



Flathead Lake Biological Station

**FOOD WEB
DYNAMICS**

2020

Look at all of the plants below...

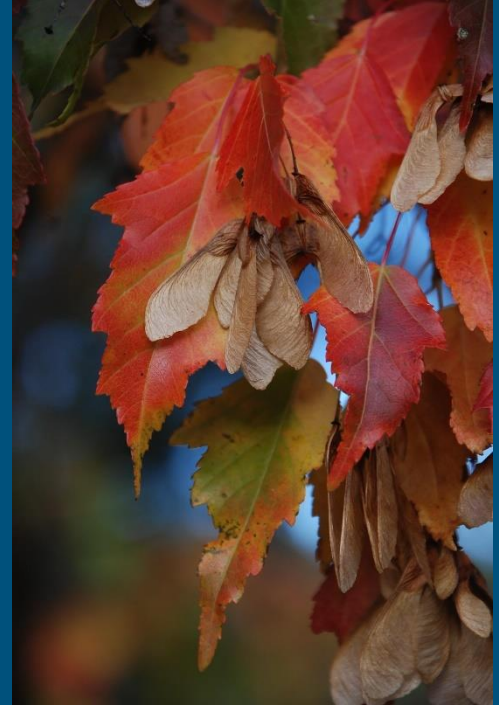
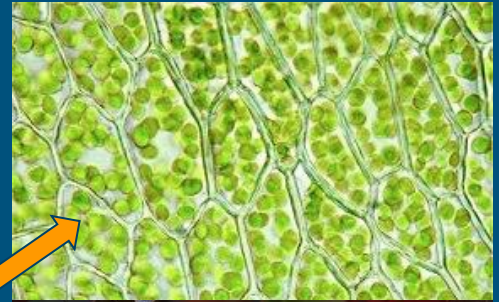
WHAT DO ALL PLANTS HAVE IN COMMON?



© Edward H. Hargrett

4 TRAITS ALL PLANTS SHARE...

1. They are all made of **MORE THAN ONE PLANT CELL**
2. They all make **FOOD** with **PHOTOSYNTHESIS**
3. They can all **SENSE AND RESPOND TO THEIR ENVIRONMENT**
4. They can all **REPRODUCE**



What do ALL plants need to
survive?



Look at all of the animals below...

WHAT DO ALL ANIMALS HAVE IN COMMON?



5 TRAITS ALL ANIMALS SHARE...



1. They are all made of **MORE THAN ONE ANIMAL CELL**
2. They all **EAT OTHER ORGANISMS** and **DIGEST (BREAK DOWN) FOOD**
3. They all **REMOVE WASTES** from their body
4. They can all **SENSE AND RESPOND TO THEIR ENVIRONMENT**
5. They can all **REPRODUCE**

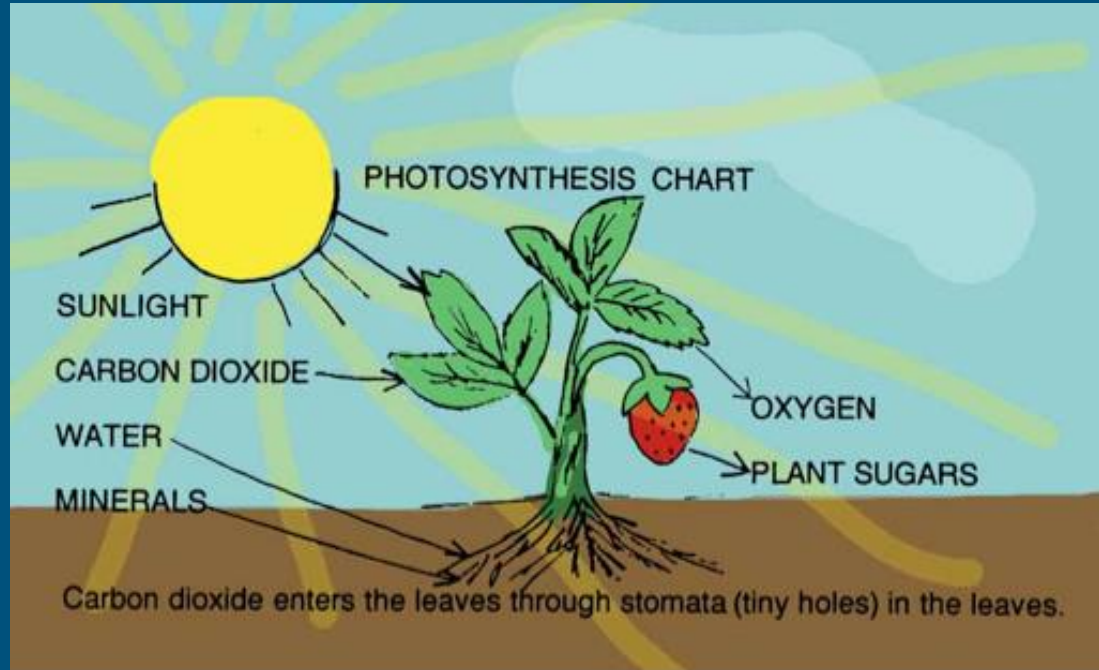


What do ALL animals need
to survive?



Producers

PRODUCERS MAKE THEIR
OWN FOOD



Consumers

CONSUMERS CANNOT MAKE THEIR OWN FOOD so they **EAT OTHER ORGANISMS!**

- What do **HERBIVORES** eat?



Consumers

CONSUMERS CANNOT MAKE
THEIR OWN FOOD so they **EAT**
OTHER ORGANISMS!

- What do **CARNIVORES** eat?



Consumers

CONSUMERS CANNOT MAKE THEIR OWN FOOD so they **EAT OTHER ORGANISMS!**

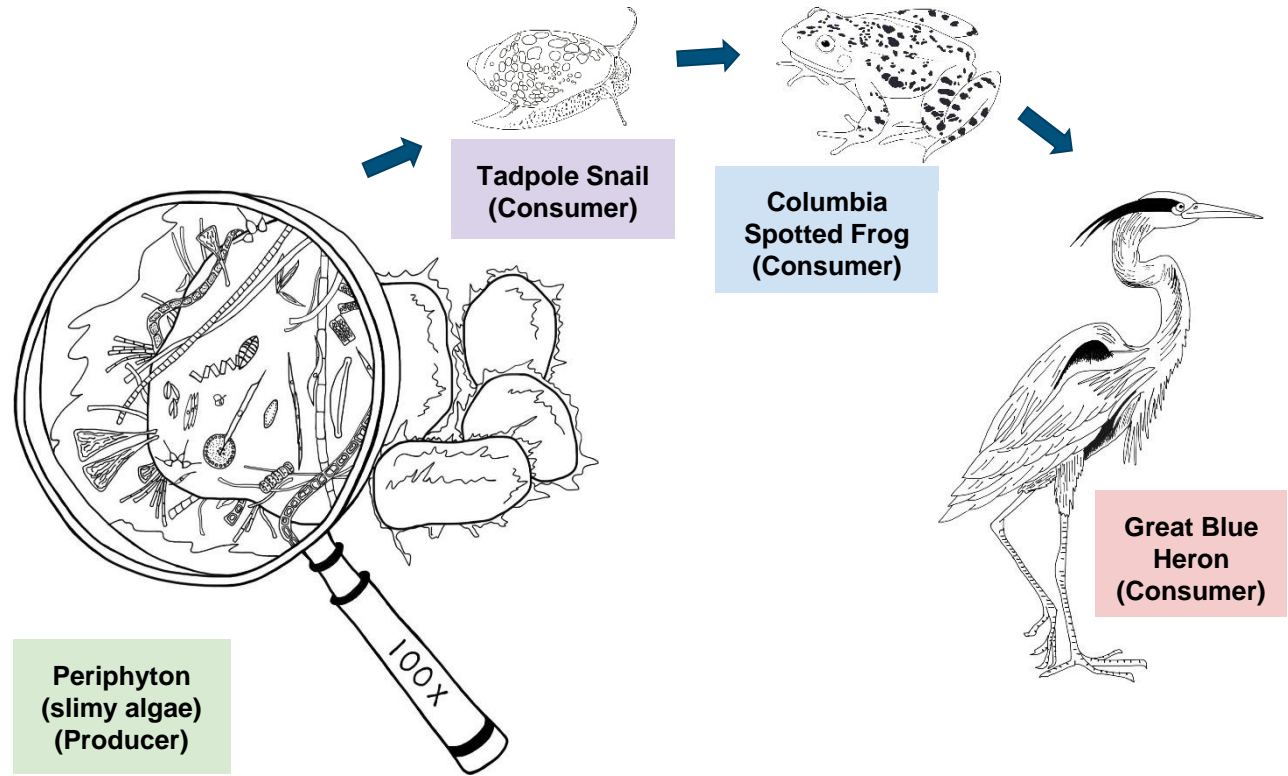
- What do **OMINIVORES** eat?





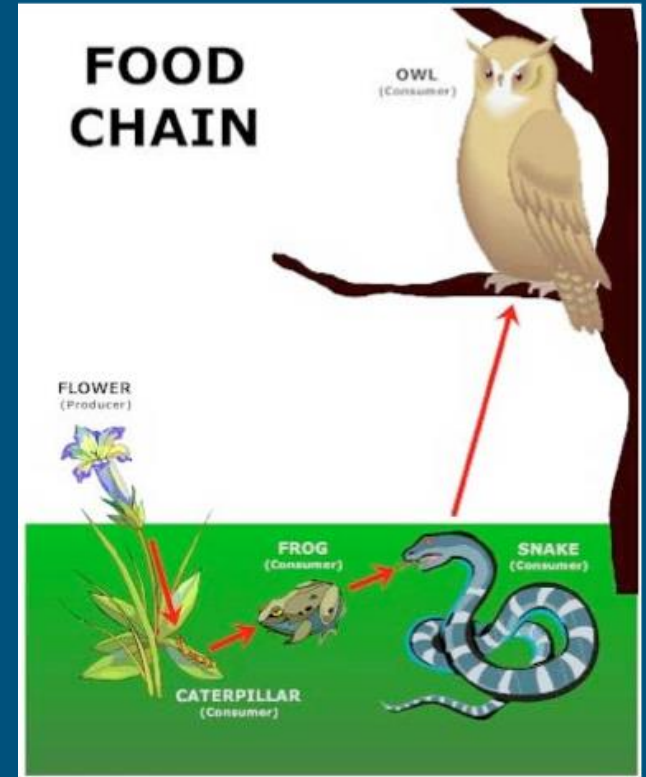
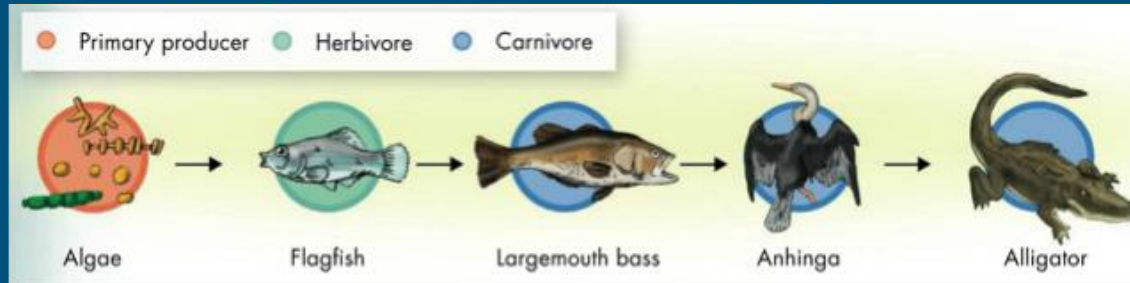
Food Chains

- A food chain in Flathead Lake...



Understanding a Food Chain

- A food chain shows the **FLOW OF FOOD ENERGY** through a habitat
- They all start with a **PRODUCER**
- They have 4 or more organisms



BUILD YOUR OWN FOOD CHAIN...

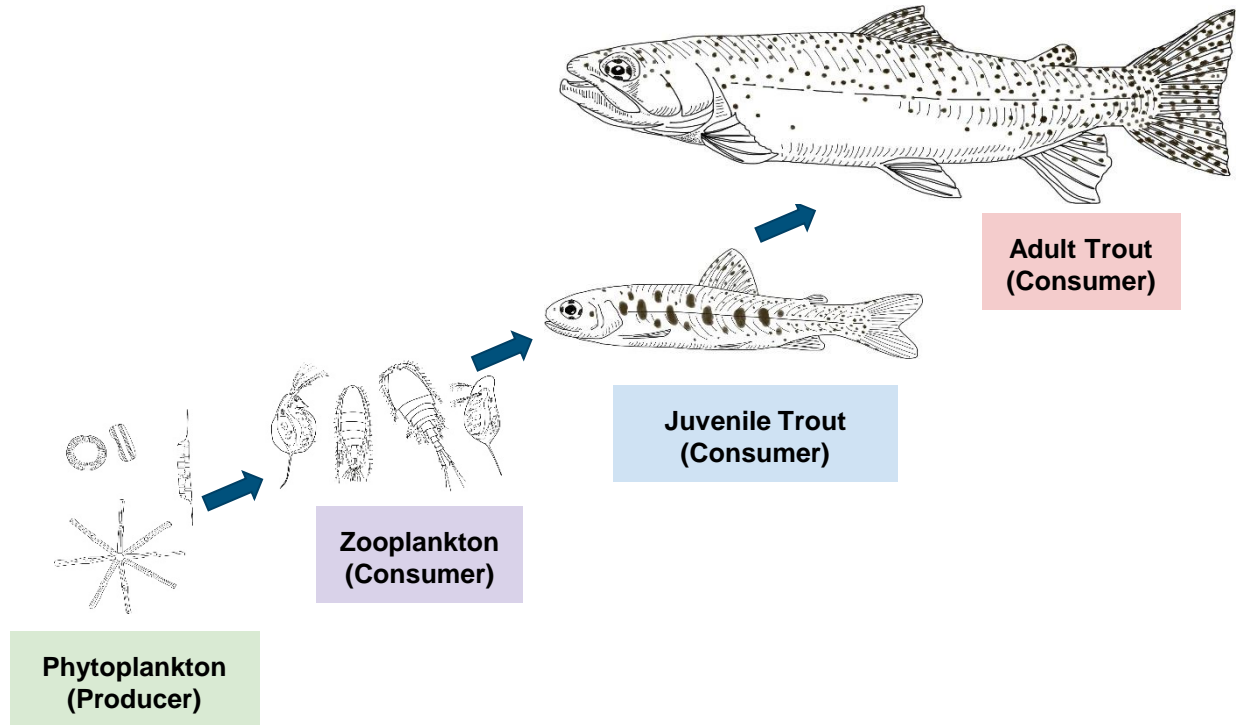
1. **CUT** out the organisms
2. **PLACE** the organisms in the order they would be eaten
3. **STOP** and have your teacher **CHECK IT**
4. **GLUE** the organisms as directed onto the poster





Food Chains

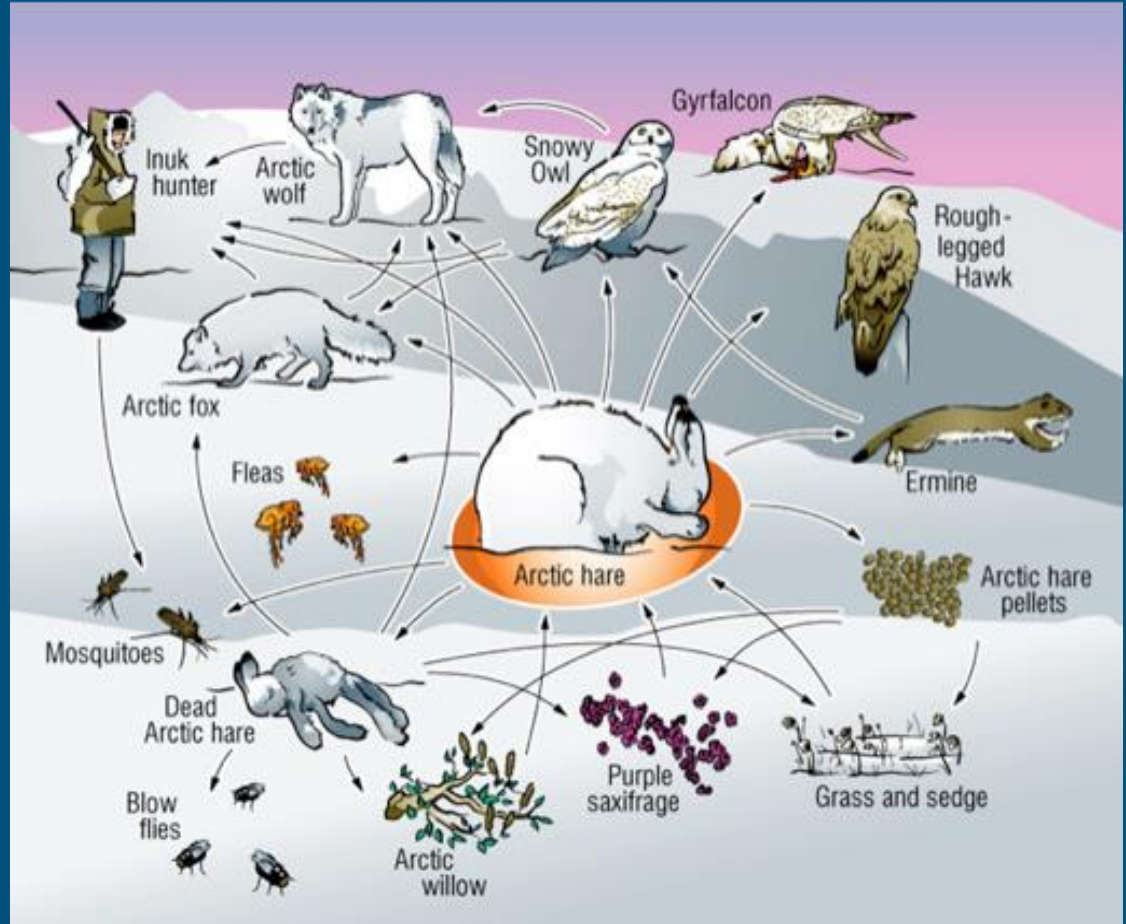
- A food chain in Flathead Lake...



Understanding a Food Web

- A food web is a group of interlocking food chains

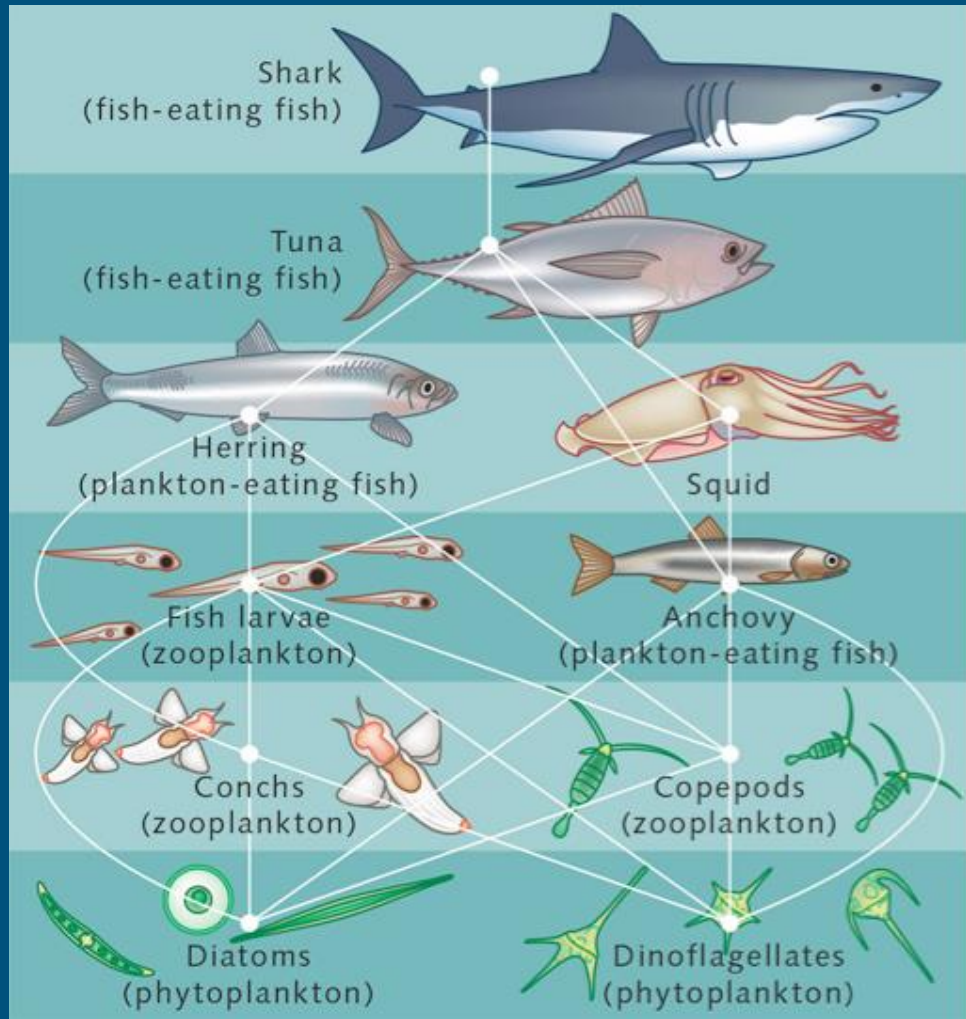
Arctic Food Web



Understanding a Food Web

- A food web is a group of interlocking food chains

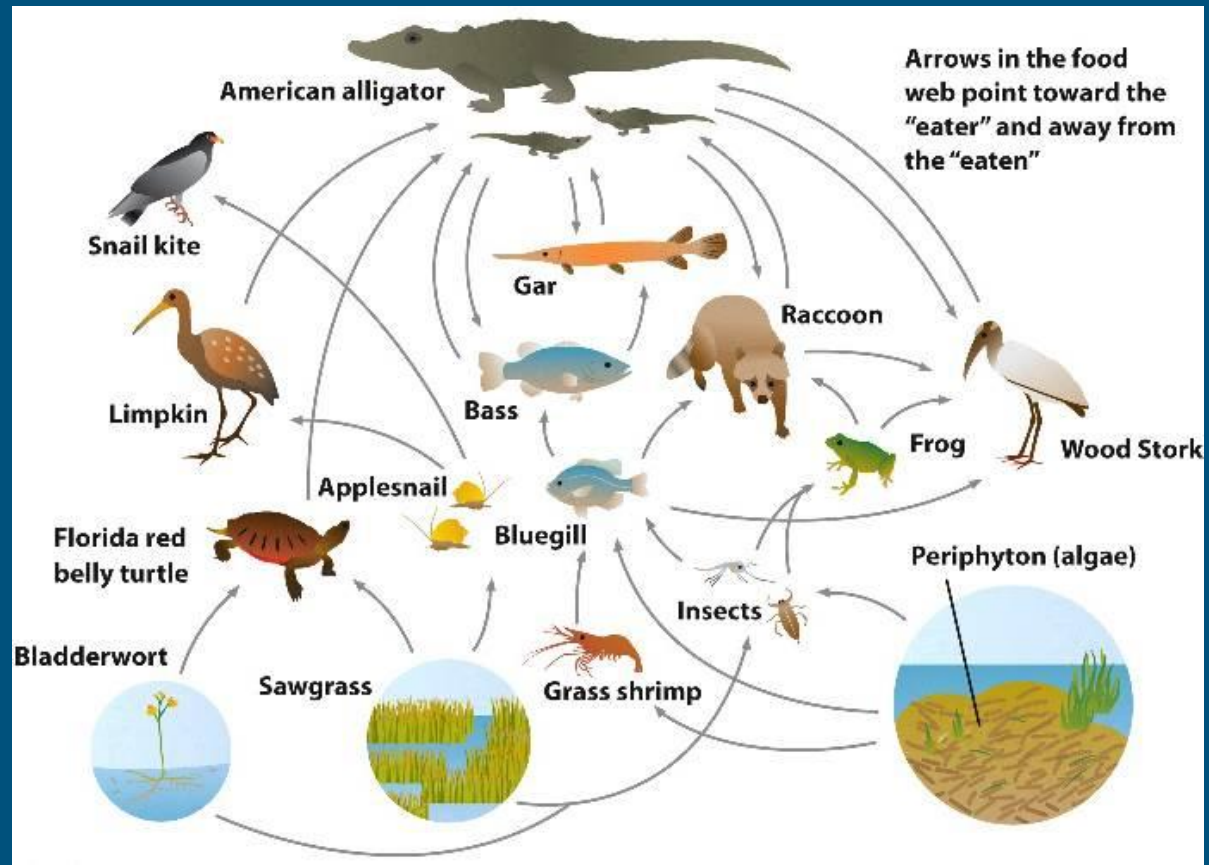
Ocean Food Web



Understanding a Food Web

- A food web is a group of interlocking food chains

Everglades Food Web



BUILD YOUR OWN FOOD WEB...

1. **CUT** out the organisms and descriptions
2. **MATCH** the organisms with their description
3. **ARRANGE** them on the poster to build your food web
4. **STOP** and have your teacher **CHECK IT**
5. **GLUE** the organisms and descriptions onto the poster
6. **DRAW ARROWS** that **MOVE UP** through the web



Photo Sources:

Slide 1:

Osprey <http://i2.mirror.co.uk/incoming/article7688892.ece/ALTERNATES/s615b/PAY-An-osprey-fishing-in-the-Scottish-Cairngorms.jpg>

Slide 2:

Aspen trees photo taken by Edward Marcinek <https://www.pinterest.com/explore/aspen-trees/>

Ponderosa pine

<https://static1.squarespace.com/static/53bc26abe4b0819b357a6c2e/53cd4b91e4b0e2fedf6f15b2/53cd4c24e4b0847eddfc755e/1405963300967/Pond+Bark.jpg>

Snow berries <http://www.monrovia.com/plant-catalog/plants/492/charming-fantasy-snowberry/>

Carrots <http://dingo.care2.com/pictures/greenliving/uploads/2016/05/carrots.jpg>

Pansy flowers <https://ae01.alicdn.com/kf/HTB1Ays3KFXXXXXaXXXXq6xXFXXX3/Bonsai-Flowers-Seeds-font-b-Pansy-b-font-Big-Flower-font-b-Pansy-b-font-Mix.jpg>

Indian paintbrush <http://www.ownbyphotography.com/IndianPaintbrush-0003C.jpg>

Slide 3:

Elodea cells photo by Holly Church

Maple leaves photo by Holly Church

Slide 5:

Hummingbird photo by Terry Sohl

Black bear cub https://www.reddit.com/r/bearsintrees/comments/1yiol8/black_bear_cub_in_tree/

Red fox <http://static.boredpanda.com/blog/wp-content/uploads/2016/07/fox-faces-roeselen-raimond-red-fox.jpg>

Frog <https://s-media-cache-ak0.pinimg.com/originals/af/af/04/afaf046b444ae29fcb2e2072e51d08c3.jpg>

Lobster http://thelobsterinn.com/yahoo_site_admin/assets/images/maine_Lobster.158180939_std.jpg

Jellyfish <http://ecop.pbworks.com/f/jellyfish.jpg>

Bee on flower http://whyfiles.org/wp-content/uploads/2013/02/bee_pollen2.jpg

Reptile <http://wp.vcu.edu/acrossthespectrum/wp-content/uploads/sites/1922/2014/01/INSIDE-RESEARCH-reptile-feature-news.jpg>



Photo Sources:

Slide 6:

Red Blood Cells <https://s-media-cache-ak0.pinimg.com/originals/b7/8b/fc/b78bfcd994bf0642220090e4e63e1d8.jpg>

Scared Cat <https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTrNoQAhOEgCBpaE5i33tsOaybVoqt0QNjThM5uM94bDGZuZLFR>

Oragutan <http://funtooo.com/wp-content/uploads/2013/02/Peeing-Level-Epic....LOL.....jpg>

Bird with extra legs http://static.boredpanda.com/blog/wp-content/uploads/2016/01/cute-bird-parents-fb4__700-png.jpg

Slide 8:

Photosynthesis diagram <https://loyalgardeners.files.wordpress.com/2012/10/photosynthesis.jpg>

Slide 9:

Hare photo by Frantisek Bumba at www.naturfoto.cz

Slide 10:

Lion http://www.wallpaperup.com/649265/lion_lions_predator_carnivore_cat_cats_s.html

Slide 11:

Omnivore diagram (source unknown)

Slide 12:

Simple Food chain https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcSRlojYWjUrj1Lq9gwuSqllRyhVTDSLfl7DTu25ffDT_gm413gD

Everglades food chain from the Miller Levine (2014) Biology textbook

Slide 14:

Arctic food web <https://s-media-cache-ak0.pinimg.com/originals/6d/4b/25/6d4b25889f255df43999a0245316dcca.jpg>



Photo Sources:

Slide 15:

Ocean food web http://worldoceanreview.com/en/files/2013/04/wor2_c1a_s12_Interrelationships_between_organisms.jpg

Slide 16:

Everglades food web http://bio1110.nicerweb.com/Locked/media/ch09/09_01.jpg

