

ASSESSMENTS

- a. Between rounds, have students predict the number of poker chips that will be in the bucket at the end of the round. Have students explain their predictions.
- b. Discuss how roots – which are underground – help reduce *surface* runoff and erosion. (Healthy, perennial root communities make the soil act like a sponge.)
- c. Graph the data collected in each round (amount of soil over time). Have students discuss trends, similarities and differences in the data.
- d. We need crop fields to grow food. What can be done to prevent pollutants from entering waterways, while still allowing for productive cropland? (Plant prairie buffers.)

EXTENSIONS

1. Play a similar activity using three different colors of poker chips. The colors represent soil particles, nitrogen and phosphorous. Students can calculate the pollutants trapped by the roots in the various rounds and chart the outcome.
2. Read *Plant a Pocket of Prairie*, by Phyllis Root, or another good children’s book about prairies, then discuss other ecosystem services provided by prairies.

STANDARDS

4-ESS2-1 Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.

5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

SS.3-5.G.4 Understand how physical processes and human actions modify the environment and how the environment affects humans.

3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

Prairie Roots lesson plans created by the Tallgrass Prairie Center
with funding from the Iowa Living Roadway Trust Fund.

2017

