

Science Year 7 Knowledge Organiser – B3 Interdependence

Overview of topic: Describe the relationships within a food web. Explain the impact of a new consumer to the food web. Describe the impact of bioaccumulation on an organism. Describe and explain why insects are so important to food security. Explain the importance of plant reproduction through insect pollination in human food security.

Key content/ ideas/ concepts

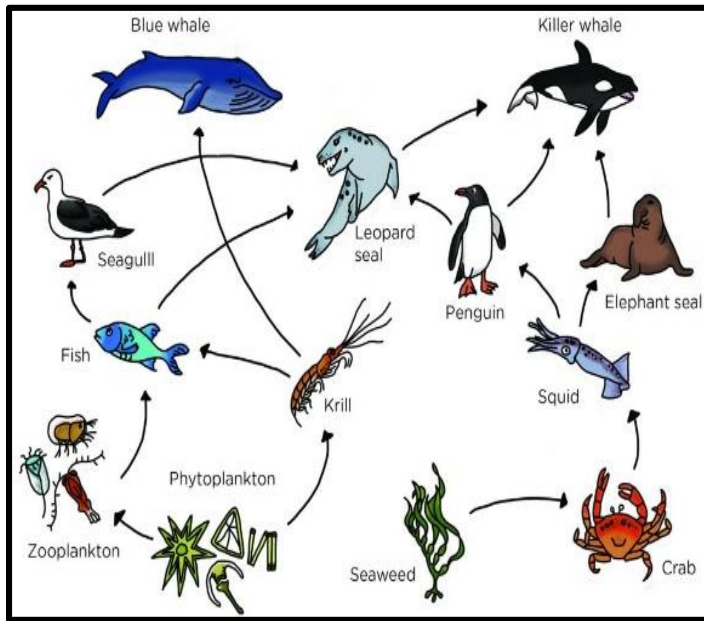


Fig 1 a Food marine web

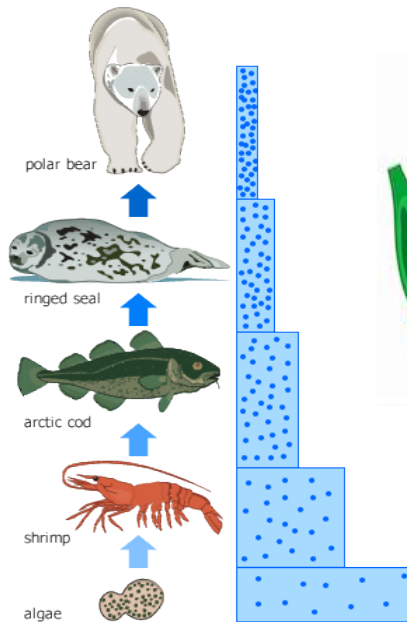


Fig. 1b. Bioaccumulation in an arctic chain

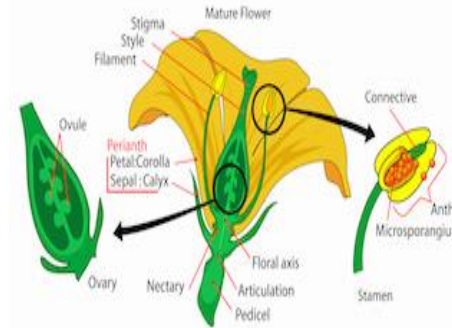


Fig 2a. Reproductive parts of flower

Keywords/ Glossary

Adaptation – How an organism has changed to survive in their surroundings

Bio accumulate – build- up of chemicals in an organism

Carnivore – A meat eater

Decomposer – breaks down large compounds into elements

Food chain – a diagram to show the energy transferred when animals and plants are eaten

Habitat – This is the place where an organism lives

Herbivore – An animal that eats plants only

Omnivore – An animal that eats both plants and animals

Predator – An animal that hunts other animals for food

Prey – An animal that is hunted

Producer – A plant that makes its own food.

Trophic level – feeding level

If pollinators died we would see food shortages.

Reasons pollinators may die:

- o Climate change
- o Habitat loss - replaced with monocultures
- o Disease
- o Pesticides

Section 7: Insects and human food supplies

Insects are vital for pollination of plants. As a result plants are adapted to attract them

Nectar	Sweet taste to attract insects
Scent/perfume	Pleasant smell to attract insects
Bright colours	Bright colour and patterns can attract insects (some plants mimic insects to attract them like a mate would)
Moderate amount of pollen	Prevents wastage of pollen
Pollen is sticky or spikey	Sticks to insects to be transferred between plants
Anthers and stigma inside the flower	Pollinators/insects can contact them
Stigma is sticky	Pollen attaches easily

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KNOW IT	GRASP IT	THINK IT
1. State the name of the first living organism in a food chain.	1. State 3 things that plants compete for.	1. Explain how a new disease in one animal could affect the population of other species in the ecosystem.
2. State what eats the plant in a food chain.	2. Define a biotic factor.	2. Describe alternative ways of securing high yields
3. Give an example of a secondary consumer.	3. Define an abiotic factor.	3. Give an example of is the benefit of biological pest control?
4. State the term to describe an animal that only eats plants.	4. State the term that describes an animal that looks for animals that have already died to eat.	4. Describe the benefit of using a biological pest control?
5. State the term to describe an animal that only eats animals.	5. Draw a food chain with 3 organisms in.	5. If a fertiliser is released into a lake why do the fish die?
6. State the term to describe an animal that eats both animals and plants.	6. Draw a food chain with 4 organisms in.	6. Why do growers keep bee hives near to their orchards?
7. State the term to describe an animal that hunts.	7. Explain the effect on the other organisms if a new predator is introduced in the food web (Figure 1, overleaf)	7. Why does the government pay farmers to leave fields alone?
8. State the term to describe an animal that is hunted.	8. What is a pesticide?	8. What is a monoculture?
9. State the word equation for photosynthesis.	9. what is a fertiliser?	9. Why do monocultures lead to a reduction in biodiversity
10. State 3 things that animals compete for.	10. What is biodiversity?	10. Why would intercropping support organic farming and increase biodiversity?
Total score	Total score	Total score

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