



Painted Lady Butterfly

Upper Elementary

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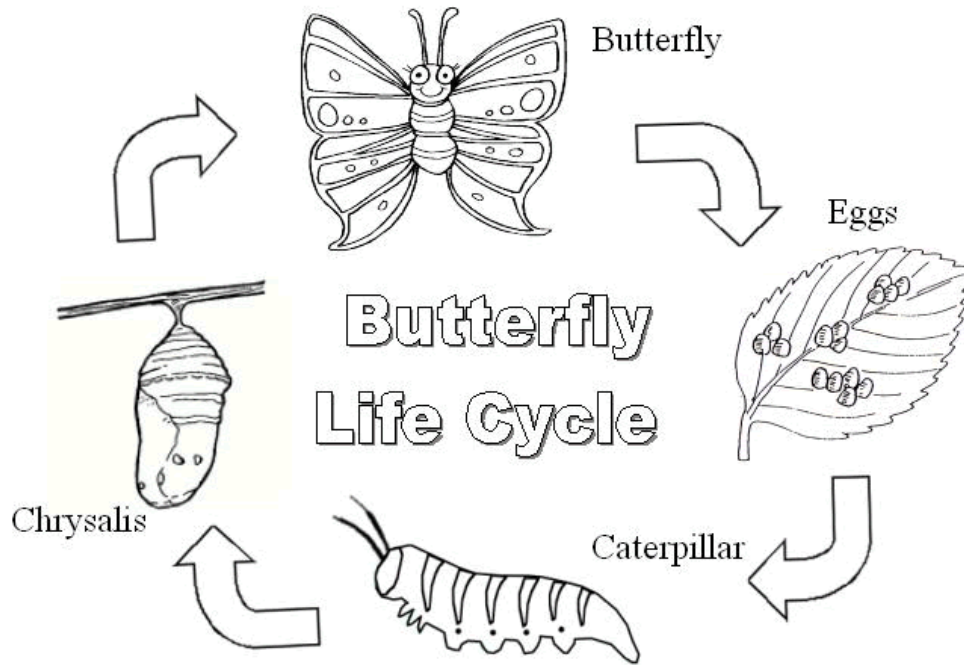
Hays County Master Naturalist

Let's have a show of hands for the people who have raised butterflies before



Tell me about your experiences while I write it on the board.

Did we get all the major steps?



Is a butterfly a plant or an animal?



How do you know?

Animals can be divided into two main groups

Vertebrates

Invertebrates



Which group are you in?

Butterflies belong to the Invertebrates group Insecta

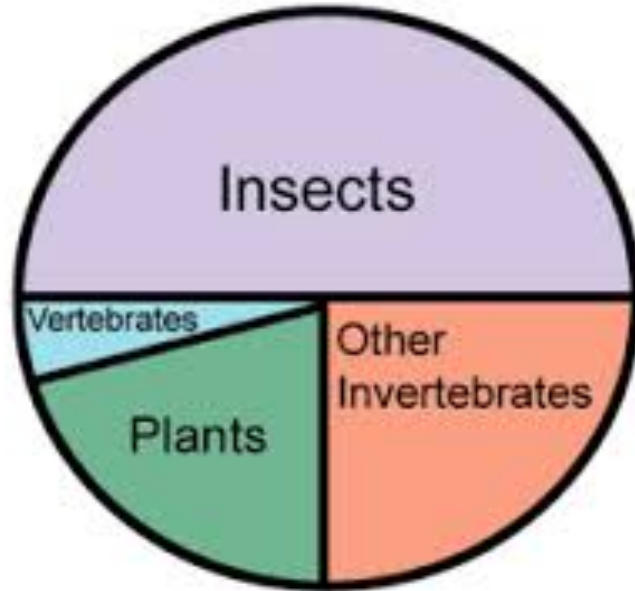


Chart of relative number of living organisms

What do you know about Insects?



What characteristics do all insects have?

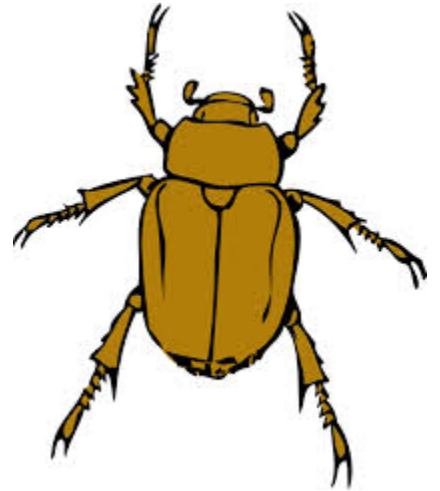
Major Insect Characteristics

Six legs

Head, thorax and abdomen

Antennae

Exoskeleton

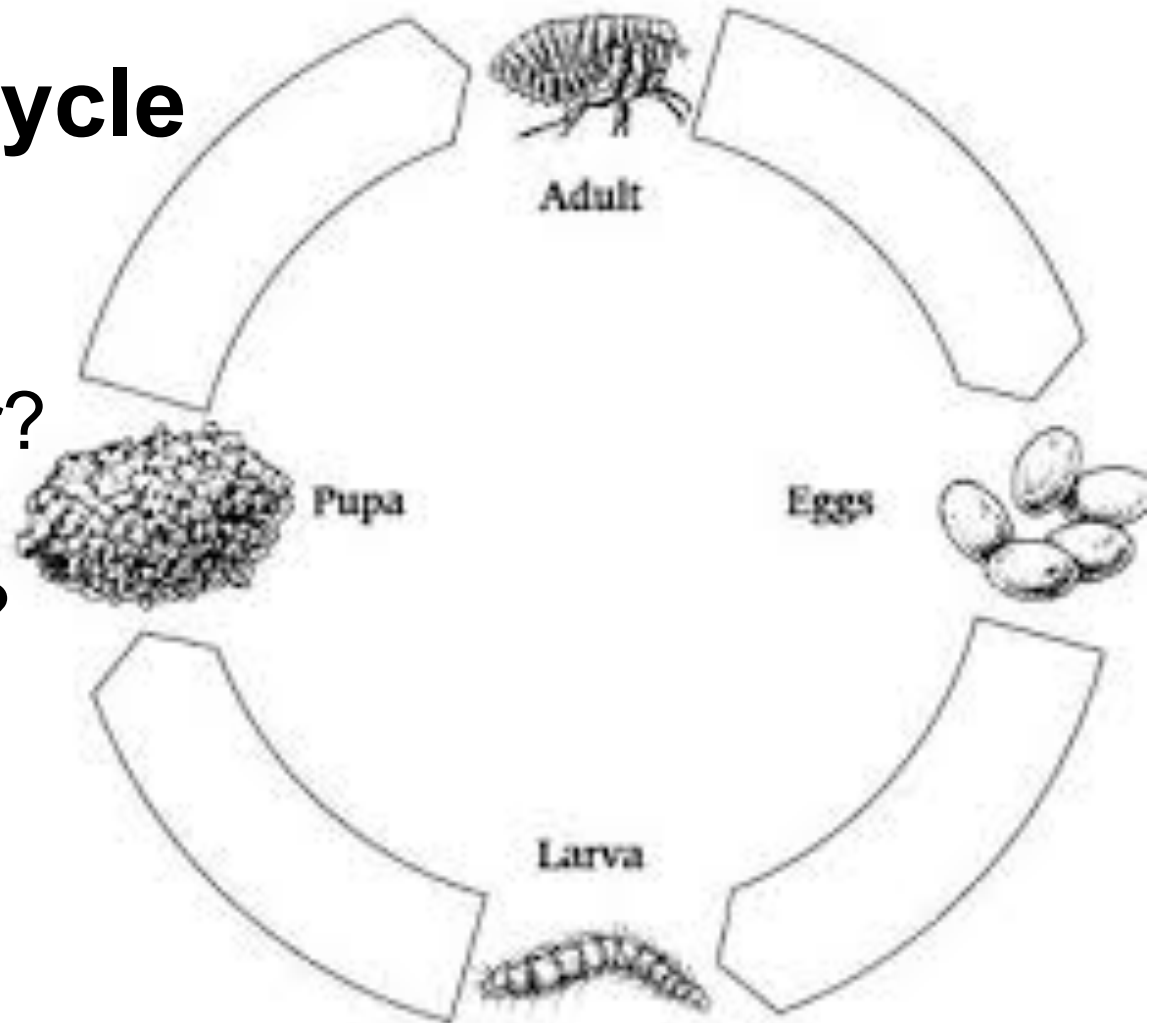


Complete life cycle of Insect

Where is caterpillar?

Where is chrysalis?

What is a cocoon?



Eggs





WEB formed by painted lady
caterpillar

What is the job of the larvae?

Eat

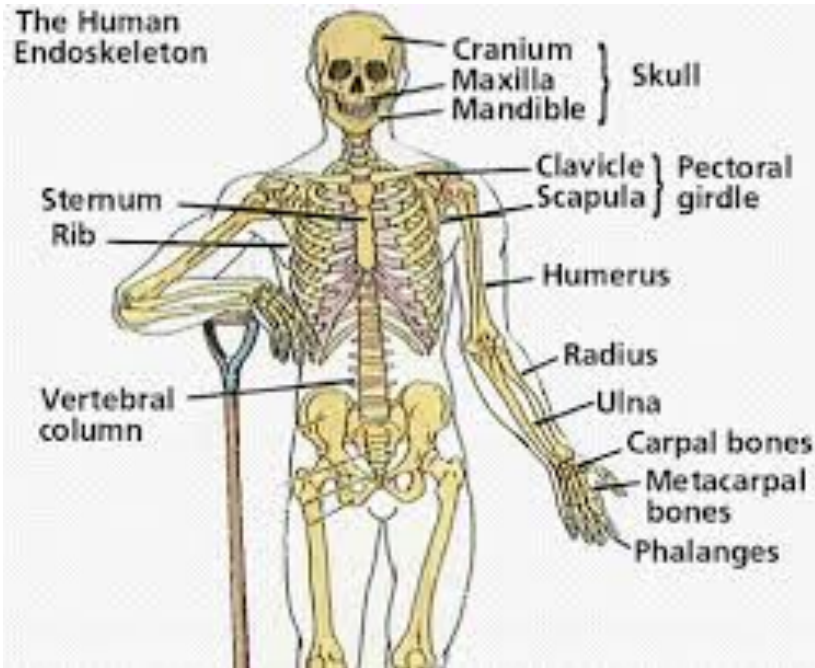
Grow

Poop



Skeleton types

Endoskeleton



Exoskeleton need to molt



Instars

The Painted Lady goes through 5 instars before it pupates.

The caterpillar will shed its exoskeleton 5 times.

If you look carefully you might see the tan flakes of exoskeleton in the plastic cup.

FRASS

Tell me again the job of the caterpillar.

What are those dark blobs?

Can you see them in the plastic cups?



Look carefully with a magnifying lens
and you may see:

Web

instar exoskeleton

frass



last instar “J” shape

This caterpillar is
getting ready to
pupate

It will become a
chrysalis



Slowly it will form a hard covering

This is the
Chrysalis

Remember to mist
your Chrysalis



Metamorphosis
is the process by
which the caterpillar
turns into a
butterfly





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A close-up photograph of a butterfly with orange, black, and white wings perched on a purple flower. The butterfly's proboscis is extended into the flower. The background is a solid green color.

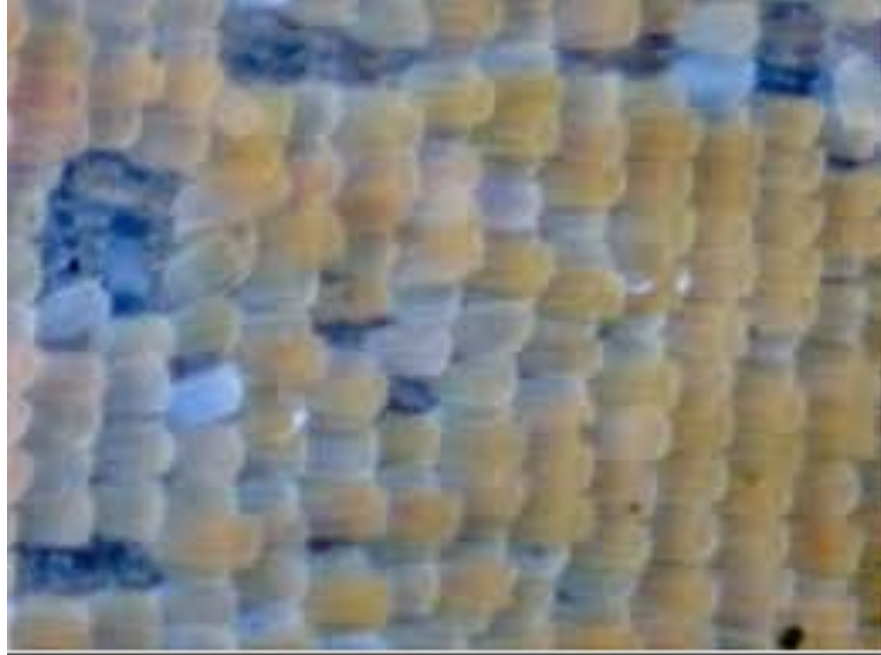
Adults eat nectar and
fruit

proboscis

How are butterflies
helpful
to plants?

Do not mist the adult butterfly

They have
scales on
their wings



Review. Now it is your turn

The words are mixed up for your enjoyment.

Draw the butterfly life cycle and include all 10 terms:

chrysalis

instars

eggs

adult

caterpillar

larvae

pupae

metamorphosis

frass

“J” shape



Who ate this leaf?

Caterpillars eat larvae food

Can we have butterflies without eaten leaves?

Adult butterflies eat different foods

Do all the caterpillars
survive?

List causes on the board

Predators



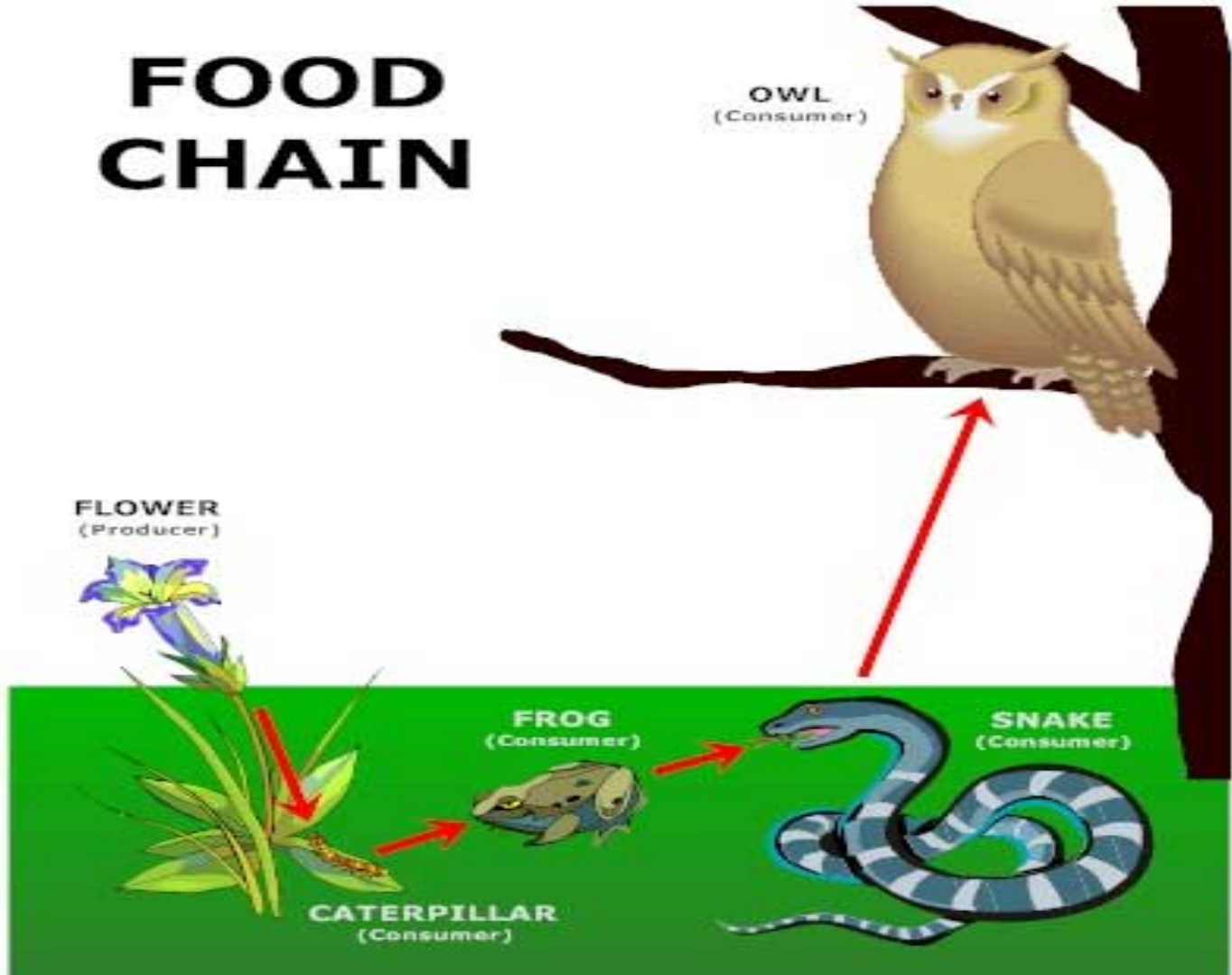
Parasites



Pesticides

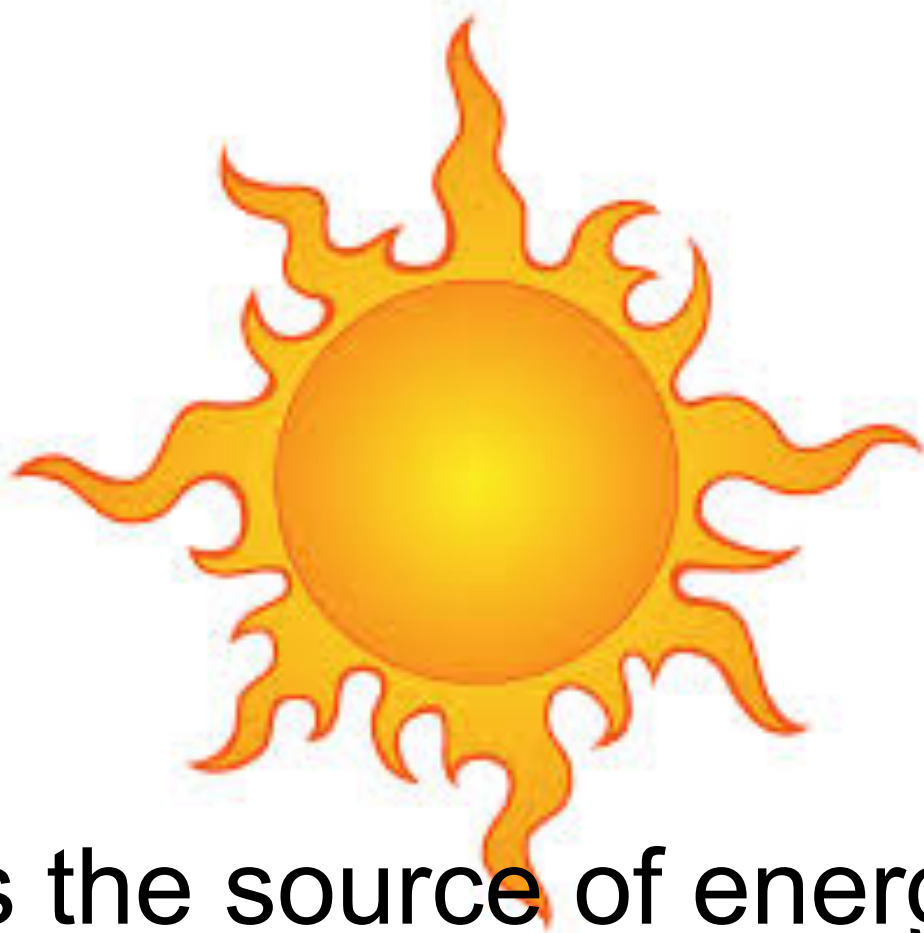


FOOD CHAIN

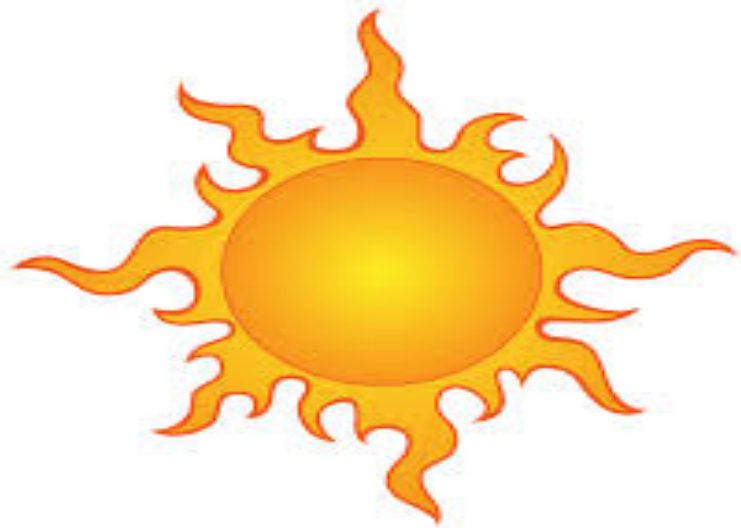


Something big is missing from that
picture

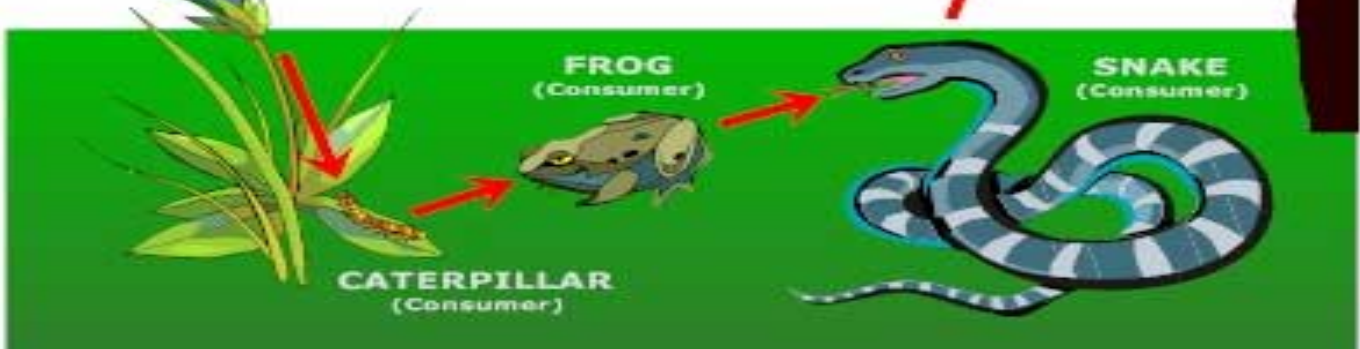
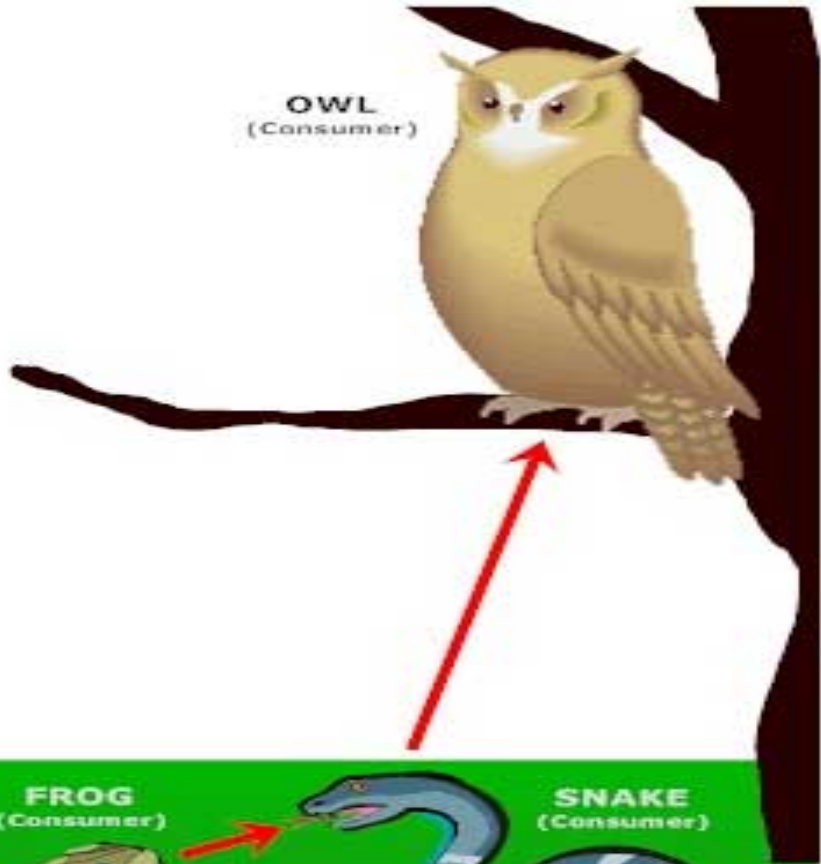
Where is the plant getting its
energy?



The Sun is the source of energy for all of the plants and thus all animals.



OWL
(Consumer)



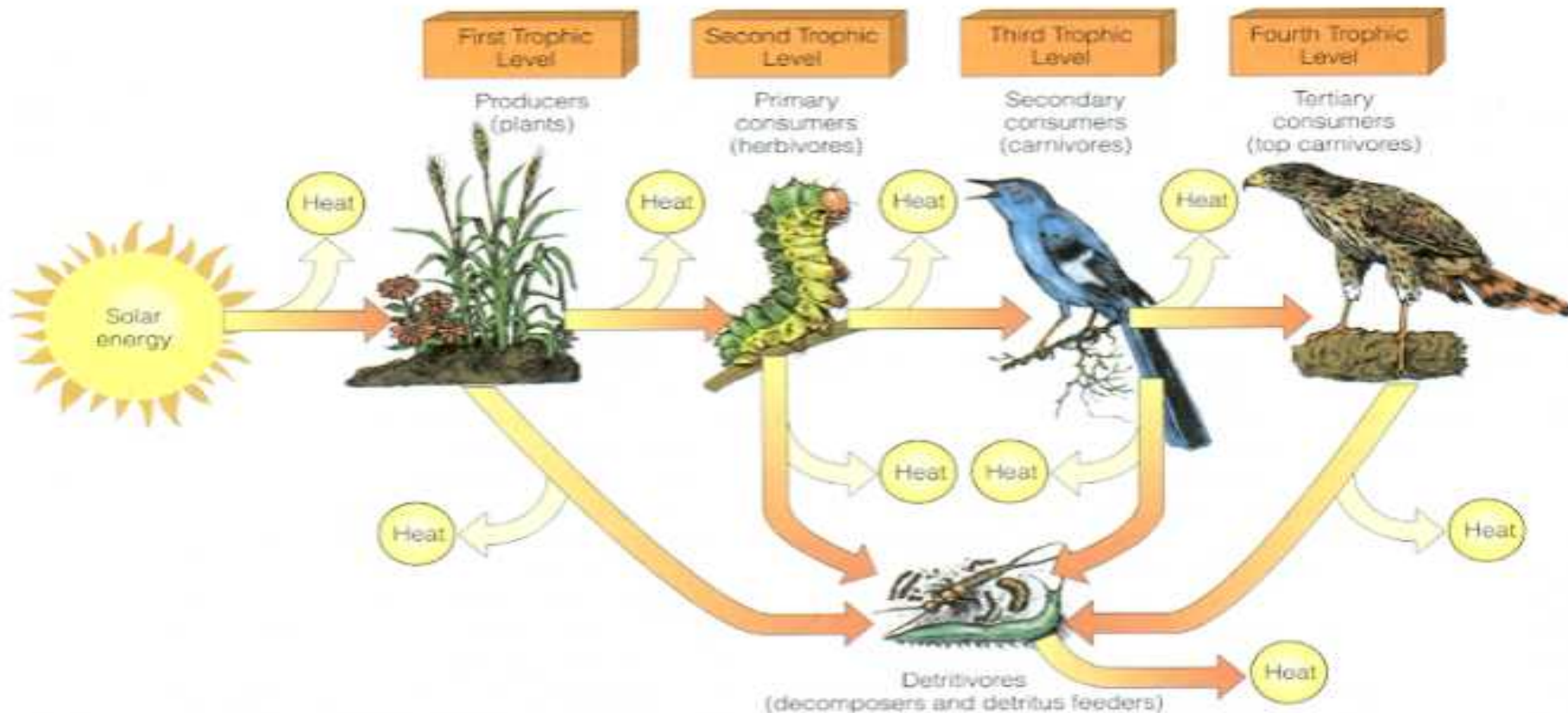


Figure 5-16 Conceptual model of a food chain. The arrows show how chemical energy in food flows through various *trophic levels* or energy transfers; most of the energy is degraded to heat in accordance with the second law of energy. Food chains rarely have more than four trophic levels.

When pesticides are put on the
plants
the animals are affected as well.

Name two ways the pesticides
affect the animals.

Using pesticides could

reduce the food supply for secondary
consuming animals

or

possibly pass poisons on to
animals up the food chain

Now you can complete the food chain worksheet.

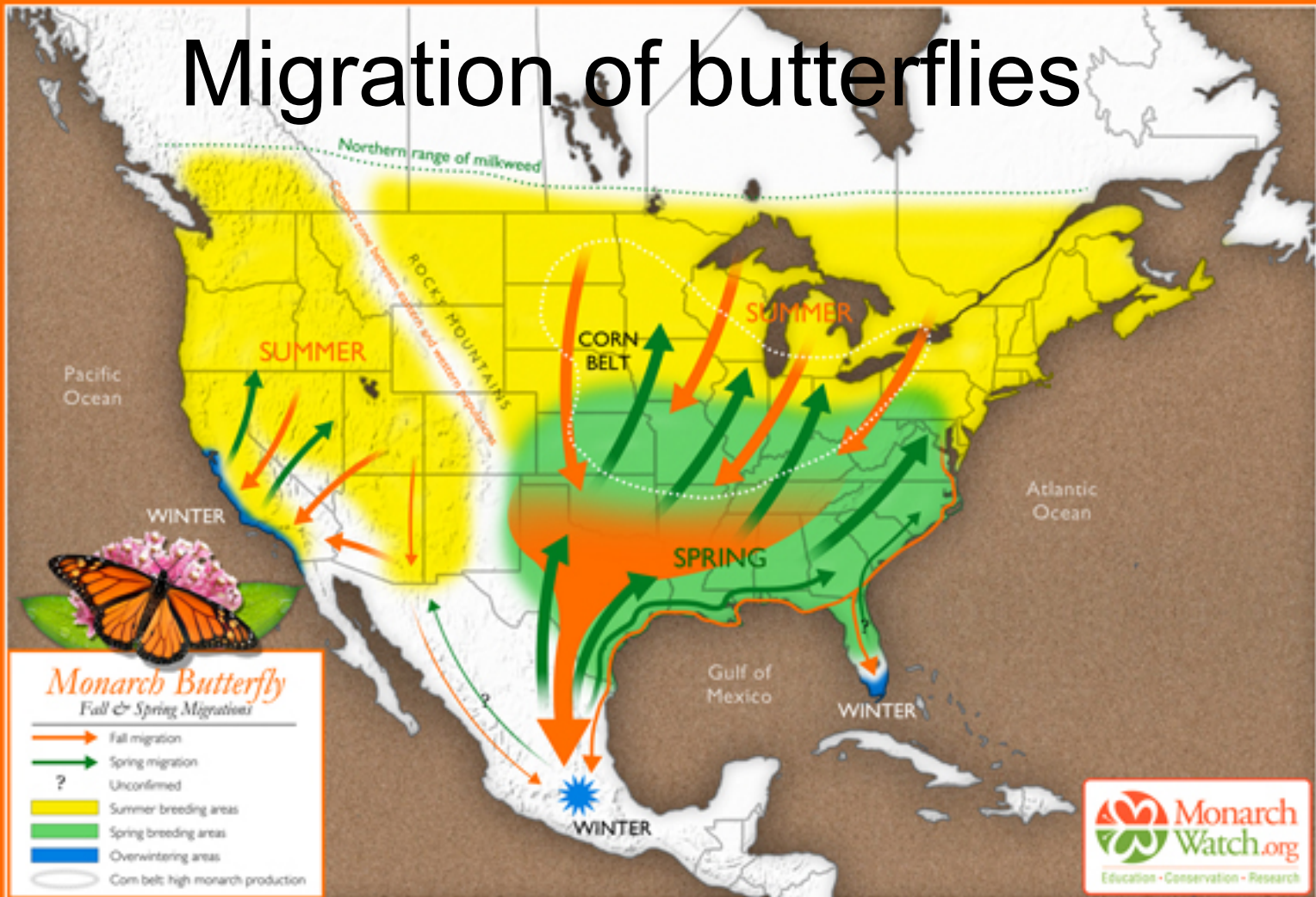
Additional information

Painted Ladies migrate, but not every year
or on a definite route

Painted ladies are also found in Europe and
Africa



Migration of butterflies



Monarch Butterfly

What is its larvae food?





(a) Blue jay eating monarch



(b) Vomiting reaction

Alkaloids in milkweed make the butterfly toxic.



Mimicry protects other butterflies from predation