



- Outcomes:**
- I can draw a food chain
 - I understand Predators and Prey
 - I understand all about Producers and Consumers
 - I understand how energy goes up the food chain!

We're going to be working scientifically!

Step 1:

We all need energy to survive. Here on Earth, that means SUNLIGHT. The Sun is where the energy cycle starts for us. The Sun's energy goes into plants, and from the plants it then goes to animals.

Since all animals need energy, the way that energy transfers from one LIVING THING to another is called a FOOD CHAIN.

Fill in the missing words:

Energy comes from _____. Plants turn the Sun's energy into food. Because they produce food from the Sun's energy, they are called _____. Animals then eat these plants, and they are called _____.

Step 2:

So, plants form the basis of all food on earth. Next time you leave your peas on the plate, remember how important they are for life on earth!

We know also that animals eat plants to get the energy they need to survive.

The animals that eat plants directly are called _____ consumers. These guys are often eaten by other animals, which are called _____ consumers.

After this, larger animals then feed on these secondary consumers. These large animals are called _____. Predators that rarely get eaten themselves are called _____ predators. Crocodiles are apex predators within their environments.

Despite people being scared of apex predators, these predators are critical for a healthy ecosystem. Every link in the food chain is needed, or the ecosystem will start to fail.

Use these components to create a food chain (draw pictures of these things):

The Sun

Algae

Snails

Fish

Piranha

Crocodile

Extra points! Can you label each of the living things? (ie. Think of Producer, Consumer, Predator, prey, Apex Predator)



Challenge!

All this energy!

Can you name three things that an animal (including you!) would use energy for?

1. _____
2. _____
3. _____

If we eat too much food too often, we cannot use all the energy from our food. What do you think our bodies do then?

Answer: _____

All this stored energy is what moves up the food chain. The larger predators require more energy from their food.

As crocodiles grow, they eat larger and larger prey.

A baby crocodile will eat insects, small frogs and small fish. If we gave each of these items an 'energy unit' of 1, a young croc might need to eat several of these each day to provide the energy for it to grow.

A larger crocodile may require 50 units of energy per feed. How many of these small items would it need each feed?

Answer: _____

Do you think it would be easier for it to eat larger fish that each have, say, 25 units of energy?

Answer: _____

People are surprised when they hear that we feed our adult crocodiles only once each week. Unlike mammals, reptiles have a slow metabolism ('cold-blooded' is a familiar term). **Crocodiles simply do not require the same amount of energy as we do.**

However, as APEX PREDATORS, they gain the increasing amount of energy as it moves up the food chain, and they conserve that energy by being very efficient.

A saltwater crocodile in the wild that weighs 100kg would eat about 700g of food each week.

A man that weighs 100kg would eat almost that amount every day!

If the man ate as much in one day as a crocodile eats in a week, what percentage of food does a crocodile eat compared to a man?

Answer: _____ .

When crocodiles eat, much of that energy goes toward maintaining their body's cells, and toward growth: crocodiles keep growing all their lives. Very little energy is needed for metabolism. We need lots of energy to keep our body warm, and to be able to move around all the time, so we eat more than a crocodile does!