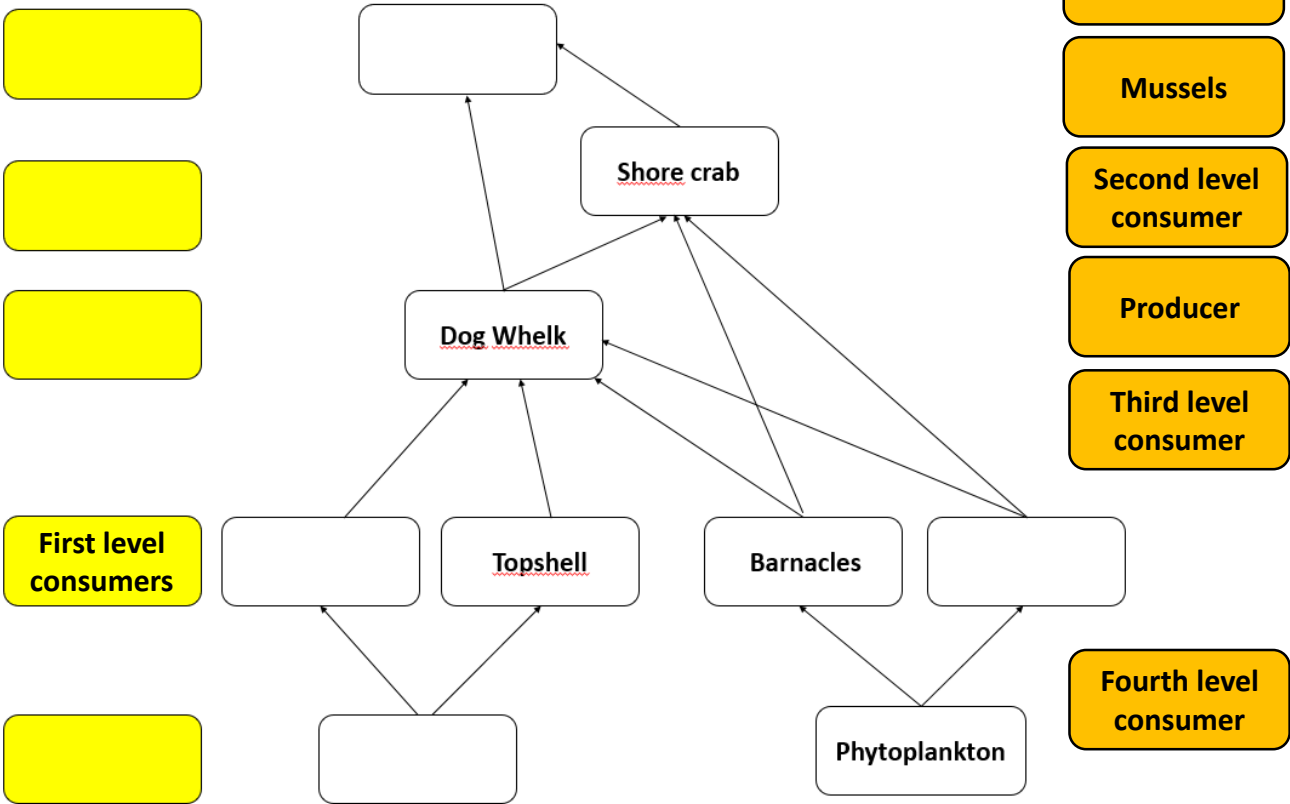


1. Food webs

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.

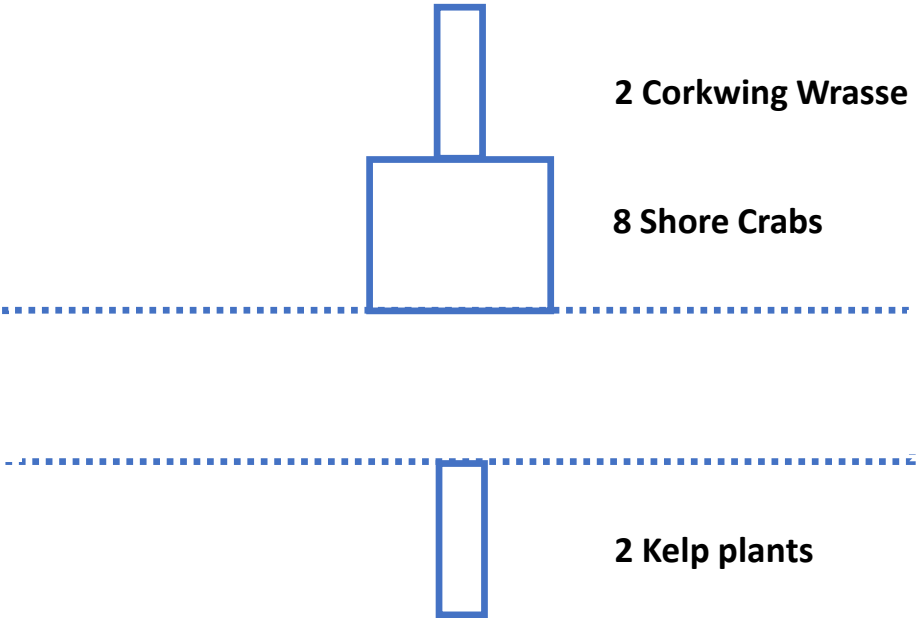
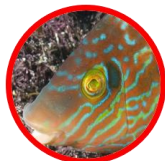


What do all producers have in common?

What do the arrows in a food web represent?

2. Pyramids of numbers

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



Why is this not a good way of showing the energy at different trophic levels in the food chain?

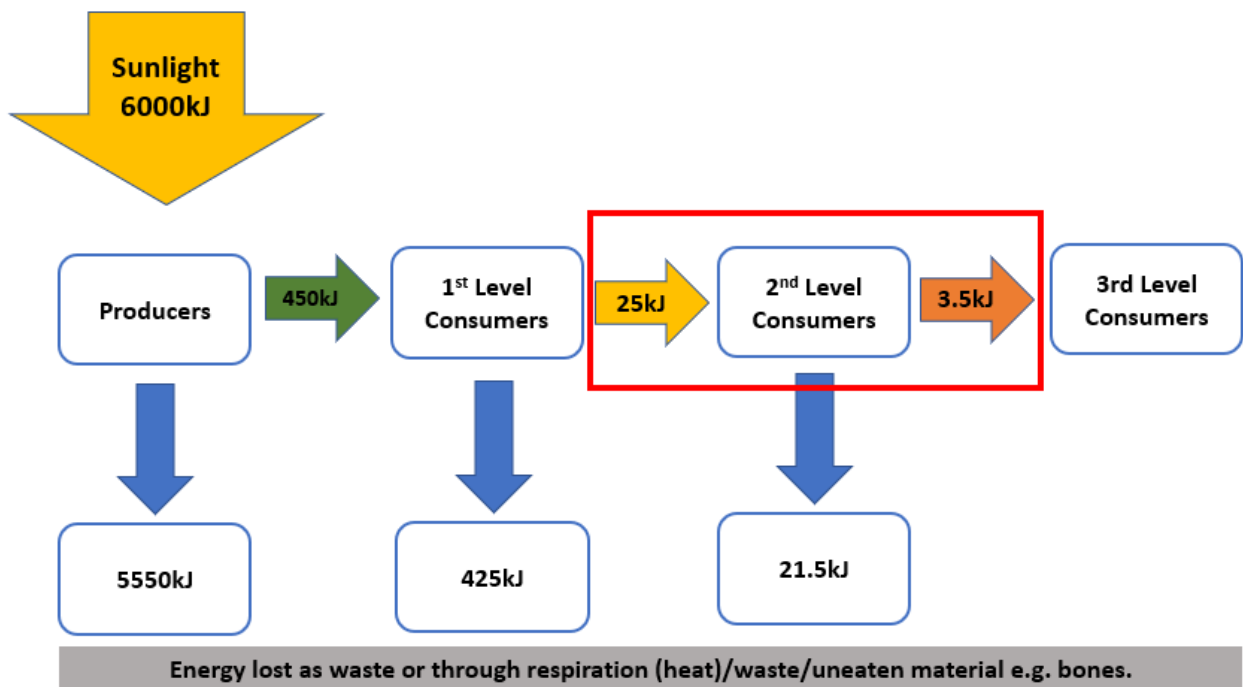
What would be a better way of representing this, that would create a true pyramid shape?

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?

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:

$$25\text{kJ} \div 450\text{kJ} \times 100 = 5.6\% \text{ efficiency}$$

÷

×

=

% efficiency

Now try working out how efficient producers are at trapping energy from the sun. Use the space below to show your working: