

## **PHENOMENAL PHENOMENA**

### **THE HUDSON RIVER IS FULL OF PHENOMENA. LET'S TAKE A FEW AND DETERMINE HOW WE CAN BUILD THEM INTO AN ACTIVITY.**

1. Delicate dime size predators that each day filter a liter of water (that's over 4 cups!) for food particles – clarifying the water...cool...or is it cool?

*(What do zebra mussels do to the ecosystem?)*

2. Currents that move the opposite direction from the tide - how does that work?

*(Lag time on the currents along the shallow edges – friction, depth etc.)*

3. Fish that use 'legs' to walk on the bottom of the estuary – walk? Swim? Huh?

*(Sea Robins with six spiny legs that have transitioned from being part of their pectoral fin)*

4. Fish that can tell the salt content –or fish that change their whole biology to deal with the salt changes.

*(Atlantic Silverside needs a hint of salt, Spottail shiner hoover at the edge of the freshwater transition to brackish. OR Anadromous fish that migrate in from the ocean to the freshwater section of the Hudson.)*

5. A salty estuary that suddenly runs fresh.

*(Snow melt, or excessive rain can suddenly cause our estuary to run fresh)*

6. Dissolved Oxygen levels that get higher as the water gets warmer?

*(Plankton and submerged plants like water celery in the estuary push out oxygen at higher rates when the sun is up)*

7. Tidal ranges that are higher 150+ miles away from the Atlantic than they are in the lower estuary 5 ft. versus 3 ft.

*(The narrowing of the river in the upper estuary causes the tides to push higher than down in the wider lower estuary)*