factory owner, a government official and an environmentalist. Using the following statements as a starting point, discuss in patrols how you will make your case to the rest of your unit. Nominate one person from your patrol to represent you in the debate.

Paper factory owners: Our paper factory has been a family business for generations. We need to expand to serve more customers. We bring employment into the area and support local families.

Government officials: We must consider the paper factory's plans for expansion carefully. It brings money into our area but we are seeing the effects of waste and pollution in our local rivers and reservoirs.

Environmentalists: We are against the expansion. The paper factory has polluted local water supplies in the past. There is a risk that this could happen again, affecting the wildlife and people of the area.

15. **For older members:** Find out the names of organizations that are concerned about the health of the environment. Go to a meeting, help with a water project or follow one of their suggestions for improving the health of the environment by protecting water sources.

16. **For older members:** Write an article based on the interview. Illustrate it with drawings or photos.

17. **For younger members:** Draw up a list of the things which are different and the things which are the same and decorate it with your own drawings.

18. **For younger members:** Draw a picture of the water cycle and show where you fit in.

19. **For younger members:** PLAY! Penguins on sheet of ice.

- Four penguins stand together on a sheet of ice (= sheet of newspaper)
- The sun shines and the sheet of ice shrinks (= the leader tears off pieces of the newspaper)
- The penguins try to stay as long as possible together on the shrinking sheet of ice by holding on to each other
- The game is over, when all penguins fell into the ocean (=stepped off the shrinking sheet of newspaper)