~~3.5.~~ 3.4.5 BIOL

Photosynthesis = energy enters ecosystem – sun's light energy → chemical energy

Producers = photosynthetic organisms

Consumers = obtain energy by consuming other organisms

Decomposers = break down complex materials into simple components when producers and consumers die

Can be used by plants

Most decomposers are fungi / bacteria

Earthworms are detritivores

Energy passed down trophic levels of food chains

Arrows show direction of energy flow

Many animals do not rely upon single food source so food chains within a habitat can link together to form food web

*After about 4 trophic levels there is not enough energy to support a large enough breeding population.

3.4.5 BIOL

Gross production (of plants) → Total quantity of energy that plants convert to organic matter.

plants use 20–50% gross production in respiration.
So little stored (eg in starch/chlorophyll)

The rate at which they store energy = Net production
Net production = Gross production − respiratory losses

In farming, net production increased by reducing gross production (e.g. high density, efficient photosynthesis/ max. leaf area).

3.4.5 BIOL

Food chains/webs show energy flow between trophic levels, but provide no quantitive info. about no./ mass/amount of energy stored by organisms.
To do this = ecological pyramids.

Pyramid of numbers
Usually pyramidal in shape
- But no account taken of size of organisms, so not always!
- No. of organisms can be so great that it is impossible to draw it to scale

~~Pyramid of biomass~~