

## KCWATER CLEAN WATER MESSAGES

KC Water offers water quality education to students of all ages. All lessons can be modified for various grade-levels to meet science standards and are free of charge to schools, residents, and businesses in Kansas City. Schedule a lesson at water.education@kcmo.org.



**OVERVIEW:** Students learn about common types of pollutants and their impact on waterways. They start with their definition of pollution that might be found in local waterways. Main story includes human impact, how water carries pollutants to waterways, and a discussion of the importance of clean water through good habits and actions known as "Best Management Practices" (BMPs). Finally, the lesson concludes with students creating and comparing clean water and polluted water to understand how BMPs help filter and support clean water practices. This lesson has an optional activity where students can create clean water message posters to display at school or at home.

TOTAL CLASS TIME: Approximately 1 hour

**KEY COMPONENTS:** Introduction includes rain, groundwater, and stormwater runoff with pollution. Main story defines and discusses "Best Management Practices" and individual actions to promote clean water. Conclusion engages students in creating a polluted water sample and how filtering out pollution helps improve overall water quality. In addition to NGSS/MLS, this lesson also relates to standards for Language Arts, Social Studies, and Fine Arts.

KEY VOCABULARY: Groundwater, stormwater, runoff, storm drains, roots, concrete/cement/pavement, gravity, pollutants, fertilizer, rain barrel, Styrofoam, best management practices









## CLEAN WATER MESSAGES

## **NEXT GENERATION SCIENCE STANDARDS / MISSOURI LEARNING STANDARDS**

YHY PHY	PHYSICAL SCIENCE	Grade K   Grade 1	Grade 1	Grade 2	Grade 3 Grade 4	Grade 5
PS1 - Matter and Its Interactions	A - Structure and Properties of Matter	K.PS1.A.1		2.PS1.A.1		
PS2 - Motion and Stability: Forces						
and Interactions	B-Types of Interaction					5.PS2.B.1

EARTH	EARTH and SPACE SCIENCE	Grade K Grade 1	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
ESS2 - Earth's Systems	E- Biogeology	K.ESS2.E.1					
ESS3 - Earth and Human Activity	C- Human Impacts on Earth's Systems	K.ESS3.C.1					5.ESS3.C.1

	LIFE SCIENCE	Grade K	Grade 1	Grade 2	Grade 3	Grade K Grade 1 Grade 2 Grade 3 Grade 4 Grade 5	Grade 5
LS1 - From Molecules to Organisms:							
Structure & Process	A- Structure and Function					4.LS1.A.1	
	C- Organization for Matter and Energy Flow in						
	Organisms	K.LS1.C.1					

ENGINEERING TECHNOLC	ENGINEERING TECHNOLOGY and the APPLICATION OF SCIENCE	Grade K	Grade 1	Grade K Grade 1 Grade 2 Grade 3 Grade 4 Grade 5	Grade 3	Grade 4	Grade 5
ETS1 - Engineering Design	A- Defining and Delimiting Engineering Problems K.ETS1.A.1 1.ETS1.A.1 2.ETS1.A.1 3.ETS1.A.1 4.ETS1.A.1 5.ETS1.A.1	K.ETS1.A.1	1.ETS1.A.1	2.ETS1.A.1	3.ETS1.A.1	4.ETS1.A.1	5.ETS1.A.1
	B- Developing Possible Solutions	K.ETSI.B.1 1.ETSI.B.1 2.ETSI.B.1 3.ETSI.B.1 4.ETSI.B.1 5.ETSI.B.1	1.ETS1.B.1	2.ETS1.B.1	3.ETS1.B.1	4.ETS1.B.1	5.ETS1.B.1