

Edible Aquifers

3rd-8th Grade

Water Discovery Field Trip Program

Objective

To learn about aquifers, a process of pumping groundwater to the surface by wells to provide us with a clean water supply, and the impact of pollutants on groundwater through the means of hands-on experimentation.

Overview

Students will learn about aquifers, groundwater and pollutants. The students will create an edible model of an aquifer, which includes groundwater (clear soda), sand and gravel (cookie crumbs), rocks (gummy bears), and clay (ice cream). Students will then simulate how “pollutants” (sprinkles) enter an aquifer. Then, using a straw, students will “drill” a well in the middle of their aquifer to simulate how water is pumped from the aquifer. A discussion on pollution sources will be included.

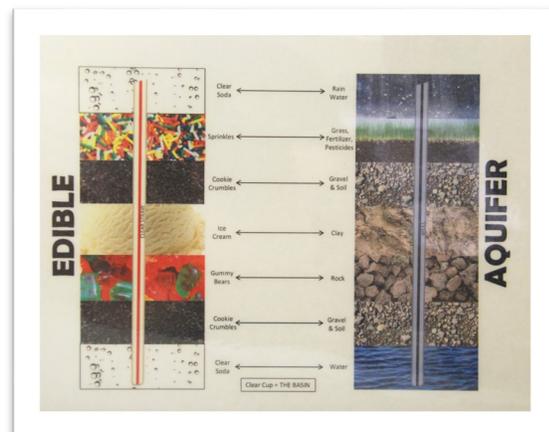
Note: This activity is available to field trips of 30 students or fewer.

Length of Time

20-30 minutes

Next Generation Science Standards* Connections

3 rd Grade	3-ESS3 Earth and Human Activity
4 th Grade	4-ESS2 Earth's Systems 4-ESS3 Earth and Human Activity
5 th Grade	5-ESS2 Earth's Systems
Middle School	MS-PS3 Energy MS-LS2 Ecosystems: Interactions, Energy, and Dynamics MS-ESS2 Earth's Systems MS-ESS3 Earth and Human Activity



Common Core State Standards Connections

3 rd Grade	ELA/Literacy	W.3.1, W.3.7
	Mathematics	MP.2, MP.4
4 th Grade	ELA/Literacy	RI.4.1, RI.4.7, RI.4.9, W.4.7, W.4.8
	Mathematics	MP.2, MP.4, MP.5, 4.MD.A.1, 4.MD.A.2, 4.OA.A.1
5 th Grade	ELA/Literacy	RI.5.7, W.5.8, SL.5.5
	Mathematics	MP.2, MP.4, 5.G.A.2
Middle School	ELA/Literacy	RST.6-8.1, RST.6-8.3, RST.6-8.7, RST.6-8.8, RST.6-8.9, RI.8.8, WHST.6-8.1, WHST.6-8.2, WHST.6-8.7, WHST.6-8.8, WHST.6-7.9, SL.8.1, SL.8.4, SL.8.5
	Mathematics	MP.2, MP.4, 6.RP.A.1, 6.RP.A.2, 6.RP.A.3, 6.EE.C.9, 7.RP.A.2, 8.EE.A.1, 8.EE.A.2, 8.F.A.3, 6.SP.B.5, 6.NS.C.5, 6.EE.B.6, 7.EE.B.4

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