1. Food webs

Use your knowledge from the fieldtrip to complete the food web below:

- Label producers, first, second and third level consumers.
- Complete the food web with the organisms in orange on the right.
- Connect one of the first level consumers to the top predator.
- Circle one carnivore on the food web.

Bladder Wrack

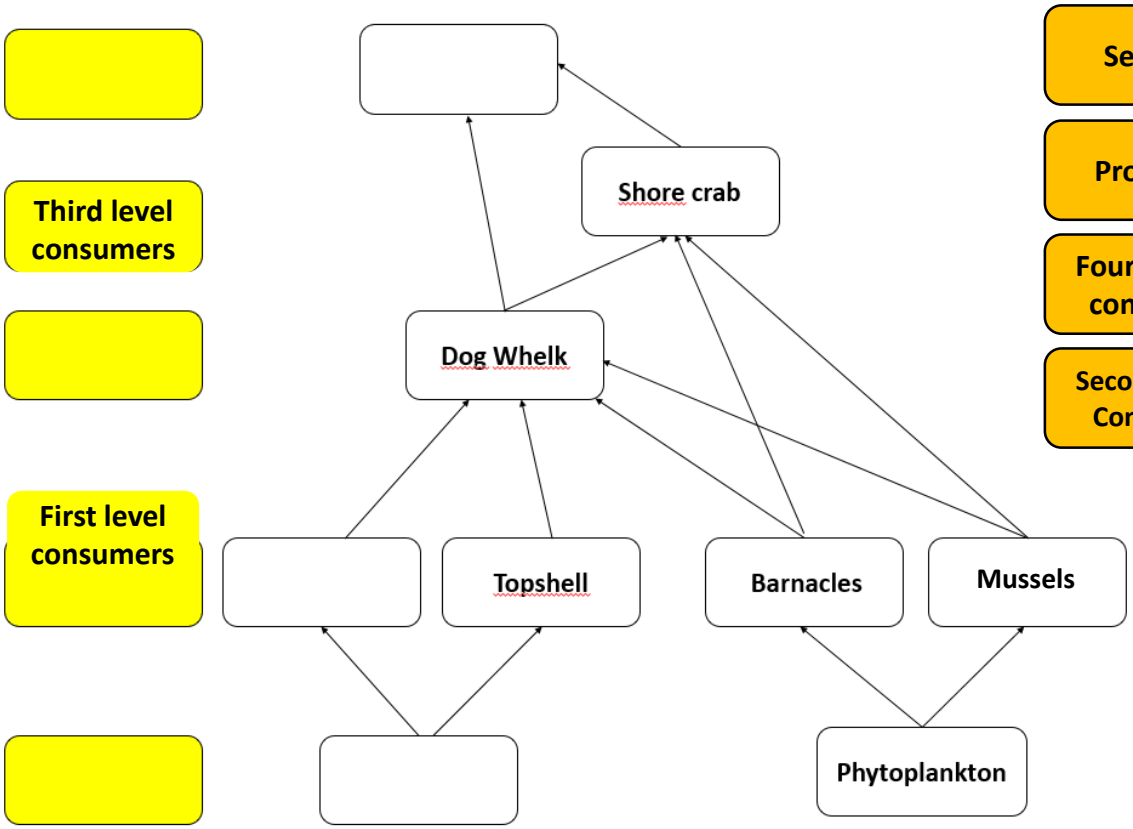
Common Periwinkle

Sea gull

Producer

Fourth level consumer

Second Level Consumer



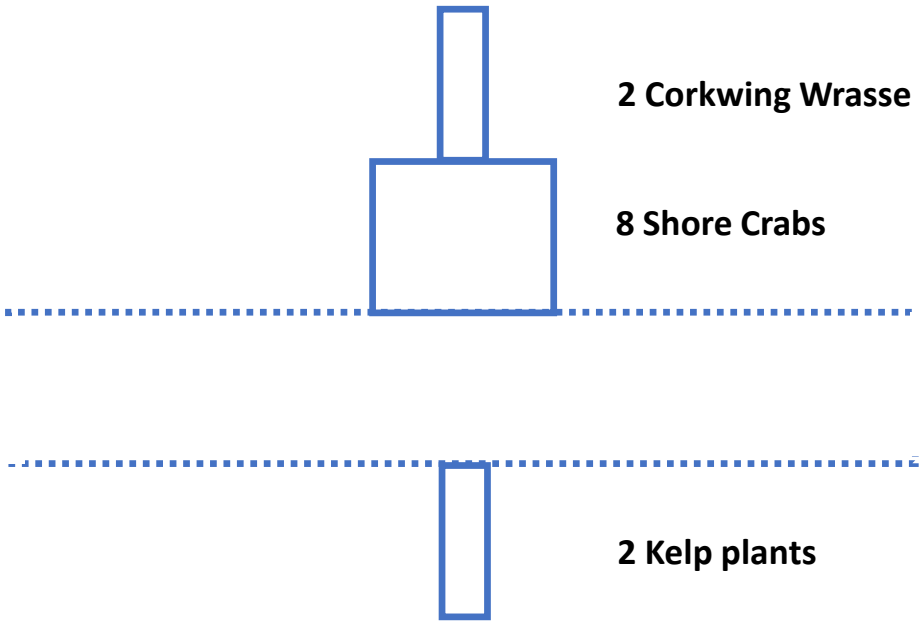
From where do all producers get their energy?

What do the arrows in a food web represent (underline the correct answer below)?

Which organism is eating another.
The energy flow through the food web.
The direction an organism is moving in an ecosystem.

2. Pyramids of numbers

Complete the pyramid of numbers below to show 40 Topshells as first level consumers.



Graddfa: 1 unigolyn = 0.3mm

Why is this not a good way of showing the energy at different trophic levels in the food chain? What kind of diagram would show us this better?

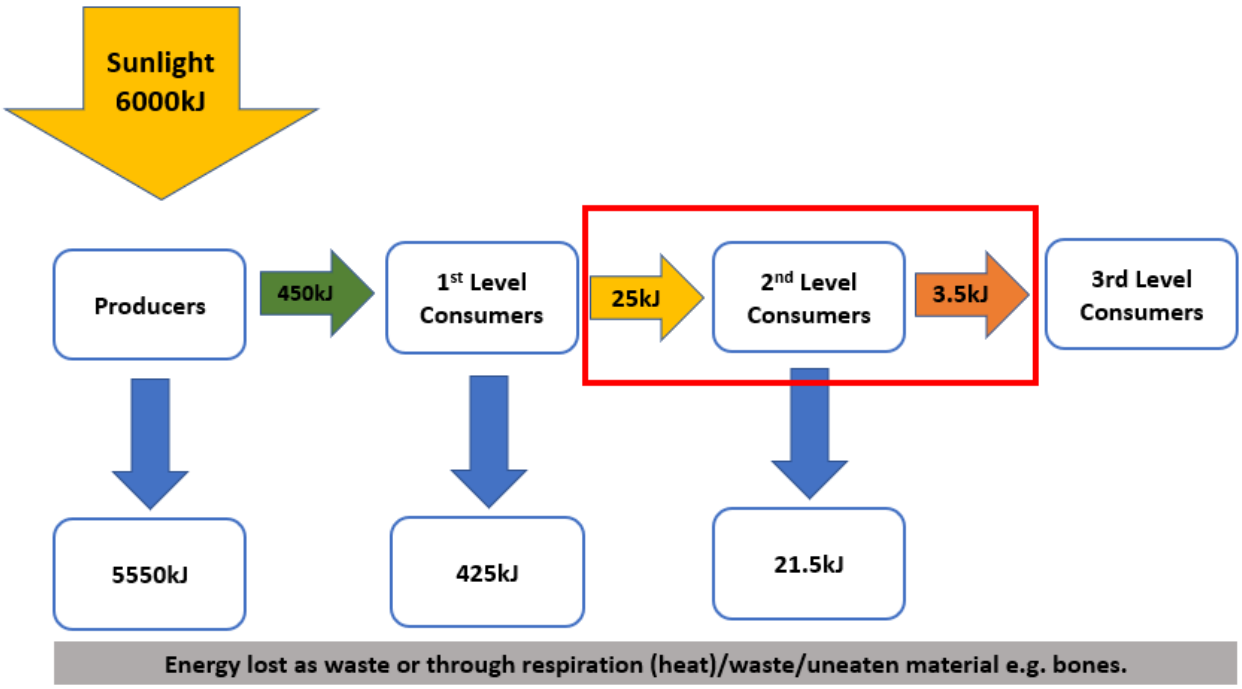
Why do the number of organisms get smaller as you move further up through a food chain?

Organisms use energy for growth of new cells, which other way do they use energy?

Which other ways is energy lost at each level in a food chain (underline two below)?

Lose energy as heat in respiration
Sound energy
Sweat
Urine and faeces

Energy efficiency in food chains.



Calculate the efficiency of 2nd level consumers in the food chain above:

Follow this format that we used to calculate the efficiency of first level consumers in our example:

25kJ ÷ 450kJ x 100 = 5.6% efficiency

	÷		x		=		% efficiency