



## Mi Arroyo, Mi Tierra Curriculum Lesson Scope and Sequence

**Mi Arroyo, Mi Tierra was developed to support place-based outdoor education using local arroyos that are readily accessible to most schools. Each mini unit begins with a walk to observe different phenomena taking place in the arroyo. Through the lens of stormwater, students explore erosion, infiltration, and pollution while using hands-on activities that are aligned with NM STEM Ready! Science Standards. Students will make connections between the history of the local arroyo system, how water moving through impacts the system, best management practices, and the role arroyos have played in local cultures over time.**

### Introduction Activities

- **I.1 - Arroyo Walk:** Visit your local arroyo to make general observations about the geology and biotic factors that you find there.
- **I.2 - Mapping the Arroyo:** Investigate different maps to better understand where our arroyos come from and where they go.
- **I.3 - Art and Nature:** Explore the arroyo using art as your lens.

### Mini Unit 1: Erosion and Arroyos

- **1.1 - Erosion Arroyo Walk:** Explore the arroyo looking for evidence of erosion.
- **1.2 - Erosion Experiment:** Build a model of an arroyo and model how water erodes the land.
- **1.3 - Erosion Mitigation Walk:** Return to the arroyo to look for ways that erosion issues are being solved.
- **1.4 and 1.5 - Erosion Solutions:** Develop additional solutions to slowing, preventing, and reversing the issues caused by erosions.

### Mini Unit 2: Infiltration and Arroyos

- **2.1 - Infiltration Arroyo Walk:** Test the infiltration rates of different soil types in the arroyo.
- **2.2 - Water Table Experiment:** Build a water table model to explore how water moves through underground geological features.
- **2.3 - Hydrological Maps of the Santa Fe Region:** Explore maps that explain the way that water moves through rock formations underground.
- **2.4 - Plant Roots, Soil, and Groundwater:** Use the arroyo model from Unit 1 to investigate how plant roots can impact erosion and infiltration.
- **2.5 - Arroyo Walk, Increasing Infiltration and Slowing Runoff:** Have students look for evidence of infiltration and plant seeds to help increase the number of native plants growing in the arroyo.

### Mini Unit 3: Pollution and Arroyos



- **3.1 - Pollution Arroyo Walk:** Visit the arroyo to investigate pollution.
- **3.2 - Stormwater and Pollution Experiment:** Use a model to explore the different ways that pollution moves through the environment.
- **3.3 - School Stormwater Walk:** Walk the school grounds to look for ways that stormwater moves through the school grounds.
- **3.4 and 3.5 - Planning and Creating a PSA:** Students create a PSA to help the community better understand how they can protect the habitats that arroyos provide.

### **Closing Activities**

- **C.1 - Arroyos as Pathways:** Students look for evidence of who is using the arroyos.
- **C.2 - Arroyo Tales:** Students collect stories from their community about the arroyos that run through Santa Fe.