

04/30

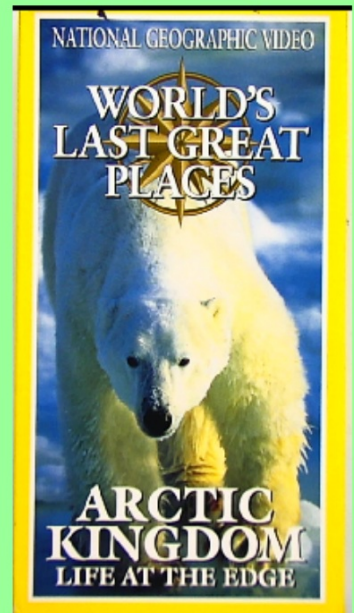
Limiting Factors

#7

**What were the limiting factors in the Arctic ecosystem ? Make a list.**

**For at least 3 limiting factors write;**

- **What is the limiting factor?**
- **What population does it limit?**
- **How does it limit that population?**



**Learning target:**

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

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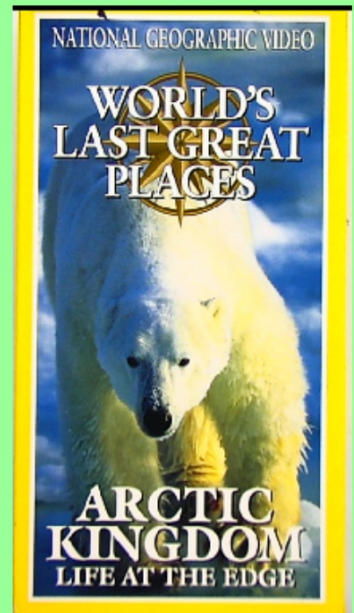
Limiting Factors

#7

**What were the limiting factors in the Arctic ecosystem ? Make a list.**

**For 2 limiting factors write;**

- **What is the limiting factor?**
- **What population does it limit?**
- **How does it limit that population?**



**Learning target:**

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

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Limiting Factors

#7

- Shifting ice
- Ice melting
- Temperature too warm leads to ice melting
- Amount of light
- Inuit
- Predators
- not enough prey.
- pollution



**Learning**

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

# Arctic Food Web

Narwhal

Arctic  
Fox

Polar  
Bear

Walrus

Beluga

snail

human

**small fish**

Bowhead  
Whale

Ring  
Seal

Murre  
bird

Gull

Clam

Starfish

Arctic  
Cod

Phytoplankton

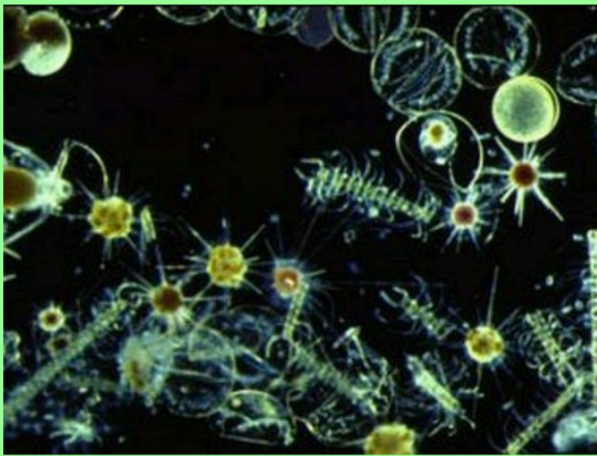
Algae



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Limiting Factors

#7



## PRODUCERS

Algae  
Phytoplankton

### Limiting Factors

1. Predation
2. Wind- Loss of habitat
3. Sun melting the ice
4. Food Supply
5. humans
6. Climate change
7. Light



### Learning

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



## 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.

For each temperature, pH, Dissolved oxygen and phosphates:

1. say what each factor is
2. Explain how it affects the ecosystem
3. What is the optimum (best) range of the factor?
4. How is it tested?



**Learning target:**

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

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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</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 <sub>2</sub> to survive.	8-12 ppm	Tab + temp.
<u>phosphates</u>	Vital for organisms at cell level.	2 ppm	Tab.



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

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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>			

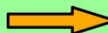



**Learning** I can explain how limiting factors affect populations in the arctic target: ecosystem



### pH test

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

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



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

SSR/ Study hall until  
11:53