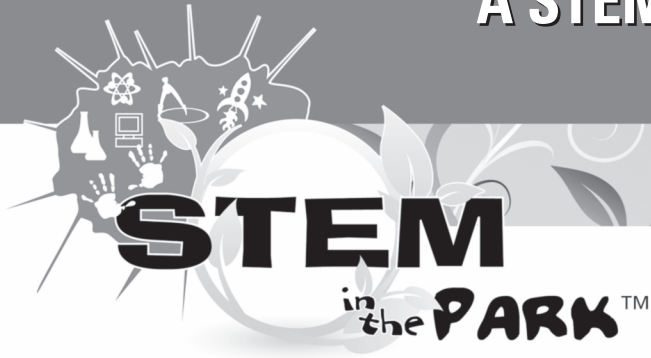


A STEM in the Park

Take Home Activity



Science, Technology, Engineering, and Mathematics

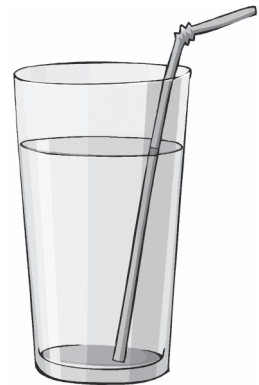
What's in Your Water?

What You Need

- Hach test strips
- Small container to collect water sample
- Directions for testing and color chart

What To Do

1. Collect a water sample in a small container
2. Dip the Hach test strip in the water sample
3. Follow directions from card from event (also online)
4. Compare to the color chart




Water sample location	Nitrate (ppm)	Nitrite (ppm)	Phosphate (ppm)
Non-buffer zone			
Buffer zone			
Prediction for downstream			

Continued on back


The Science

Flowing streams can naturally restore themselves if there is a pollutant that enters due to run-off. Oxygen mixes into the water and allows microbes present in the water to break down anything that is biodegradable. Water quality goes down when there are many inputs of pollutants into a stream. The ability for the microbes to break down those substances can be overwhelmed so that the stream takes longer to recover.

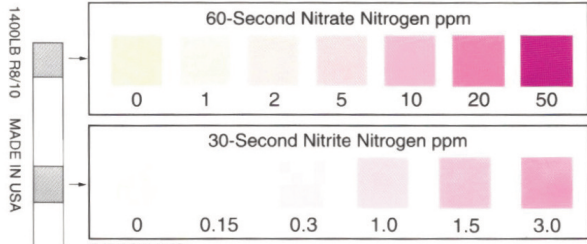
However, when a pollutant is in the form of nitrate or phosphate, the algae normally present in the water get a boost to grow and reproduce. If there are too many nitrates or phosphates in the water, an algal bloom may result. That algae sometimes produces a toxin, depending on what types of algae are present. This results in water that cannot be cleaned by drinking water treatment when it occurs on a large scale.



AquaChek®
Water Quality
Test Strips for
**Nitrate
Nitrite**
25 Test Strips
Cat. 27454-25
HACH®



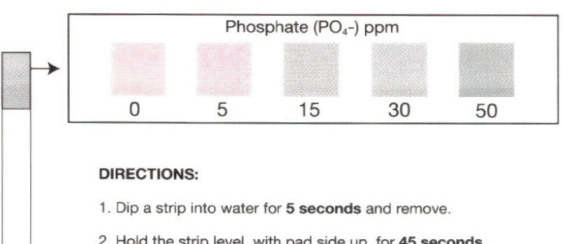
AquaChek®
Water Quality
Test Strips for
Phosphate
50 Test Strips
Cat. 27571-50
HACH®



60-Second Nitrate Nitrogen ppm
0 1 2 5 10 20 50

30-Second Nitrite Nitrogen ppm
0 0.15 0.3 1.0 1.5 3.0

1400LB R8/10
MADE IN USA



Phosphate (PO_4^-) ppm
0 5 15 30 50

1409LB R12/13
MADE IN USA

DIRECTIONS:

1. Dip a strip into water for **1 second** (or pass under gentle water stream) and remove. **Do not shake** excess water from the test strip.
2. Hold the strip level, with pad side up, for **30 seconds**. Compare the NITRITE test pad (bottom pad) to the color chart above.
3. At **60 seconds**, compare the NITRATE test pad (top pad) to the color chart. Estimate results if the color on the test pad falls between two color blocks.

Note: The Nitrate Test actually measures the sum of both nitrate nitrogen and nitrite nitrogen present in the sample.

IMPORTANT: KEEP CAP ON TIGHT BETWEEN USES. STORE AT ROOM TEMPERATURE.

DIRECTIONS:

1. Dip a strip into water for **5 seconds** and remove.
2. Hold the strip level, with pad side up, for **45 seconds**.

Do not shake excess water from the strip.

3. Compare the PHOSPHATE test pad to the color chart above.

IMPORTANT: KEEP CAP ON TIGHT BETWEEN USES.
STORE AT ROOM TEMPERATURE.

This activity is brought to you by GrowNextGen.org



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