

Warm-Up (oct 22)

10/21

Define the following terms and give an example of each:

Producer
- converts nrg from sun to food (plants)

Consumer
- eats producers (animal)

Habitat - place to live (park)

Niche - job (prod., cons., decomp)

Abiotic factor - physical environment (water, rocks, air etc)

Biotic Factor - living things (plants/animals)

Warm-Up (Oct 27)

1. Give 2 ways carbon is released to the atmosphere.

- Combustion
- cellular respiration (breathing)

2. How is carbon pulled out of the atmosphere?

photosynthesis

3. Define the terms:

a) Autotroph make own food (producer)

b) Heterotroph eats other organisms (consumer)

Warm-Up (Oct 28)

1. What is the difference between a food web and a food chain?

- food web is made of many food chains

2. Compare and contrast a pyramid of energy and a pyramid of biomass

Compare - Both are bigger at the bottom

Contrast - energy - each level is 10% of the previous
(only 10% is passed on)

Warm-up (oct 28)

1. What is nitrogen fixation

process of removing N_2 from atmosphere & making it useable for plants (converting to nitrates or ammonia)

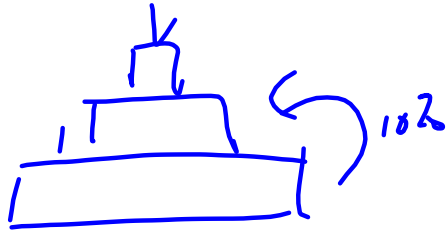
2. What is denitrification?

Process of converting nitrates & ammonia back to N_2 in the atmosphere

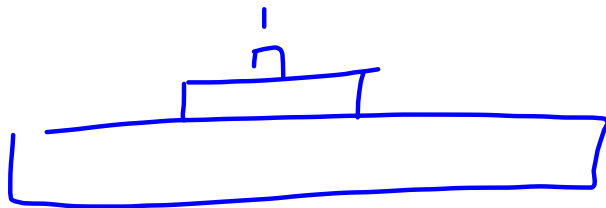
Warm-up (Nov 2)

Briefly describe each of the following. You can draw a diagram to help your answer:

1. Pyramid of Energy *each level gets 10% of the energy from level below*



2. Pyramid of Biomass - *amt of living material at each trophic level*



Warm-up (Nov 3)

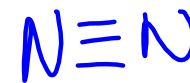
List 2 ways that humans disrupt the carbon/oxygen cycle.

- Deforestation
- Burning fossil fuels
- Forest fires

What is:

a) Nitrogen Fixation

Changes $N_2 \rightarrow NO_3^- / NH_3$



b) Denitrification

$NO_3^- / NH_3 \rightarrow N_2$

Warm-up (Nov 4)

List 2 ways that humans disrupt the nitrogen cycle.

Waste - industrial
fertilizer.
Animal waste

What is:

a) Respiration

Breathing $O_2 \rightarrow CO_2$

b) Photosynthesis

plants prod. food. $CO_2 \rightarrow O_2 + C_6H_{12}O_6$

Warm-Up (Nov 5)

1. Define the following terms, and give an example of each:

a. Autotroph - makes its own food ex) producers

b. Heterotroph - eats others ex) consumer

c. Abiotic Factor - non living part of an ecosystem
ex) rocks

d. Biotic Factor - living things ex) tree

Warm-Up (Nov 9)

Briefly explain why carbon dioxide is called a "greenhouse gas".

Warm-Up (Nov 10)

Give 2 effects of a rise in global temperatures.

- ICE caps melting
- Sealevel ↑
- Δ climate → extreme weather.
- ↑ floods / droughts

Warm-up (Nov 12)

A mouse and an eagle are both in the same food chain. Which would be more affected by bioaccumulation? Explain why

→ only 10% of nrg is passed on
but 100% of tox. are passed on

Sketch an:

Exponential population growth curve



$$y = x^2$$

Logistic population growth curve



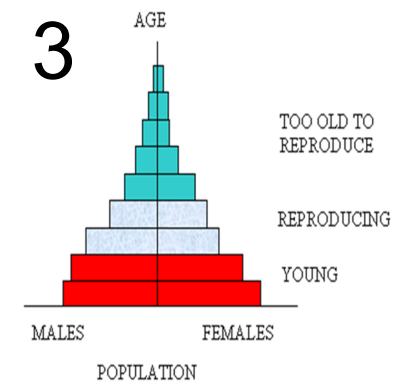
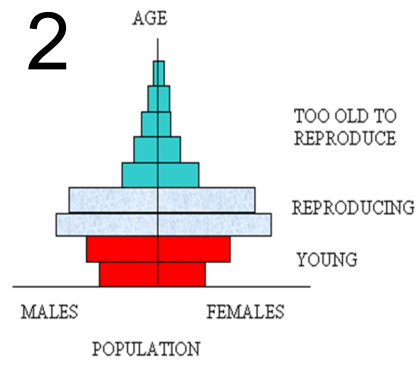
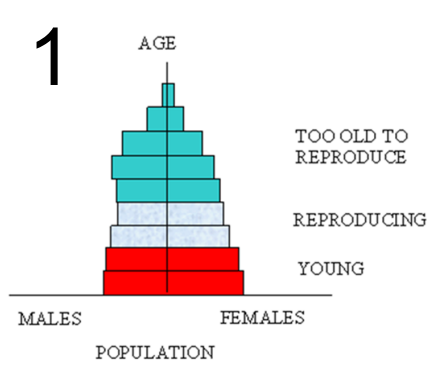
Warm-up (Nov 16)

Given the following histograms, identify which shows a population that is:

a) Increasing

b) decreasing

c) staying constant

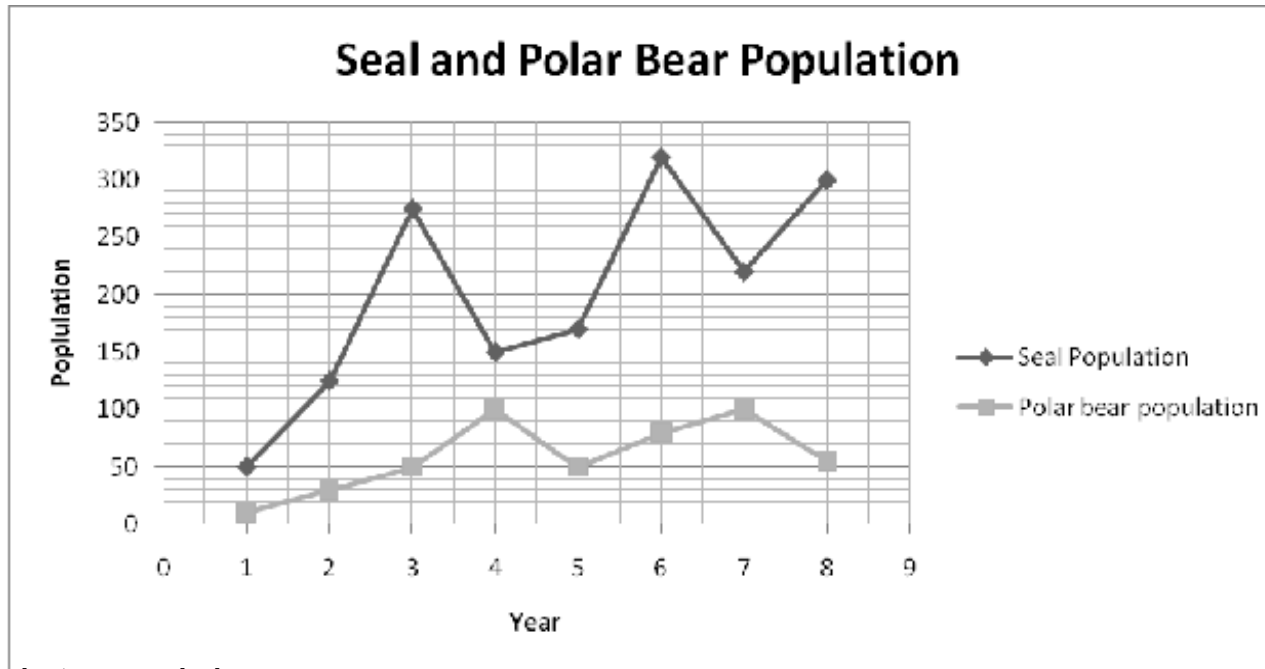


Warm-Up (Nov 17)

1. Define Carrying Capacity

2. Give 4 factors that limit a population at or around its carrying capacity.

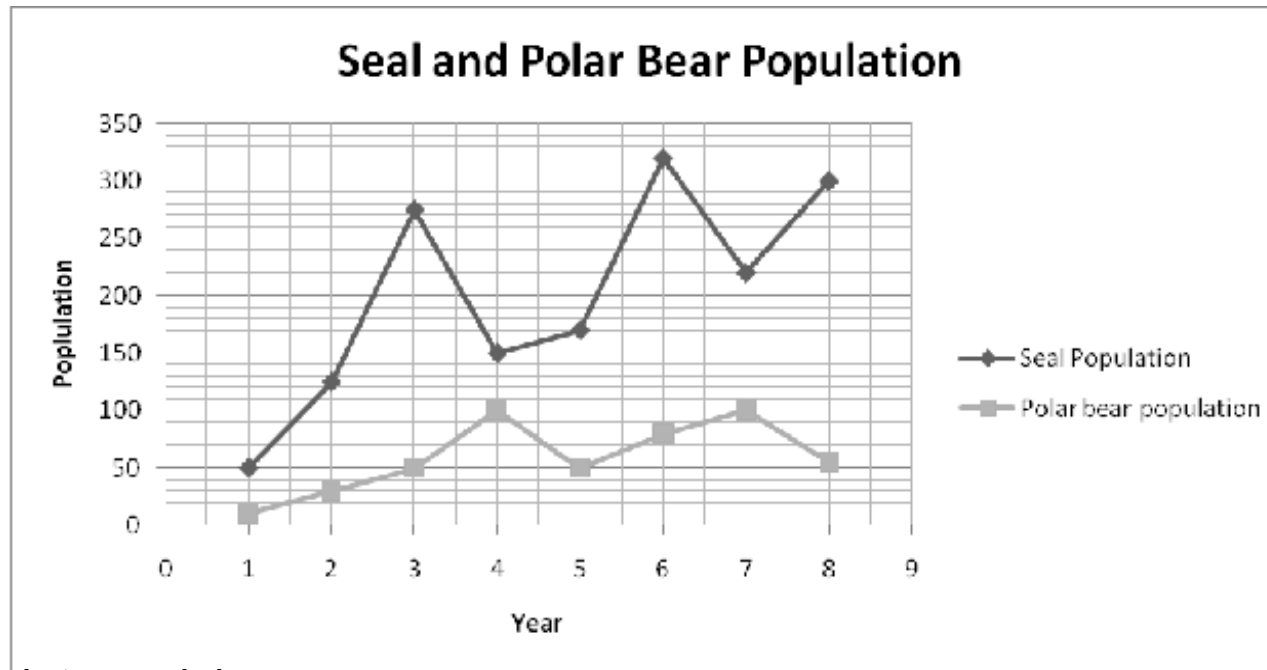
Warm-Up (Nov 19)



Use the graph to explain:

- a) The decrease in the polar bear population between years 4 and 5.
- b) The subsequent increase in the seal population between years 5 and 6.

Warm-Up (Nov 19)



Use the graph to explain:

- a) The decrease in the polar bear population between years 4 and 5.

Seal pop ↓, so less food — some bears starve

- b) The subsequent increase in the seal population between years 5 and 6.

low pop of Bears = less predators → less seals are eaten & more can reproduce

Warm-Up (nov 4)

Biologists want to study population growth of fruit flies over a month. In a small ecosystem 210 die and 350 are born. 85 leave the population and 50 immigrate in. What is the change in population?

$$\begin{aligned}PG &= (\underline{B} + \underline{I}) - (\underline{D} + \underline{E}) \\ &= (350 + 50) - (210 + 85) \\ &= 400 - 295 \\ PG &= +105\end{aligned}$$