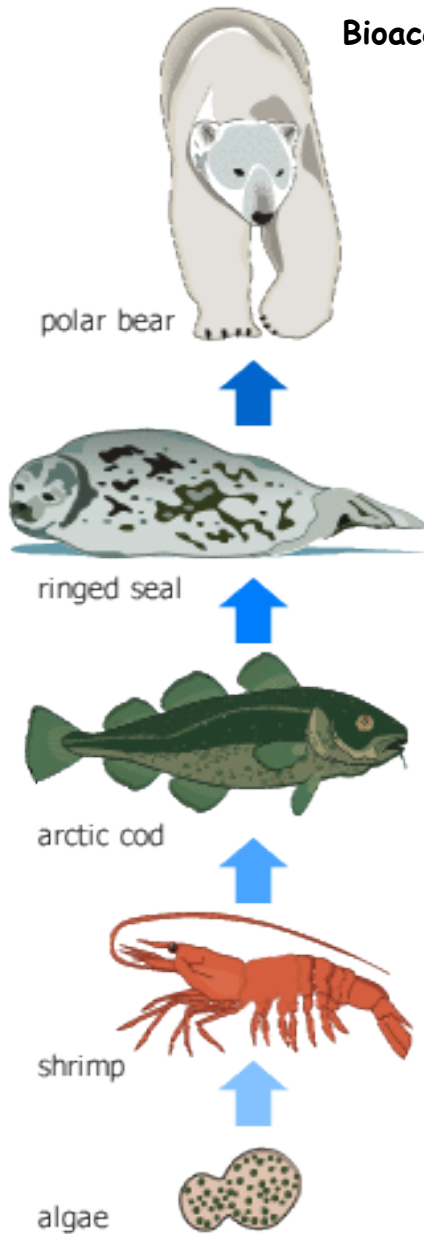


Lesson #7: BIOACCUMULATION



Bioaccumulation is when toxin levels migrate their way to the top of the food chain while increasing their concentration.

LOOK at the picture on your left:

(Toxin levels are represented as the "dots" in the rectangles next to the organisms.)

- Small organisms (algae) contract a toxin.
- As a shrimp eat their prey (algae), their toxin levels increase.
- As the arctic cod eats several shrimp, it accumulates even more toxins.
- Ringed seals, which eat arctic cod, have even more increased levels of toxins in its body.
- The top predator, the polar bear, eats several seals, and therefore contains all of the toxins from the organisms lower on the food chain.

*The more consumers on the food chain, the greater the accumulation of toxins!

Any predators of fish are susceptible to the bioaccumulation of mercury (Hg). This includes humans!

Did you know? Dolphin meat has been banned from school meal plans in Japan due to high levels of mercury!

In the 1980's, the pesticide DDT washed off into streams. It bioaccumulated in fish, which were then eaten by predatory birds (hawks, eagles, etc.). Having this chemical in their system caused the eggs of the birds to become soft and break. Many of their babies died. ☹

