

DROPS OF KNOWLEDGE FOR RIVERS OF CHANGE



GLOBAL TEACHING
AND LEARNING MATERIAL

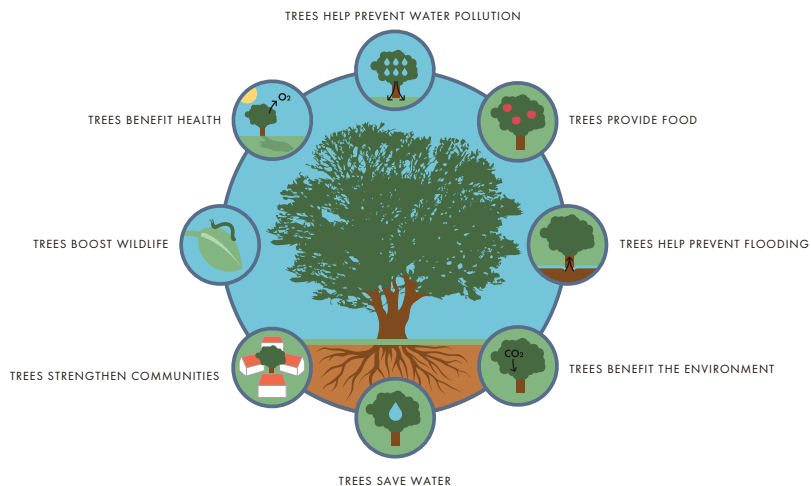
A hands-on guide to teaching
and learning about
water, sanitation, hygiene,
and the environment

SWAROVSKI
WATERSCHOOL

ACTIVITY 6.1

ACTIVITY 6.1: WATER AND TREES

This activity has two parts. Part 1 is the script for a role-play on how it would feel to be a tree, moving and growing in response to and in harmony with your neighbor. Part 2 involves the students in preparing a nursery and planting trees. For this part of the activity, all the tools and materials should be at hand, and teachers are encouraged to prepare integrated lessons using the tree nursery as an outdoor laboratory. Apart from the practical tree-growing activities, such as seedbed and pot preparation, sowing and planting seedlings, and watering and transplanting, you might also consider ways for the students to monitor and keep records of the process.



Source: <https://www.treepeople.org/resources/tree-benefits>

Before planting the trees, help the students learn about growing trees in your region, with consideration for what tree species you will want to plant. Consider what benefits the trees could bring to your community. How will they affect the soil where you are planting? Can these trees survive and thrive in the local climate conditions?

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Time: 50 minutes / **Thematic Areas:** Science, Mathematics, Social Studies, Environmental Education / **Goal for Learning:** Understand and see each tree as a member of the community that provides shade, cleans the air, preserves soil quality, and is home to many forms of life.



Materials: Tree seeds or saplings / Shovel / Water

ACTIVITY STEPS:



PART 1: “Be a tree” role-play. Read the text below as you lead the students in this role-play.

- 1 Trees, like people, are the connection between sun and water and soil ... we both need to reach for the sun ... Can everybody reach up toward the sun like a tree waving its leaves around? [Encourage students to make a big stretch.] ... Oops, did you bump into the person next to you? What happens when trees bump into each other? Sometimes they hug ... sometimes they turn and stretch out the other way. Try this out with the people standing around you.
- 2 Now, grow roots ... How would it feel to be rooted into the ground where you are standing? Put your feet together tight and straighten up ... you might be a little wobbly ... What if we spread out our roots? (Move your feet apart as if they were roots.)
- 3 Pretend you have a small tree that is about to be planted. Look at it before we put it in the ground. Now, we know about the roots growing into the soil and the branches stretching out to the sun. (Ask the participants what all of this has to do with water.)
- 4 Trees hold water ... they distribute it into the ground and into the atmosphere ... and they also help to keep it clean ... these roots connect us through the water to every other person and every other tree in the world ... they are acting locally, with global results.

5 There are 2.2 billion kids under the age of 18 on Earth today, and if everyone plants a tree, that will be a lot of trees! Each tree that we plant today is part of this community of girls and boys around the world who believe in peace and happiness for everybody, everything, and every drop of water on Earth.

PART 2: “Planting the trees

1 Trees, like people, are the connection between sun and water and soil ... we both need to reach for the sun ... Can everybody reach up toward the sun like a tree waving its leaves around? [Encourage students to make a big stretch.] ... Oops, did you bump into the person next to you? What happens when trees bump into each other? Sometimes they hug ... sometimes they turn and stretch out the other way. Try this out with the people standing around you.

2 Prepare the site. Young seedlings will grow best if they are in healthy, well-draining soil, and in a 50% shaded area, away from burning sun and protected from strong winds, rainwater runoff, and nibbling animals.

3 Obtain seeds or seedlings. Seeds can be collected from “parent trees” or bought if there are no good local seed sources for a particular species. When buying seeds, it is important to ask the supplier about the requirements for storage and pretreatment methods. As an alternative to planting seeds, cuttings can be used to produce new trees.

4 Prepare the seedbeds or pots. In wetter areas, it is best to use seedbeds: the seedbeds should be prepared and the seeds sown and kept moist. When they are large enough, they should be transplanted to a transplant bed. For drier areas, the method for potted seedlings is best: the pots or containers should first be prepared, and the seeds sown and kept moist. The pots should be moved every two weeks to prevent taproots from growing out of the pots.

5 Prepare an action plan. Work together to decide who will do what and when for the upcoming weeks’ nursery activities. The calendar of activities should consider the seedlings’ growth cycle so that planting and caring for

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the young trees fits within the school term. If needed, volunteer helpers could be mobilized to cover holidays and months when school is not in session.

6 Before planting, ask each student to hold her or his tree. Ask students to close their eyes for a moment, and feel themselves as part of the tree and the tree as part of them.

7 Put the trees into the ground. Protect the saplings with soil and let each child pour a small cup of water to nourish the trees.

OBSERVATION AND DISCUSSION:

Ask students to reflect on the activity and share their experiences with the group. Prompt discussion by asking if anyone knows why trees are so important as our partners for life on Earth.

Ask if anyone feels a personal connection with a tree, and encourage students to share stories about these connections.

ADDITIONAL RESOURCES:

Gizmos, "Photosynthesis Lab," Charlottesville, Virginia:
ExploreLearning, www.explorelearning.com/index.cfm?method=cResource.dspDetail&ResourceID=395

Ketcham, Sandra, "Teaching Photosynthesis," LoveToKnow,
http://home-school.lovetoknow.com/Teaching_Photosynthesis

Pearson Education, "Photosynthesis Worksheet," 2007. Available at:
www.teachervision.com/photosynthesis/printable/52371.html