

THE FOOD PYRAMID GAME

FP

- Cut out the Food Pyramid cards along the dotted lines on each sheet (Food Pyramid cards have “FP” in lower right hand corner of each card). There are 32 cards.
- Played in the classroom - pin the placed cards to the wall or the board.
- Played in an open space - the teacher should define 4 lines (Algae - Plankton - Fish - Nessie) where the pupils can take their places with their cards as the opportunity to build the pyramid occurs.
- The object of the game is to make a Food Pyramid which resolves into a complete hypothetical structure supporting a 2 tonne “Nessie”.
- The pack of cards has:

8 ALGAE CARDS (A) 8 PLANKTON CARDS (P) 8 FISH CARDS (F) 8 NESSIE CARDS (N)

Arrange all the cards picture face up to make a FOOD PILE. The cards MUST be assembled from the TOP DOWNWARDS as shown in the table below. (Nº.1 is the top card and Nº.32 is the bottom card).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
N	F	P	A	F	P	A	N	P	N	F	N	A	P	A	P	F	N	F	A	A	P	N	F	A	P	N	F	A	P	F	N

- Now write the numbers 1-32 on the back of the cards to make re-ordering the pack simple and quick.
- Hold the Food Pile pack (to keep it in the correct assembled order) and ask the first pupil to take the top card and they must try to place it in a pyramid constructed to the following rule.

RULES FOR PLACING CARDS IN THE PYRAMID

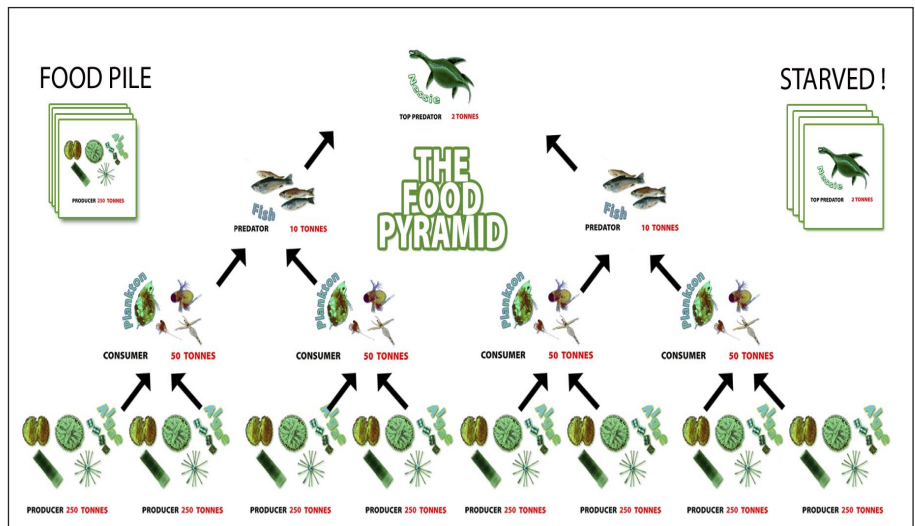
ALGAE are always placed **SIDE BY SIDE** and form the pyramid **BASELINE**.

PLANKTON can only be placed **ABOVE AND BETWEEN 2 ALGAE** cards.

FISH can only be placed **ABOVE AND BETWEEN 2 PLANKTON** cards.

NESSIES can only be placed **ABOVE AND BETWEEN 2 FISH** cards

- A great many cards (including the first 3 cards) will fail to find their correct place and are discarded to a pile which have “STARVED”.
- Pupils continue to draw cards until the pack is finished, at which point the pyramid will be complete.
- Once the pyramid is complete,:
Ask pupils to add up the total weight of each level of the pyramid.



It is then evident that: **2000 tonnes of ALGAE support 200 tonnes of PLANKTON which supports 20 tonnes of FISH which supports only 2 tonnes of NESSIE!**

- **Ask pupils** - If Nessie eats plankton and there were no fish to compete with, how many tonnes of Nessie would there be then? Answer: 20 Tonnes (Using the rule of tenths).
- This rule of thumb can then be applied to other habitats in showing that biomass is greatest at the lowest trophic levels.

NEXT: FOOD PYRAMID GAME EXTRAS - “OMNIVOROUS OPTIONS & POLLUTION PYRAMIDS”.