

05/01

Limiting Factors

#7

Water Chemistry

What are some abiotic limiting factors in our pond?
We are going to take a look at the water chemistry as limiting factors.

<u>Factor</u>	<u>How does it affect the ecosystem</u>	<u>Optimum range For most organisms</u>	<u>Test?</u>
<u>temp</u>			
<u>pH</u>			
<u>DO</u>			Test tab + Water temp.
<u>phosphates</u>		2ppm	Test tab



Learning I can explain how limiting factors affect populations in the arctic target: ecosystem

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target: ecosystem

04/30

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<u>Factor</u>	<u>How does it affect the ecosystem</u>	<u>Optimum range</u>	<u>Test?</u>
<u>temp</u>	Extreme temps cause stress.	41 - 77° F 5 - 25° C.	Thermometer.
<u>pH</u>	Too high fish can't lay eggs (9-14). affects diversity.	pH 5 → pH 9 acidic → neutral → basic	pH kit pH strip.
<u>DO</u>	aquatic animals need O ₂ to survive.	8-12 ppm	Tab + temp.
<u>phosphates</u>	Vital for organisms at cell level.	2 ppm	Tab.



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pH test

1. Test the pH for each of the liquids A-D. Write your results.
2. Put the liquids in order of acidic to basic
3. Guess what each of the liquids might be.

A pH 7 B-pH 2 C pH 5.7 D 8.9

Acid (1) \longrightarrow Neutral (7) \longrightarrow Basic (14)

B \longrightarrow C \longrightarrow A \longrightarrow D
 vinegar water salt Baking soda



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In a grassy meadow, students observed and recorded the following interactions:

- Rabbits were nibbling the grass.
- Grasshoppers and crickets were hopping around and sitting on blades of long grass.
- The more grass, the more grasshoppers and crickets could be found, except near the rabbits' burrows and bird's nest.
- A snake slithered out to lay in the sun and all of the nearby birds and rabbits hid.
- Some of the meadow was muddy and dead grasses and insects were mixed in the mud with a strange fungus.
- When a hawk circled over the meadow the remaining birds, rabbits, and even the snake could no longer be found.

Correctly place the names of the organisms into the boxes and draw all needed arrows to create a layered food web. Label the layers of the food web on the lines provided.

SSR/ Study hall until
11:37