

Good Water — Bad Water



Suggested Grade Level

Pre-K

Objective

- Students will demonstrate knowledge about the effects of polluted water on plants by experimenting with various pollutants.
- Students will identify the effects of polluted water on plants through illustrations of their hypothesized effect.
- Students will participate in group discussion about what plants need to live (that all living things need water).

Materials

- *Red Flower Goes West*
- 15 plastic cups
- Rocks
- Food coloring
- Salt
- Vinegar
- Warm water
- Paper chart
- Markers
- Drawing paper
- Scissors

Anticipatory Set

I will read *Red Flower Goes West* and I will ask the children what they think the red geranium needed to stay healthy. I will write what the children know about how flowers survive on a chart. I will ask them what would make flowers grow best and what would make flowers wilt or die. I will write their responses on the chart.

Instructional Input

Prior Knowledge

- The children need to know that flowers need water to grow and survive.
- Vocabulary: liquid

Procedure

- Before class I will have set up a table with cups filled with water and food coloring, vinegar, and salt.
- I will have the students pick out flowers from the stack I have next to me. I will cut the stems and they will move to their tables.



- Students will be dismissed by tables to pick out cups of liquid with rocks at the bottoms so they will not tip over.
- I will ask the students how they like their flowers. I will ask them if they think they have the best solution to make their flowers last the longest.
- After they have placed their flowers in their cups, I will have them draw what their flower looks like on day one and we will collect their papers.
- We will move back to the circle rug and I will ask the students if they think plants will still grow even if the water is polluted by certain things:
 - * Soap
 - * Oil
 - * Vinegar
 - * Salt
- I will tell the students that the red water is only polluted with food coloring and I will ask them if food coloring will not allow the plants to grow.
- I will tell them the green water is polluted with food coloring AND vinegar. I will ask the students if this will not allow the plants to grow.
- I will tell them the blue water is polluted with food coloring AND salt. I will ask the students if this will not allow the plants to grow.
- All responses will be noted.
- I will tell the students that we will be keeping the drawings of our flowers so that we can see how they progress over the next two days.
- I will ask them which flowers will live the longest.
(Red flowers will be the hoped for response)
- I will ask them which flowers will live the shortest
(Blue or green will be the hoped for response).
- I will ask them to explain their answers if they do not give the hoped for response.

Independent Practice

- The students will have the ability to draw their flower's progress as often as they wish.
- They will be provided with a baggy filled with seeds that they can take home and plant where their parents say they can. I will ask them what they will use to help their flower grow.

Modeling

- I will tell the students that I have placed a flower in a liquid



earlier that morning, just as they had. I will ask the students if my choice was a good choice. I will tell them that I watered my plant with clear soda, not water.

Check for Understanding

- Walk around and observe.
- Answer questions as needed.

Guided Practice

- Assist students with experiment as needed.

Independent Practice

- Students choose a flower.
- Students choose a liquid to put the flower in.
- Students draw a picture of what their flower looks like.

Closure

- I will tell the students this experiment is to show them how important our water is. I will tell them we need to keep our water clean so plants, animals, and WE can grow in a healthy manner.
- I will tell them we are going to keep track of our plants and how they grow for the next two days.

Evaluation

I will check off the following things based on my objectives:

- Participation in group discussion
- Shows understanding that all living things need water
- Correct explanations of their illustrations of the effects of polluted water.
- Will observe the progress of their plants and state pollutants harm plants.

Water Conservation Activity at Home

Note to Parents:

Today your child has been given his/her own packet of seeds to plant where you see fit. We have discussed the fact that polluted water harms our plants and we need to keep our water clean in order to keep our plants, wildlife, and friends healthy. These seeds, when planted and cared for, will blossom into beautiful flowers. The whole family can be involved in planting and caring for these little flowers.

Lesson plan compiled by Tara Henderson, an Earth Team Volunteer and Early Childhood Education student at Missouri State University, Springfield, MO.

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