What Makes a River Healthy?

1. **Flow**
   - Is the flow of the river very flashy with high peaks after storms and lower average flows?
   - Is the river currently very low?
   - Is the river currently very high?
   - Is there evidence of excessive soil erosion along the banks?

2. **Water Quality**
   - **Visual**
     - What is the color of the river?
     - Are there any distinct smells?
     - Are there large algae blooms?
     - Is there an oily sheen on the water?
     - Is there trash floating in the river?
     - Are there dead fish or other animals floating in the river?
   - **Chemical**
     - There are a wide variety of chemicals you can test for, including naturally and commonly occurring nitrogen, phosphorous, oxygen as well as different forms of pesticides, heavy metals and PCBs.
   - **Biological**
     - This includes looking at indicator species (such as macroinvertebrates) and the presence of bacteria

3. **Habitat**
   - What is the composition of the bottom of the river? Is there a variety (rocks, sand, clay)?
   - Are there aquatic plants?
   - Are there submerged or partially submerged logs?
   - Are the edges of the river vegetated, barren, or made of man made materials?
   - Are there pools and riffles?
   - Do trees shade the river?
   - What does the land surrounding the river look like (natural, semi-natural, suburban, urban, agricultural, industrial)

4. **Food Energy**
   - Are there a variety of plants growing in the river?
   - Are there a variety and abundance of macroinvertebrates?
   - Are there a variety of larger animals such as fish, turtles and frogs?