

Food Chain, Food Webs, & Energy Pyramids Big Ideas

**WHAT'S
THE
BIG
IDEA?**

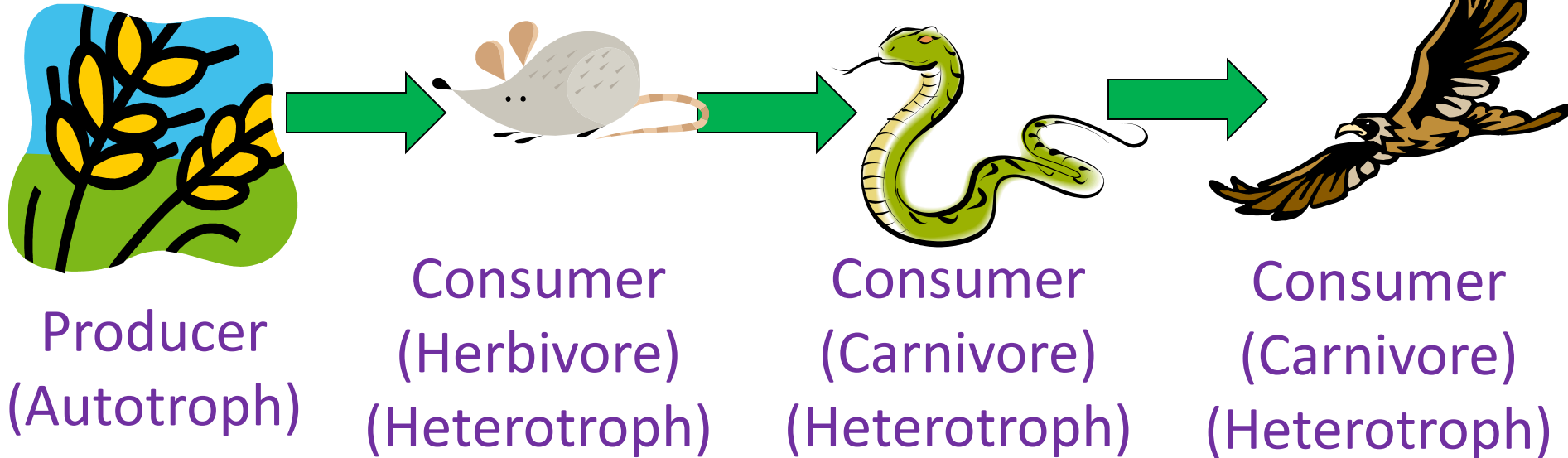


7.5C Diagram the flow of energy through living systems, including food chains, food webs, and energy pyramids

- I know that the → points in the direction energy flows.
- I can identify prey → predator relationships.
- I can differentiate between herbivore/carnivore/omnivore and producer/consumer/decomposer.
- I can infer a result with a given change in a food chain/web.
- I can label trophic levels.
- I can create an energy pyramid, given a food chain/web.
- I can label & explain the 10% rule.

Food Chain

- Shows how chemical energy is passed from one organism to another
- Arrow points in the direction energy moves
- Prey → Predator
- Classification Game
- Producer, Consumer, or Decomposer?



What kind of Omnivore is missing?

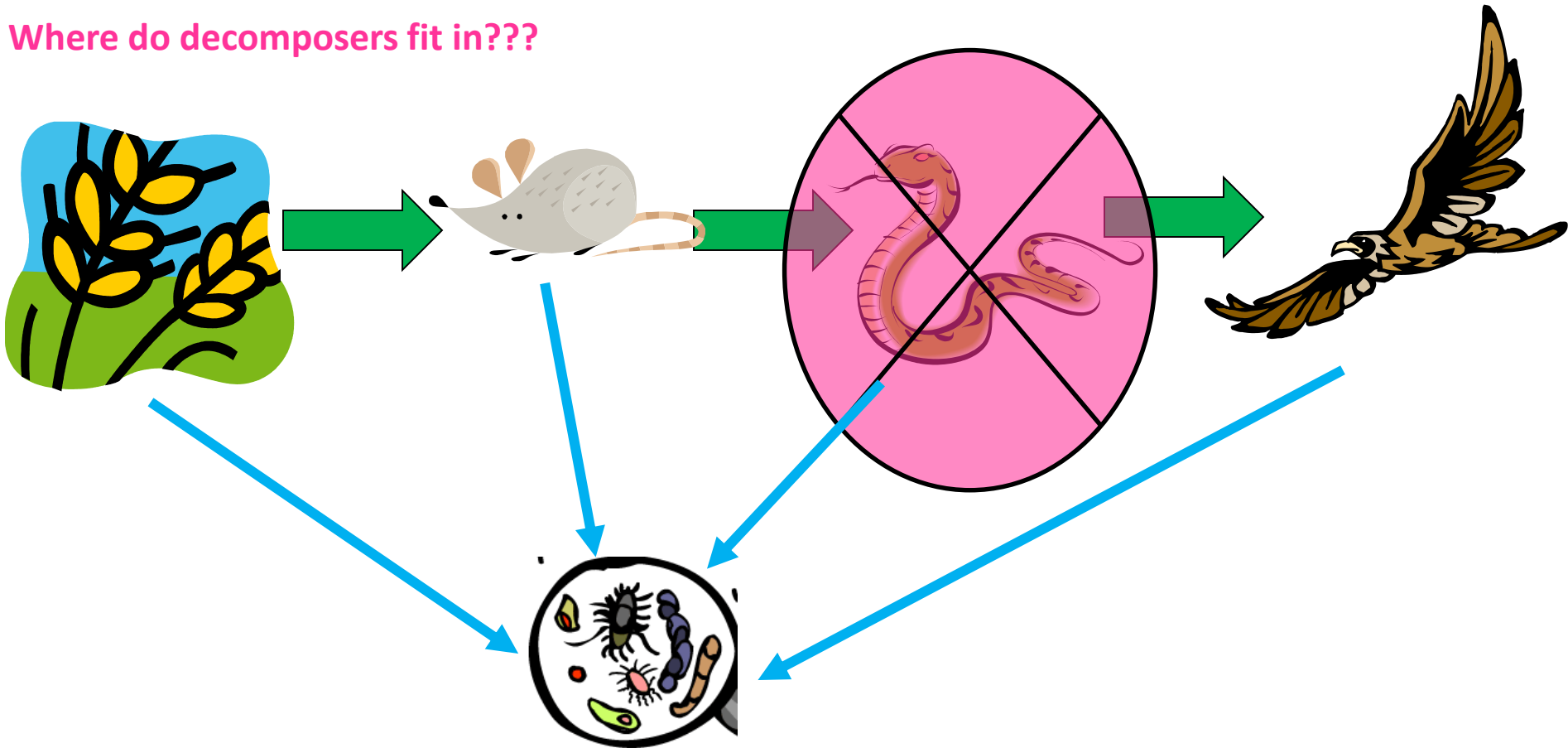
Herbivore	Omnivore	Carnivore
rabbit	pig	frog
sheep	bear	spider
deer	human	lion

Producer	Consumer	Decomposer
grass	cat	mushrooms
flower	cow	worms
algae	bird	fungi
House plant	fish	mold
cactus	human	bacteria
tree	butterfly	xxx

Food Chain

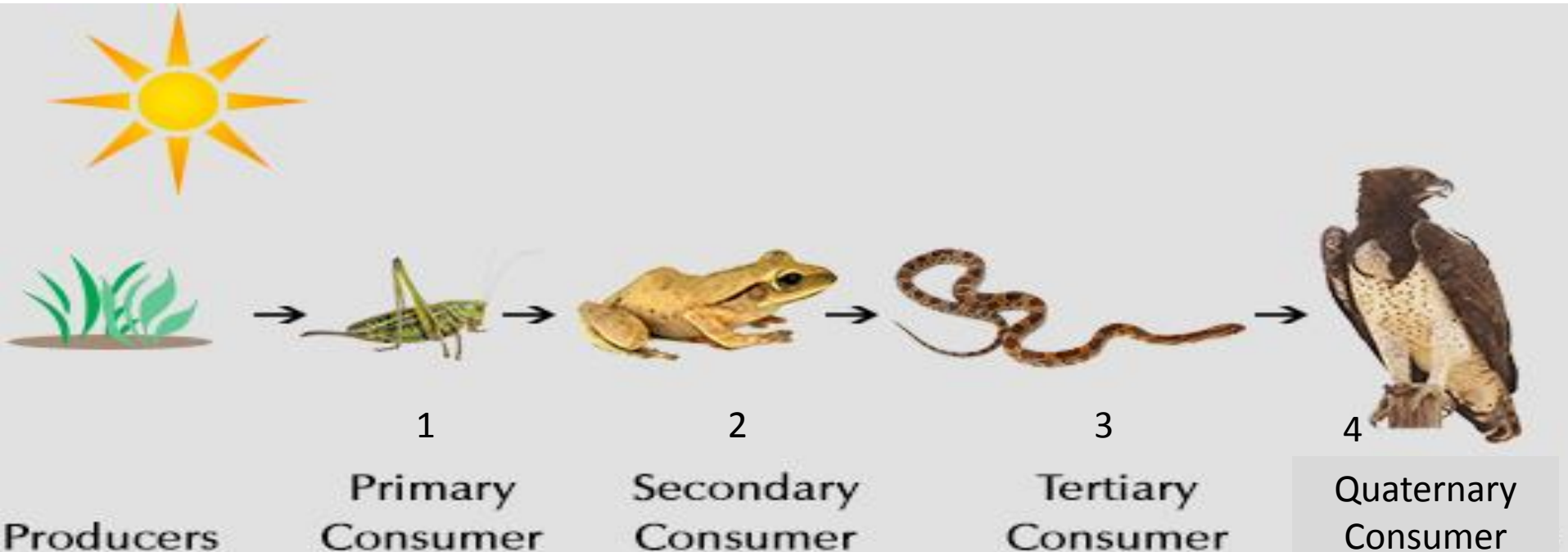
- What will happen if all the snakes die off?
 - Mice Population will increase
 - Hawk population will decrease

Where do decomposers fit in???



Energy Flow through Living organisms..

- Can be summarized by trophic levels
- Producers → Primary Consumers → Secondary Consumers → Tertiary Consumers → Quaternary Consumers
- Food Chain Game (identify order/trophic levels)



Texas Food Web

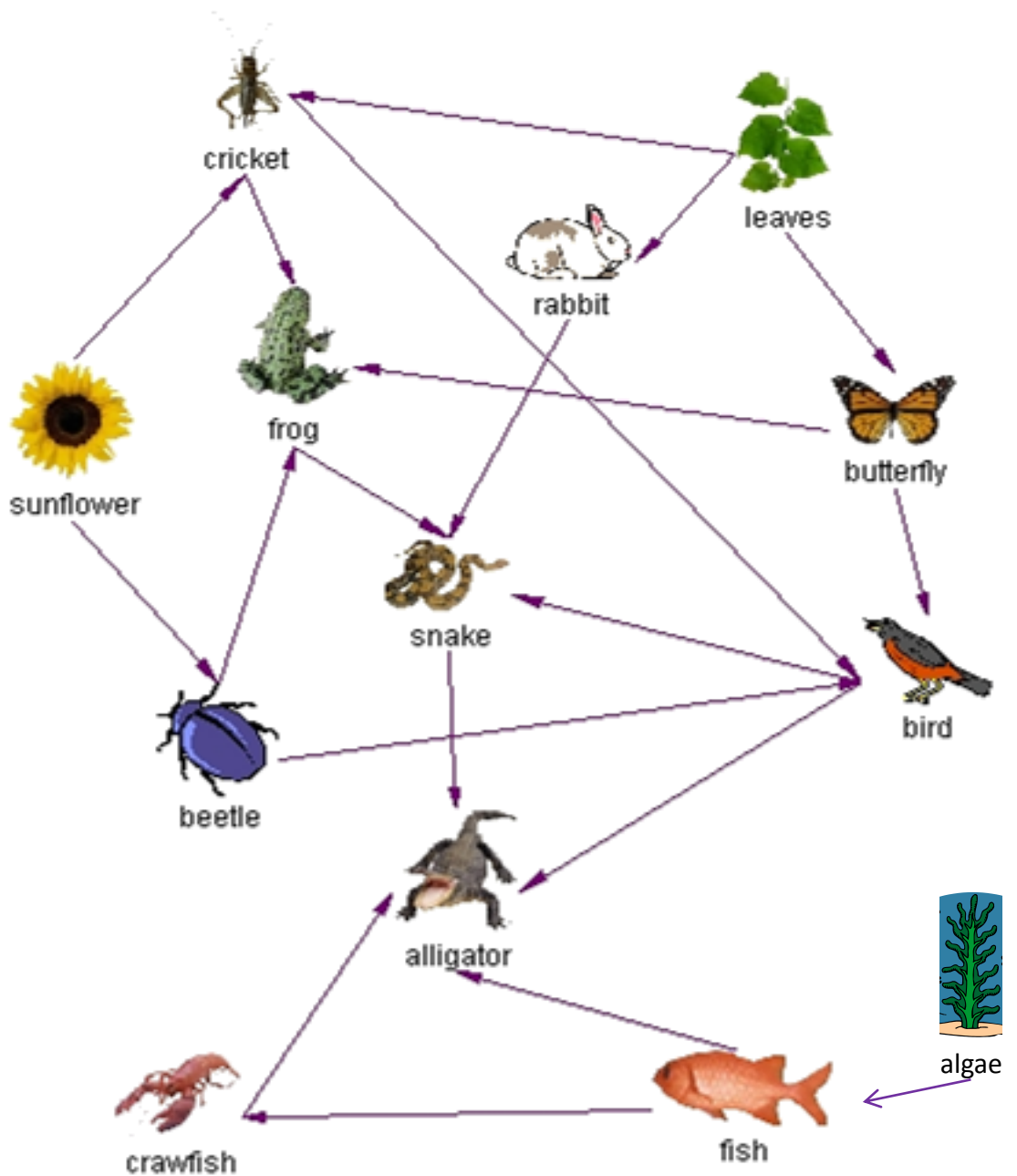
Which of these are producers?

Which of these are primary consumers?

Which of these are secondary consumers?

Which of these are tertiary consumers?

Which of these are quaternary consumers?



Texas Food Web

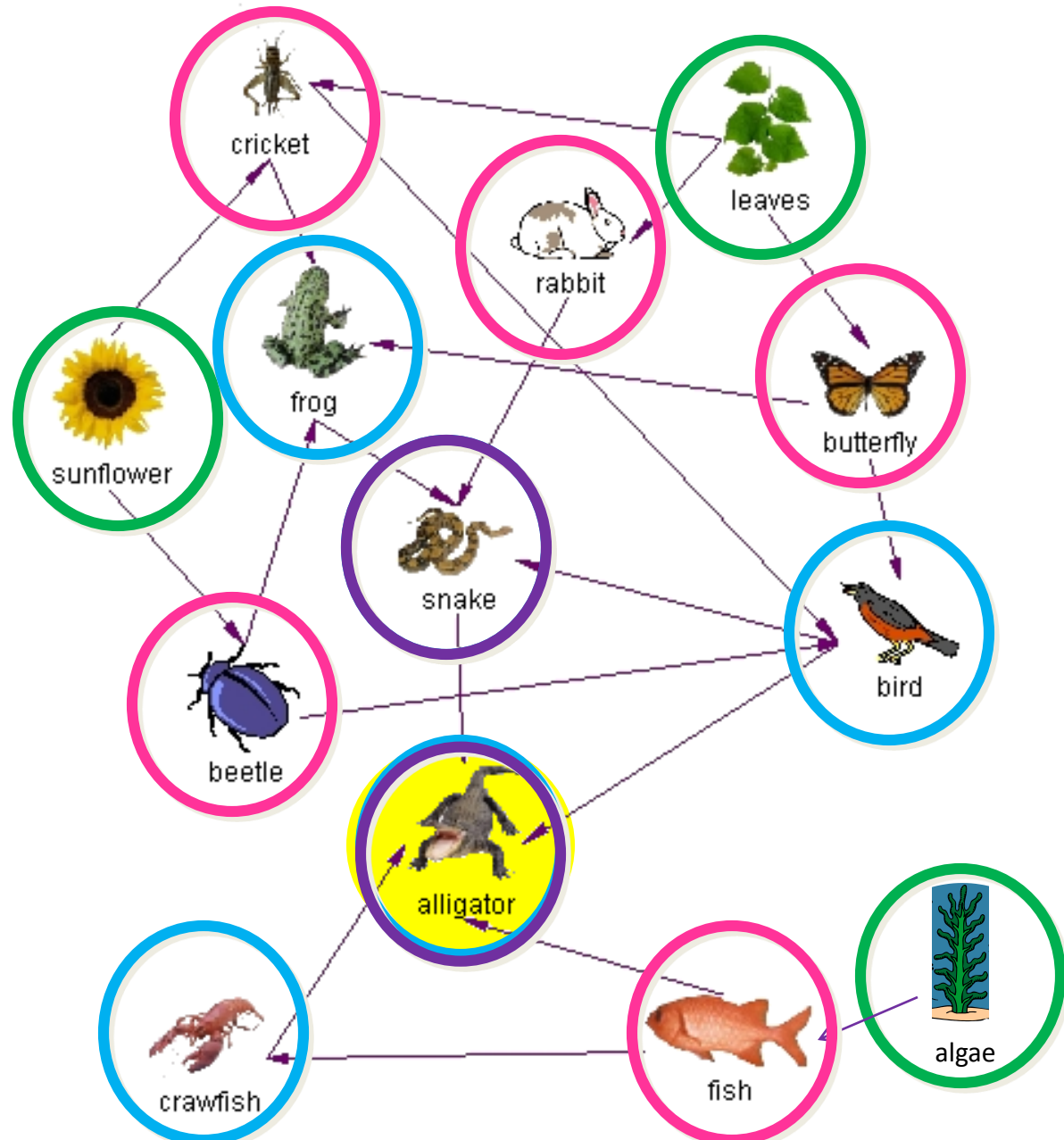
Which of these are **producers**?

Which of these are **primary consumers**?

Which of these are **secondary consumers**?

Which of these are **tertiary consumers**?

Which of these are **quaternary consumers**?

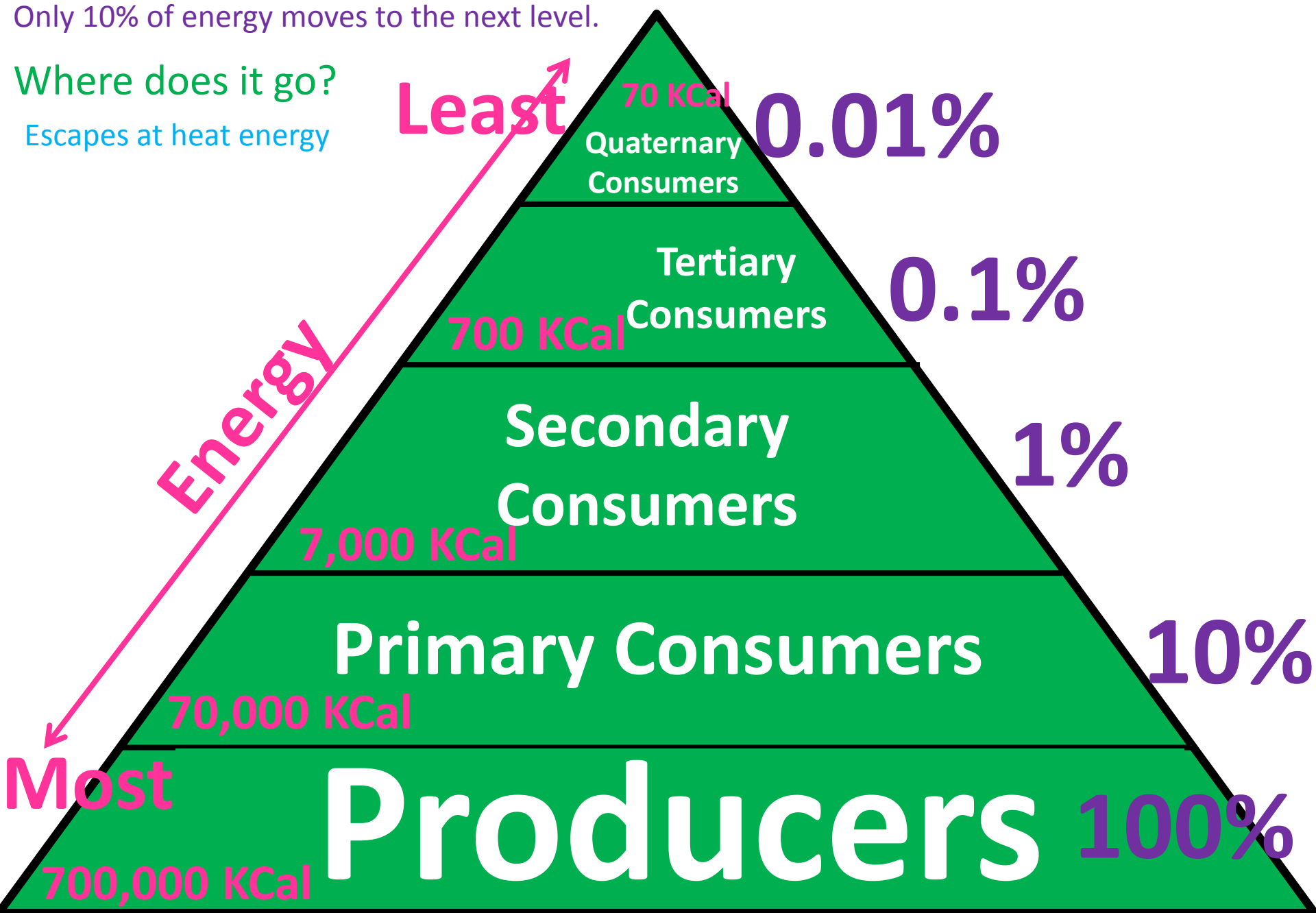


Which trophic level has the GREATEST amount of energy available?

Only 10% of energy moves to the next level.

Where does it go?

Escapes at heat energy



Your turn...

- Label the trophic level of each organism.
- Label the % of available energy.
- What would happen if all the trout died?

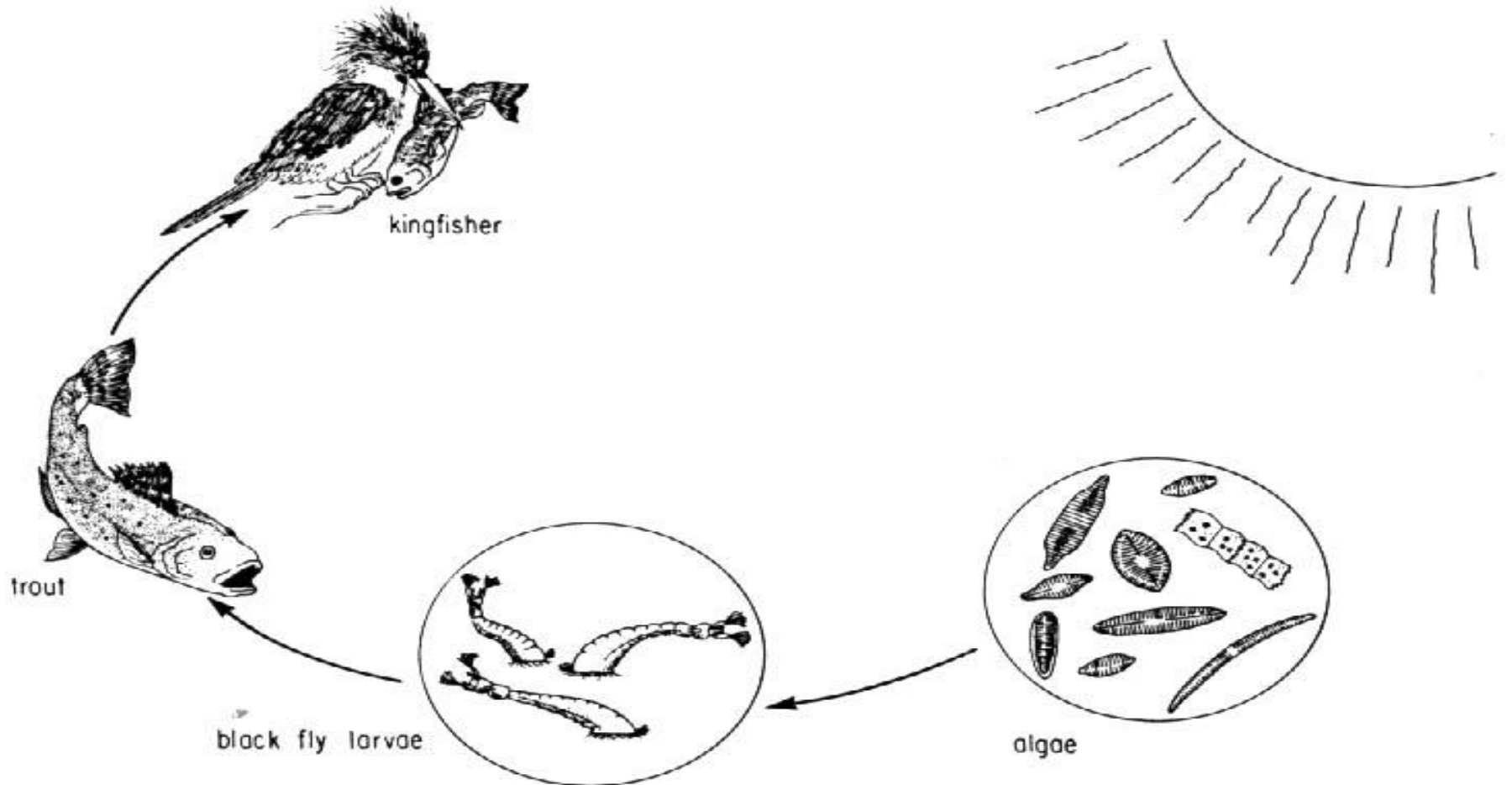


FIGURE 2-3: Stream food chain.

- Label the trophic level of each organism.
- Label the % of available energy.
- What would happen if all the trout died?

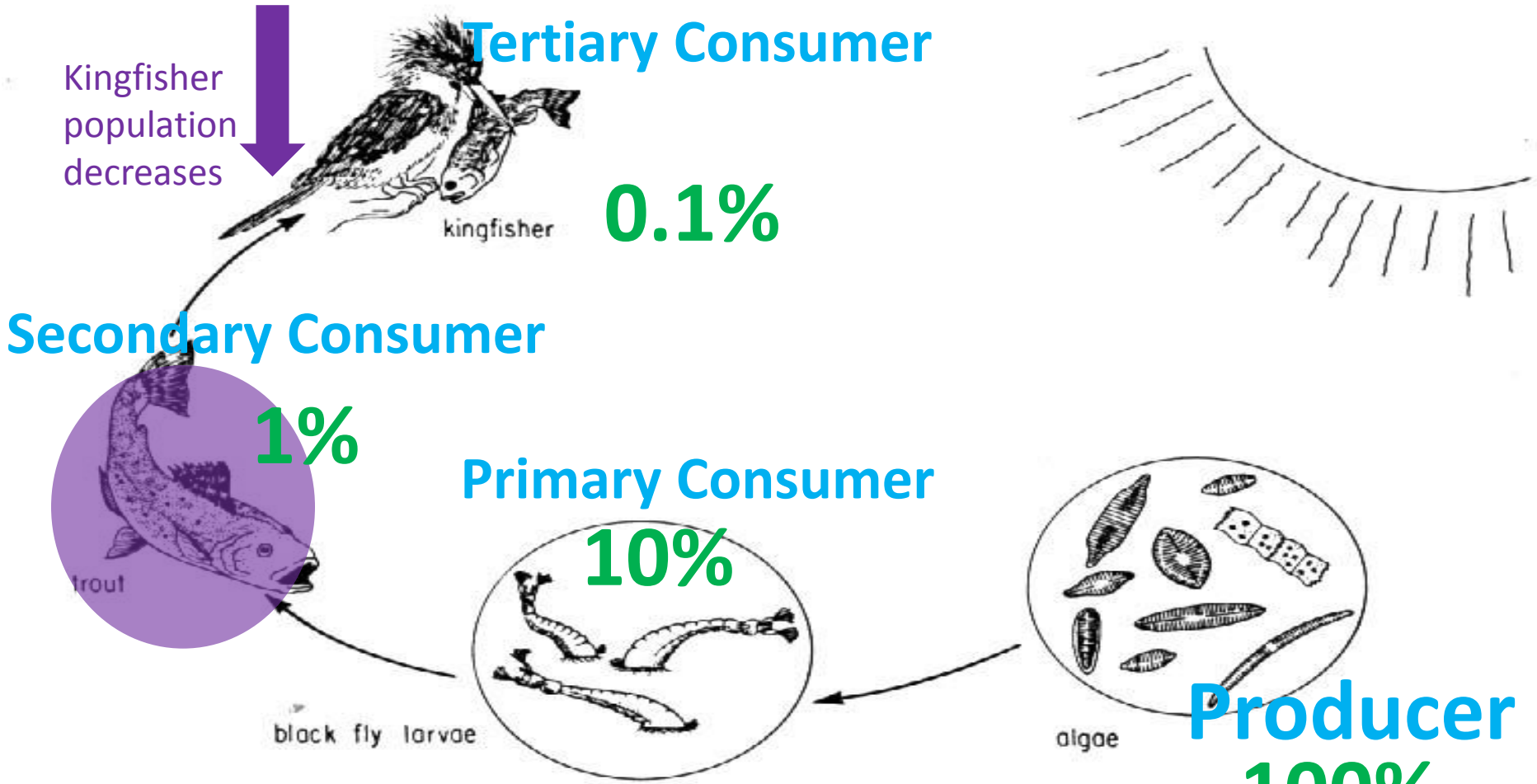
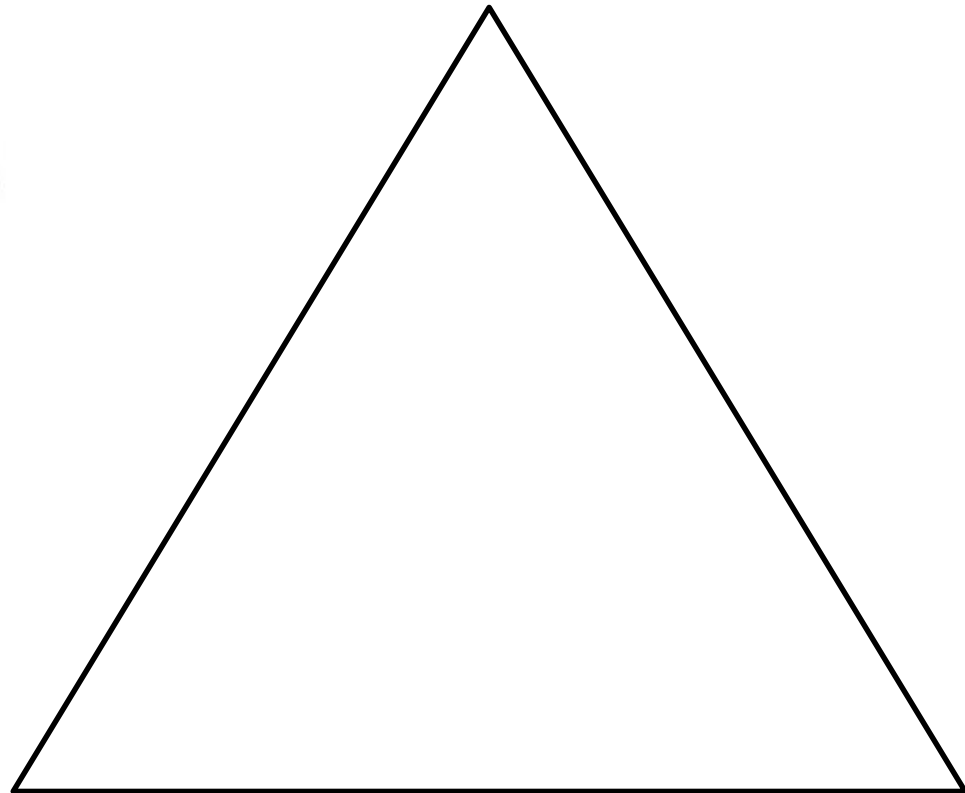
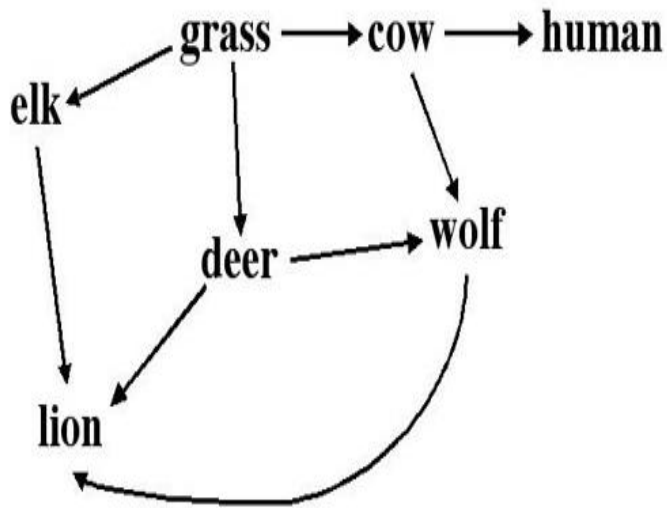


FIGURE 2-3: Stream food chain.

Black Fly Larvae population increases

You Try

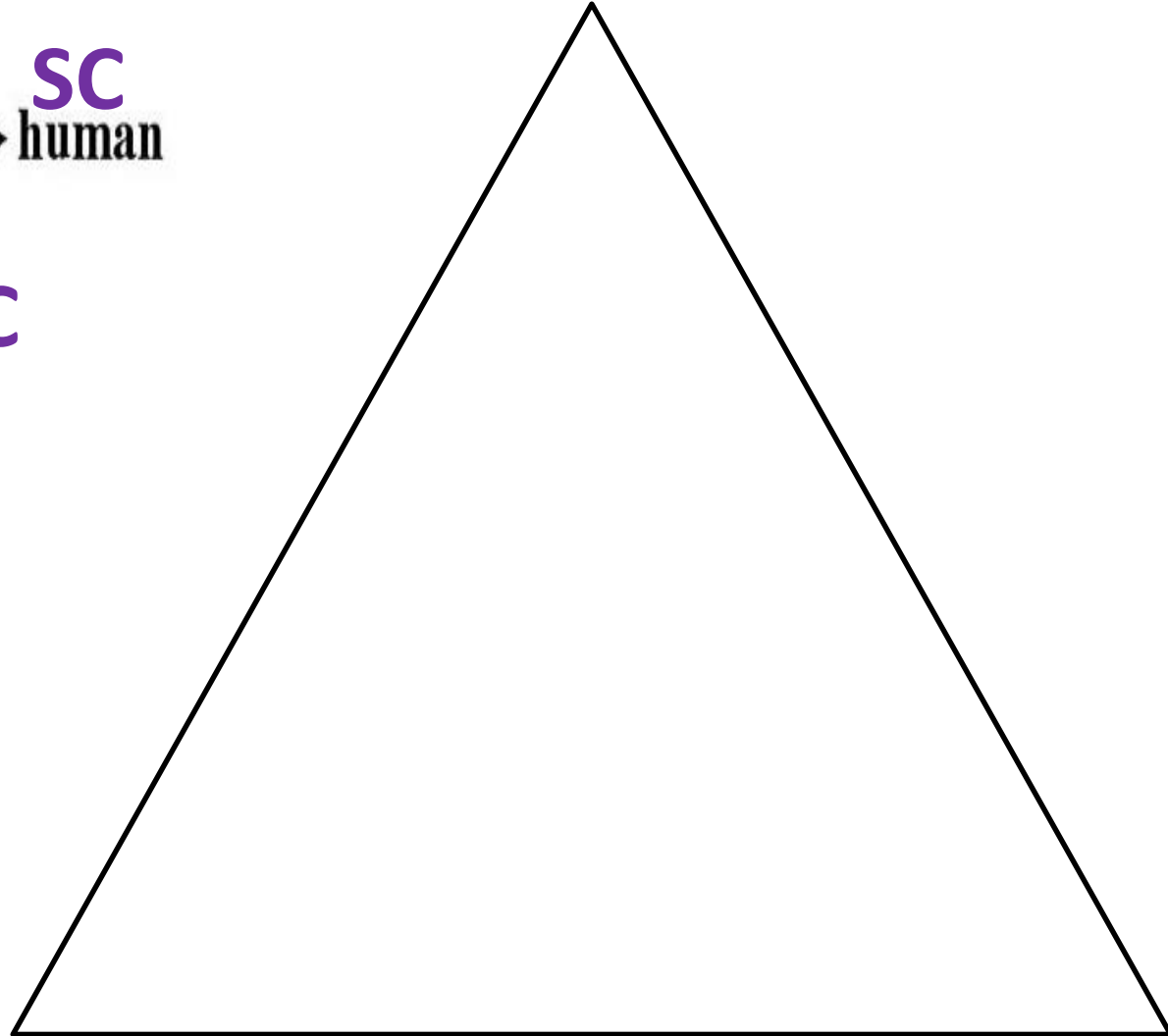
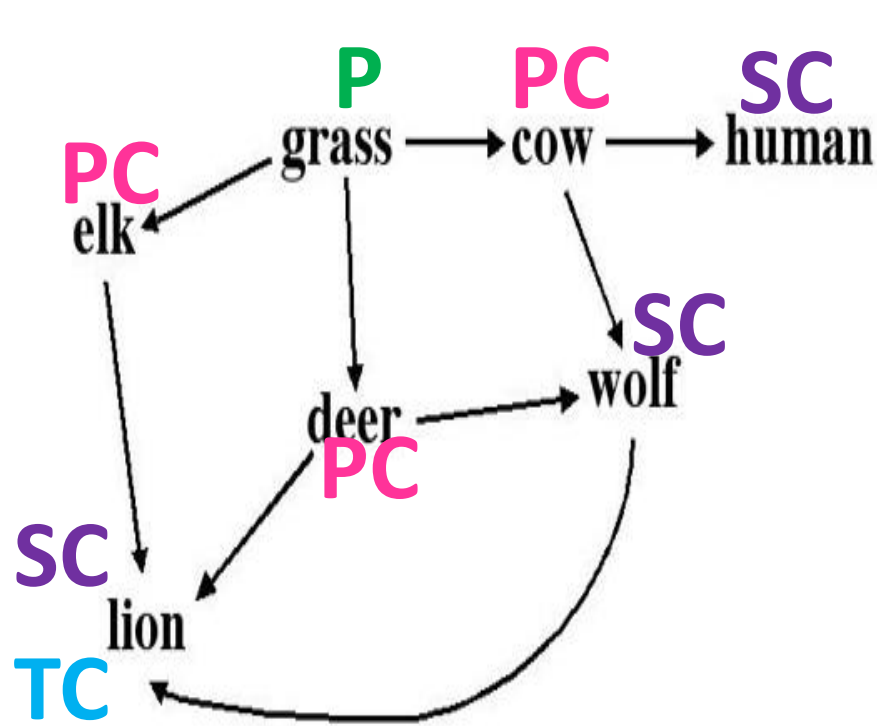
- Create a food pyramid
 - Label the trophic levels needed
 - Place the name of each organism in the appropriate level
 - Label the % of energy available on each level



You Try

How many level do you need?

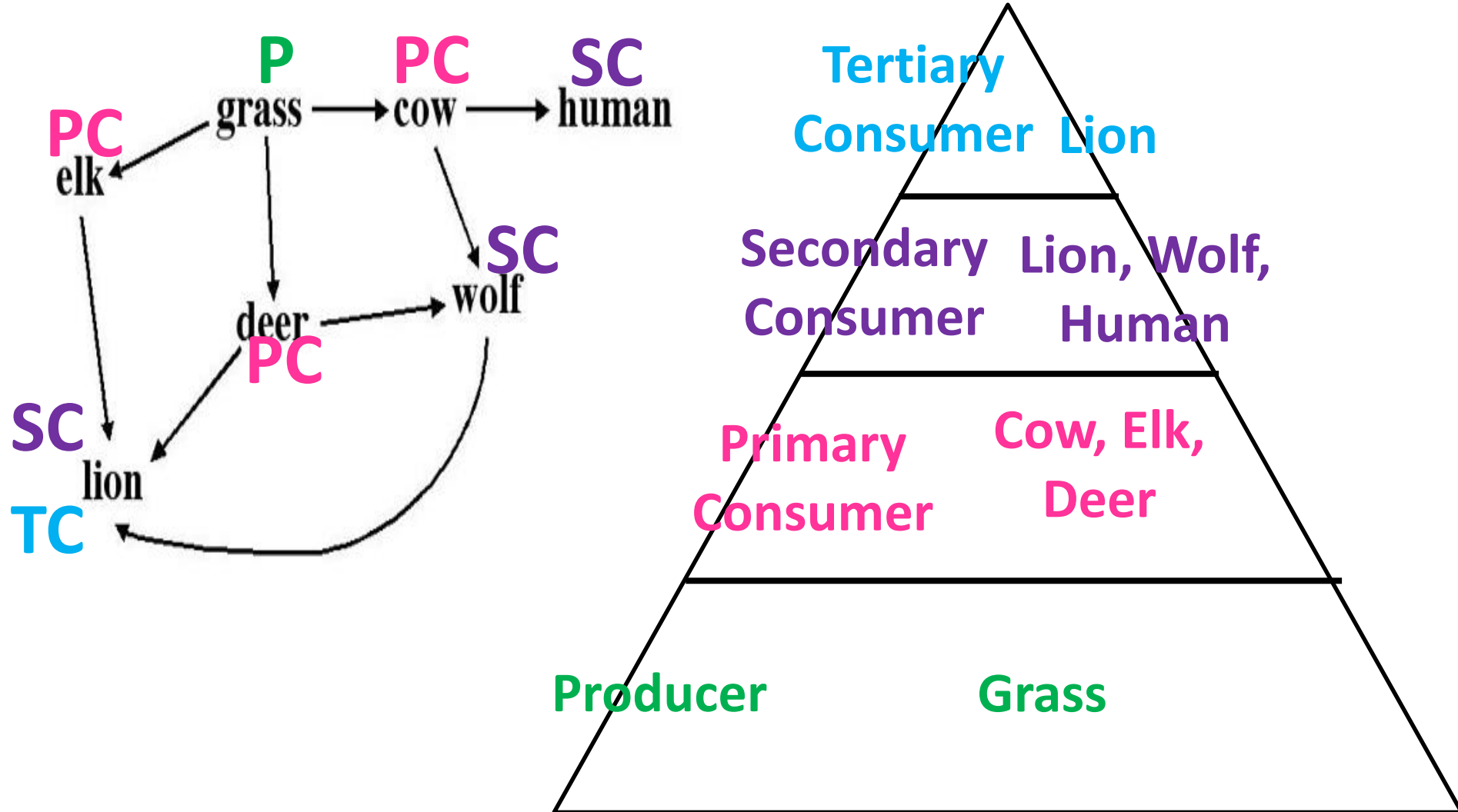
- Label the trophic levels needed
 - Some may belong to more than 1 category



You Try

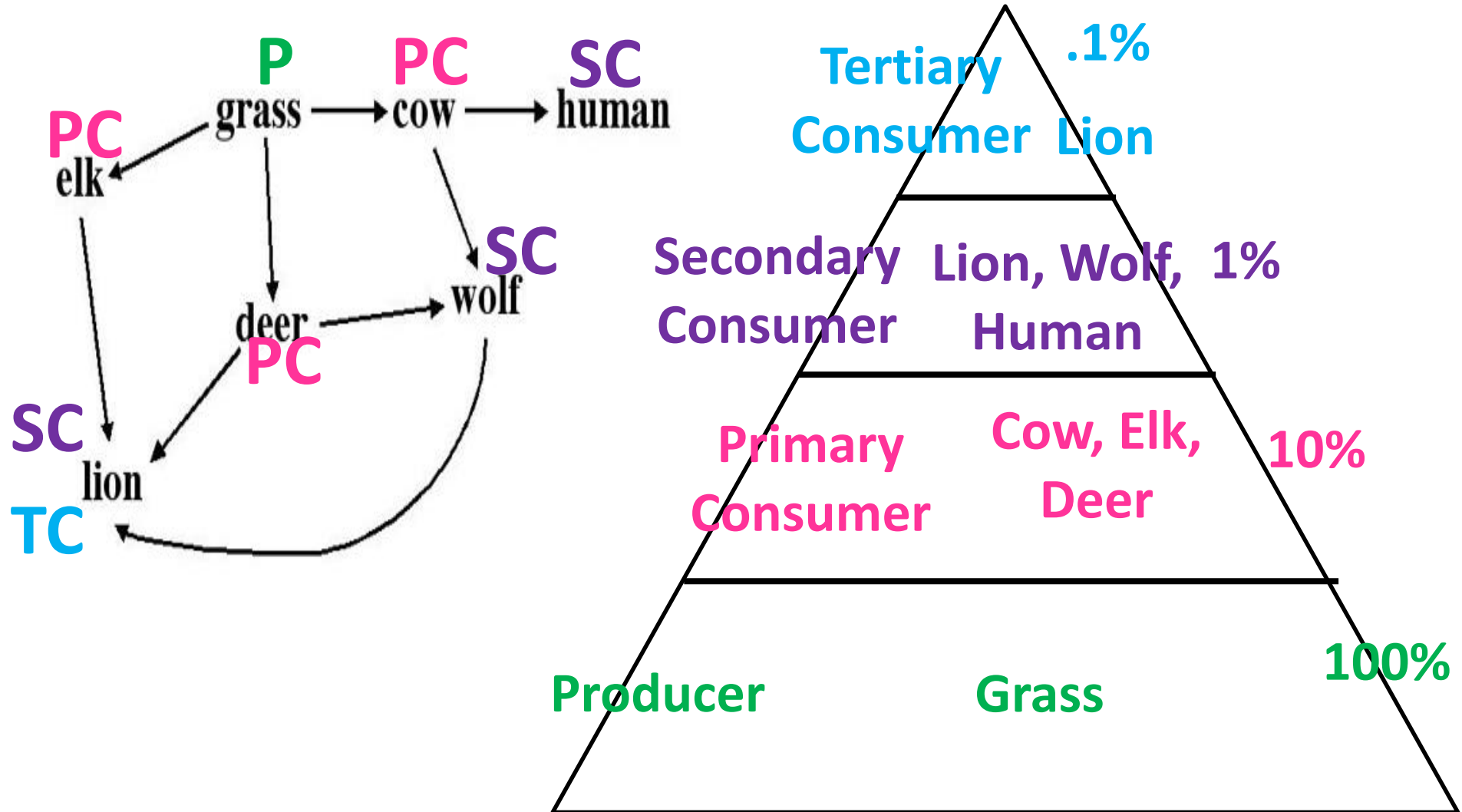
How many level do you need?

- Label the trophic levels
 - Some may belong to more than 1 category
- Place the name of each organism in the appropriate level



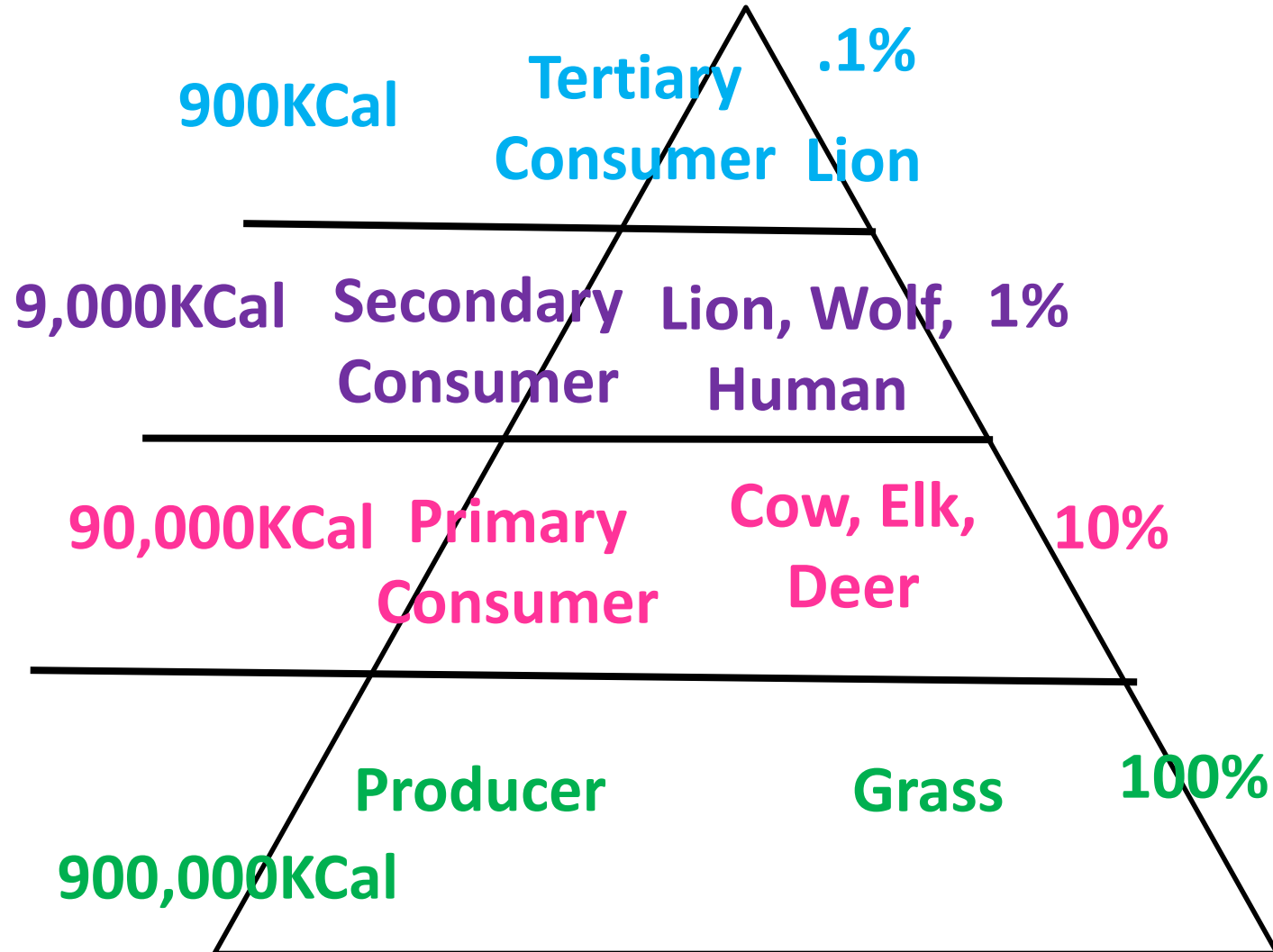
You Try

- Label the % of energy available on each level



You Try

- What if the producer level began with 900,000kcal



You Try

- Identify 1 food chain found in the web.

