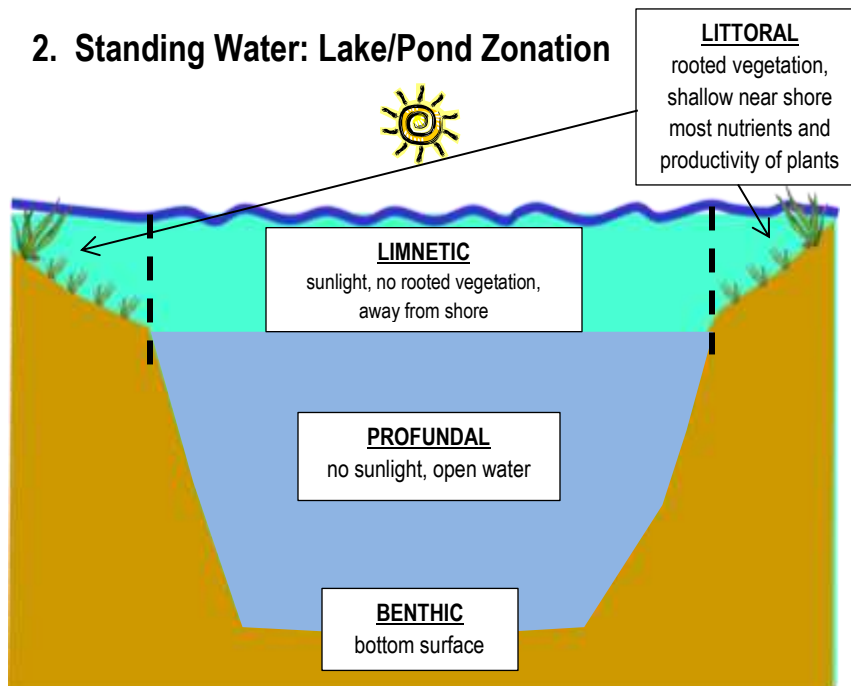


AIM: _____

1. Flowing Water: Rivers and Streams

<p><u>a. Headwaters</u></p> <ul style="list-style-type: none"> - high elevation - colder water (a lot of melting snow) - steeper and faster - more DO (from natural aeration) - algae, mosses, trout 	<p><u>b. Downstream</u></p> <ul style="list-style-type: none"> - low elevation - slower moving - warmer - less DO - more turbidity (more suspended solids) - large population of producers (including rooted plants) - catfish, carp
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2. Standing Water: Lake/Pond Zonation



Thermal Stratification

layering of water based on temperature

In *summer and winter* lake water becomes more *stratified* because of the density of water and how it is affected by solar energy. This creates a distinct boundary (**thermocline**) between cold bottom waters, and the warm water near the top of the lake. **Turnover** occurs when the temperatures change in the intermediate seasons of **fall and spring** to allow for a more full convection cell without distinct layering.

3. Nutrient Levels

- a. oligotrophic - nutrient poor low turbidity / high transparency with rock & gravel bottom
NY Examples – Lake George in Adirondacks, Skaneateles Lake (Finger Lakes Region)
- b. mesotrophic – “transitioning” and becoming more nutrient-rich
- c. eutrophic – nutrient rich, high turbidity, wide littoral zone, shallow, warmer lakes
LI Example: Lake Ronkonkoma