NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CLASS PERIOD: \_\_\_\_\_\_

**NOTES SHEET: *STREAM FOOD WEBS***

**Important vocabulary:**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: dead \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ material
	+ Where does most stream detritus come from?



* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: an organism that consumes detritus
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: an organism that makes its own food ( \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ )
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: organism that cannot make its own food and must \_\_\_\_\_\_\_\_ other organisms
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: the position an organism occupies in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**“Brown” vs. “Green” food webs**

* What forms the base of most food webs that *you* know of?
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_!
	+ These \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-based food webs are sometimes called \_\_\_\_\_\_\_\_\_\_\_\_ **food webs**
* In some ecosystems, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and other decaying organic material is the base of the food web!
	+ These \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-based food webs are sometimes called \_\_\_\_\_\_\_\_\_\_\_\_ **food webs**

**Are your rivers and streams “brown” or “green”?**

* Leaf litter from surrounding trees forms the base of the food web in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ streams in Appalachia = more “brown”
* Leaf detritus input from terrestrial (\_\_\_\_\_\_\_\_\_) ecosystems around streams and rivers is **HUGELY important!**
* As stream order increases, rivers \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and more plants are able to grow = more “green

**Food web stability**

* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_ food web is less likely to be affected by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* More complex food webs, with more \_\_\_\_\_\_\_\_\_\_ between organisms, are generally more stable than those with fewer links
* This is why each species in a food web is important! \_\_\_\_\_\_\_\_\_\_\_\_\_ in one can affect many others.

**Aquatic/Terrestrial Links**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: when things are passed from one ecosystem to another
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* In streams, this link is very important
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from trees is #1 source of nutrients
	+ Many terrestrial \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (dragonflies, stoneflies, and MANY others) spend the early parts of their lifecycle in streams before leaving to become adults

**The importance of predators**

* Predators can impact both the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (how many there are) of prey
* These effects can be transmitted down through the food web, affecting many other organisms, even in other ecosystems!

**How does the hellbender fit in?**

* Hellbenders primarily eat \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and small bottom-dwelling \_\_\_\_\_\_\_\_\_\_\_\_
* Help to maintain balance in crayfish populations – \_\_\_\_\_\_\_\_\_ of their diet!
* **Myth:** ”Hellbenders eat fish and the eggs of fish that I like to fish for!”
	+ No \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have ever been found in a hellbender’s stomach
	+ No evidence for impact on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_