Stream Table

Summary

In this activity, we will explore how rivers flow, following the path of least resistance. In areas of large, flat terrain with little slope, the water will spread out more. In areas with narrow, steep terrain the river will be narrower in width, but deeper. Natural obstacles such as large rocks, boulders, and bedrock dictate which way the water can flow. We are going to create different landscapes for water to flow through and observe how different conditions will create different types of rivers.

Materials

- Turkey Roasting Pan or large container
- Sand (packing/paver sand) or dirt
- Pitcher of water
- Rocks in a variety of sizes
- Book or item to prop up the pan
- Cup or item to scoop water

Steps to Follow *(All activities must be done with adult supervision)*

1. Pour sand or dirt into the bottom of the roasting pan to make a layer ~1" thick, leaving about a third of the pan empty on one end.
2. The end with no sand will represent a large body of water (lake/ocean) and will collect the eroding sediment.
3. Press the rocks randomly into the sand throughout the pan.
4. Place one end of the pan on a book or something to elevate it slightly. The end with no sand is at the bottom of the incline.
5. Make a small dent in the sand at the top of the pan. This is where you will pour water into to represent the water source.
6. Before pouring the water, make a prediction. How/where do you think the river will flow?
7. Slowly pour water on the raised side of the pan for about a minute to form the river.
8. What happened? How/where did the water end up flowing?
9. Using a small cup, scoop the water out of the pan and put it back into the pitcher.
10. Reset the sand and try the experiment as many times as you'd like, changing one variable each time. Make a new prediction before pouring the water. Suggestions for variables: try a larger or smaller elevation, move rocks around, or draw lines in the sand before you pour the water to see how it changes the river's flow of water.

Standards:

Ohio: ENV.ES.3, ENV.ES.4, ENV.ES.5, ENV.ER.4, PG.EH.1, PG.ER.4, PG.GG.1
NGSS: HS-ESS2-2, HS-ESS2-5