

**DINNER AT THE REEF – Who eats whom?**

Draw a line between the predator and its prey.



Little Fish



Sting Ray



Shark



Zooplankton



Sting Ray



Pytoplankton



Zooplankton



Little Fish

## How much prey do I need?

How much food does it take to support a big predator at the top of the food chain?

In the 'Dinner at the Reef' game, each player has to catch two of their chosen prey to feed themselves:

- 1 small fish needs 2 algae and plankton
- 1 big fish needs 2 small fish
- 1 shark needs 2 big fish

But, if the small fish does not have enough algae and plankton, they will not survive. This means that the big fish might not have enough small fish to eat. If the big fish does not have enough food they will not survive and so the sharks will not have enough to eat either.

This means that really 1 shark needs more than 2 big fish to survive. It also needs 4 small fish to feed the 2 big fish and 8 algae and plankton to feed the 4 small fish.

You can work out how much prey it takes to sustain a shark by drawing diagrams like the ones below.

1. Use different sized circles to represent sharks, big fish, small fish and algae & plankton.
2. Draw a table with 4 rows.
3. Draw the number of sharks you are trying to feed in the top row:



1 Shark

4. For every shark, draw 2 big fish in the row below (and link them by drawing lines between them):

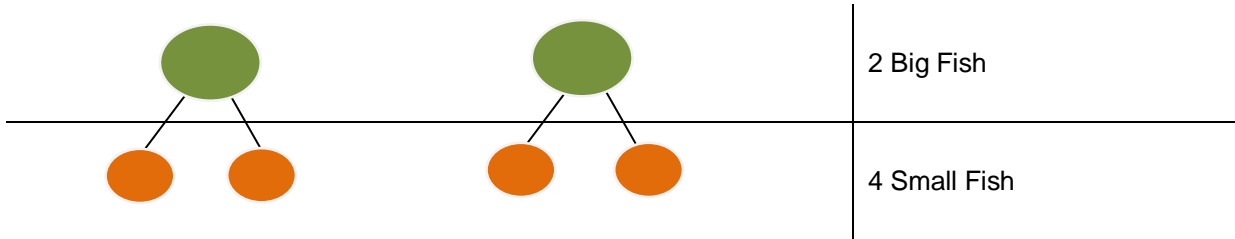


1 Shark

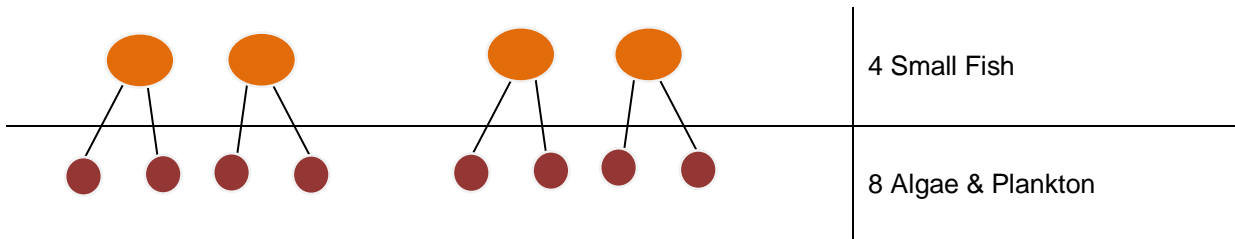


2 Big Fish

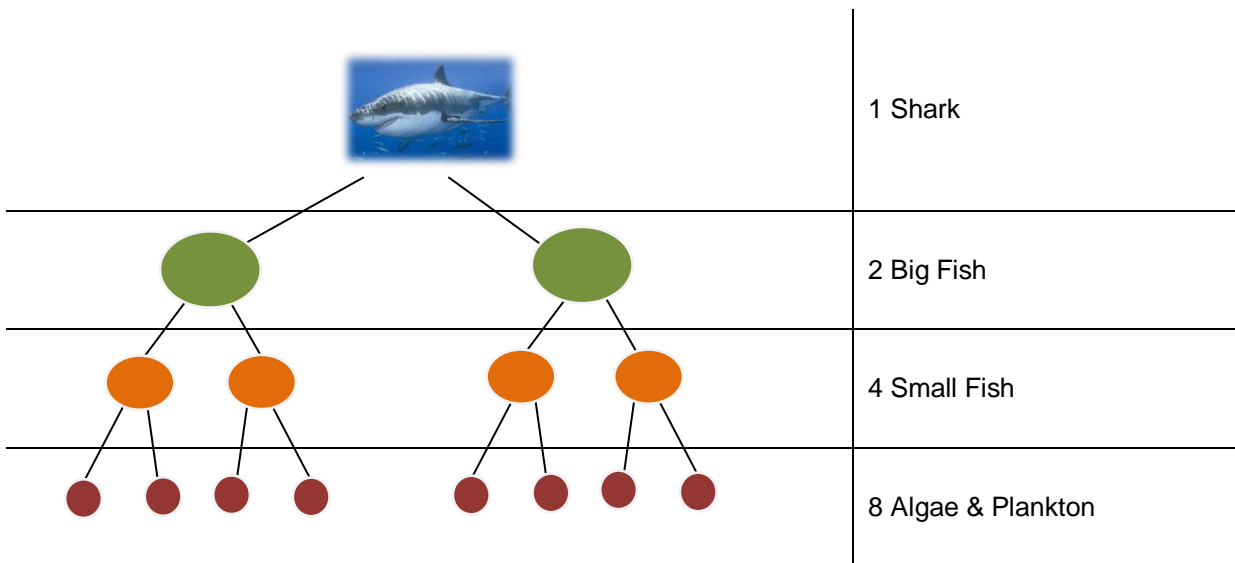
5. Then for every big fish, draw 2 small fish in the row below that:



6. For every small fish, draw 2 algae & plankton in the row below that:



7. Then, add up how many circles there are in each row:



**How much prey does it take to feed 1 shark? 14**

So, for 1 shark you need 2 big fish, 4 small fish and 8 algae & plankton.

8. Add these together:  $2 + 4 + 8 = 14$  prey

Now you try it:



2 Sharks



Big Fish



Small Fish



Algae &  
Plankton

How much prey does it take to feed 2 sharks?



3 Sharks



Big Fish



Fish

Small



Algae &  
Plankton

How much prey does it take to feed 3 sharks?

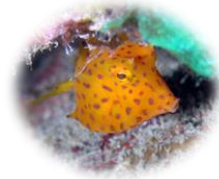


4 Sharks



Fish

Big



Small Fish



Algae &  
Plankton

How much prey does it take to feed 4 sharks?



1 Sharks



Big Fish



Small Fish



Algae &  
Plankton

**How much prey does it take to feed 1 shark?**