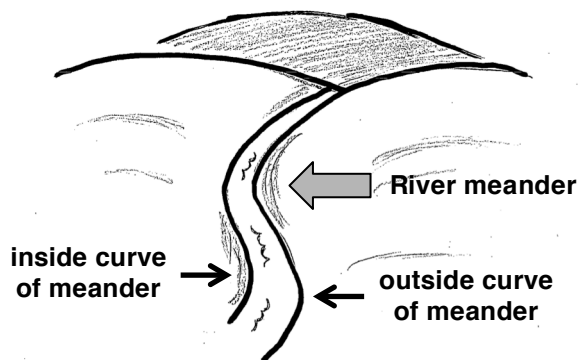


## RIVER BEHAVIOR

### (Post-Elementary Ages)

How does the water in a river behave? Do you think water behaves the same everywhere along the river? Can you make the water behave differently? Try to find out by doing the following things. Remember: Observe carefully and don't hurry. Also, only use small amounts of sand.

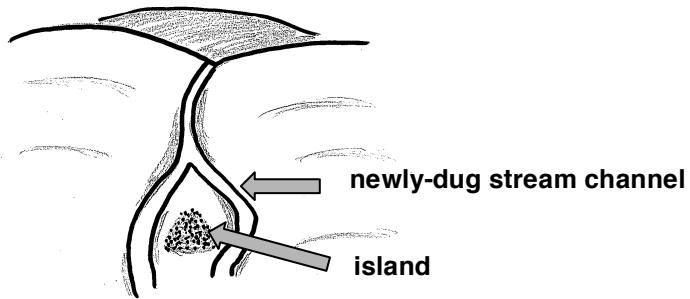
1. Observe the water in the stream all along the river – from its starting point to its ending point. What do you observe about the following?
  - Where does the river water move fastest?
  - Where does the river water move slowest?
  - What is the shape of the river stream where the water moves fastest?
  - What is the shape of the river stream where the water moves slowest?
  - How does the sand move in fastest water?
  - How does the sand move in slowest water?
2. Places where the river curves are called *meanders*. Find a *meander* and observe it. Find out these things about river meanders:
  - Does a meander stay in the same place all the time?
  - Where does water flow fastest in a meander?
  - Where does water flow slowest in a meander?
  - How do sand particles behave at the inside curve of a meander?
  - How do sand particles behave at the outside curve of a meander?



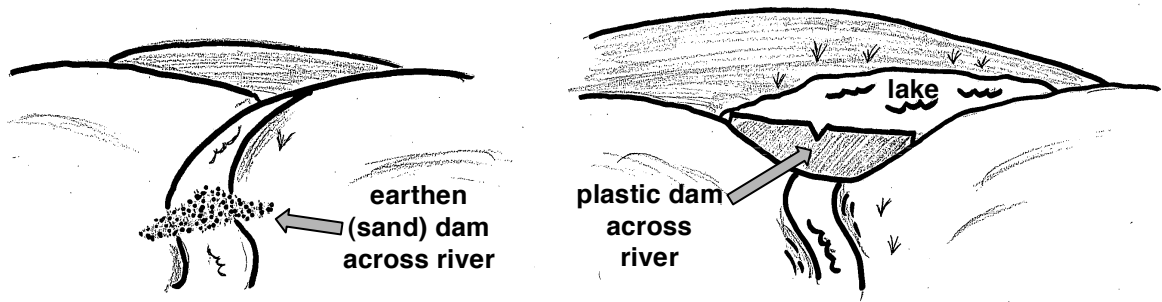
3. Now try to change the river's behavior. Do the following things:
  - Use a scoop to "dredge" one of the river's channels. That means you will dig it deeper and clean out sand in the bottom of the channel. How does this effect the way the river behaves?

**More on the back!**

- Use a scoop to dig another stream channel. See if you can force the river to change course and follow the new channel. If you can, does all the water change course?



- Use a scoop to make an island inside one of the river streams. Watch how the river effects the island.
- Use a scoop to make a small “earthen” dam. Pile some sand across one of the river’s streams to block the water. NOTE: Just use a couple of scoops! Wait and watch for a few minutes. What do the water do around the dam? Does the water pool up behind the dam? Does the dam leak? If it leaks, where does it leak? Watch what happens to the sand below the dam once the dam breaks.



- Use a piece of plastic to make a dam. Watch the water near the plastic for a minute or two. See if the water behaves the same as it did with the earthen dam. How does the river water behave with the plastic dam?
- Use a piece of plastic to make a “rock ledge”. Lay the plastic flat. Place it into one of the river streams and carefully push it into the sand until it is all covered by sand. Wait and watch for a few minutes. What does the water do around the rock ledge?

