

DISCOVERY KITS

Transform your classroom or schoolyard into a science wonderland with a watershed education discovery kit! These kits, available for teachers, enhance MWEs with hands-on excitement and include lesson plans that align with JRA's school trips.

ELEMENTARY

Optics and Salinity Lab

Investigate mystery salt water samples using light and matter properties! Students use lasers, refractometers, and a salinity map to measure salinity and determine which organisms can thrive in various salinity zones of the James River. Recommended duration: 1 hour.

Science 5.1.a,b, 5.6.c, 5.7.b

Building the Change with JRA

Engage students in activities based on JRA's best practices for river protection: riparian buffer installation, coastal protection, and green infrastructure. They create a 16x8 Lego baseplate to represent their strategy and place it on a James River map to illustrate its impact on river health. Recommended duration: 45 minutes.

Science 3.5.b, 3.8.a, 4.3.b

Building an Ecosystem Model

Engage in three activities to explore the connections between macroinvertebrates, migratory fish, and freshwater mussels. Students will create an ecosystem model illustrating their relationships and environments. Recommended duration: 2 hours or multiple class sessions.

Science 4.1.e, 4.3.a,b,c

Macroinvertebrate Biotic lab

Evaluate a river system's health by capturing, classifying, and ranking macroinvertebrates. Choose between live capture at a local water feature or using 3D models from a local stream in a simulated lab. Estimated time: 1 hour, 20 minutes.

Science 4.1.c, 4.3.d

MIDDLE

Abiotic Water Quality lab

Help your students understand the essential abiotic components of a healthy river! Test physical and chemical components of the river's abiotic health using hands-on, visually impressive demonstrations in a station activity lab. Recommended time: 1 hour.

LS.1.b, LS.8.c, LS.9.a,b,c

