



# 7.4 TROPHIC LEVELS IN AN ECOSYSTEM (biology only)

## Trophic levels

The trophic level of an organism refers to its position in the food chain, food web or pyramid of biomass

Level one – producers, photosynthetic organisms which use energy from light to produce biomass (about 1% of light is used)

Level two – primary consumers, herbivores eat plants/algae

Level three – secondary consumers, carnivores eat herbivores

Level four – tertiary consumers, carnivores eat secondary consumers

Decomposers break down dead organisms using extracellular digestion

The final trophic level is made from apex predators which are carnivores with no predators e.g. humans

Shows the total mass of organisms in each trophic level of a food chain. Level one is at the bottom

## Pyramids of biomass

## Transfer of biomass

Biomass is lost between trophic levels:

- Not all plant/animal material digested
- Biomass lost through excretion/decay
- Biomass used in other processes e.g. movement and keeping warm

About 10% transferred to next level.

Biomass is created by producers and is passed along the food chain through feeding

AQA

