

Crayfish Dissection

Not Me

**Be
careful...**

**No
thanks!**



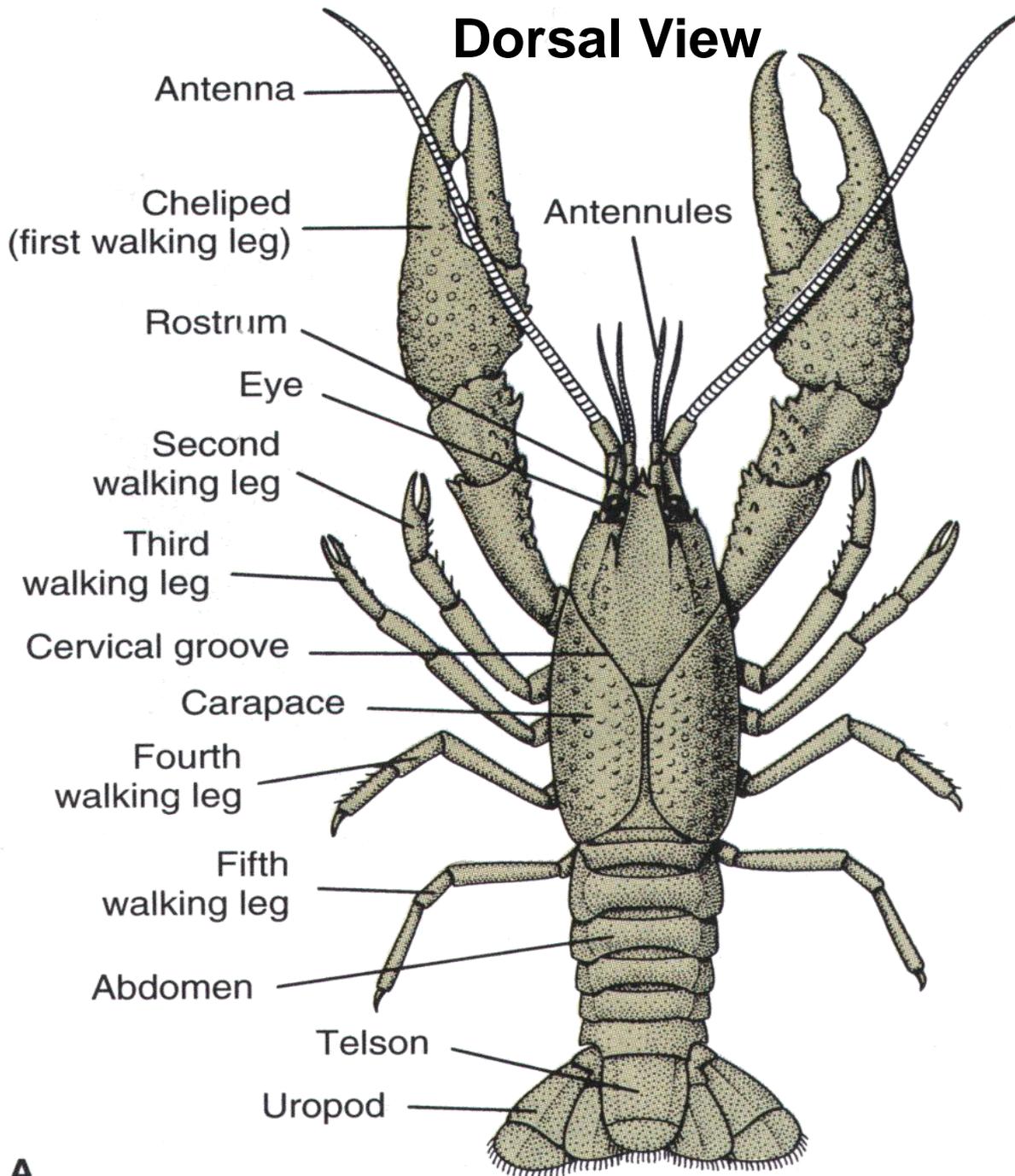
Follow the directions on this powerpoint as your guide through this lab...



There will be a lab practical (test) over the structures and functions of organs ... learn the pieces and parts!

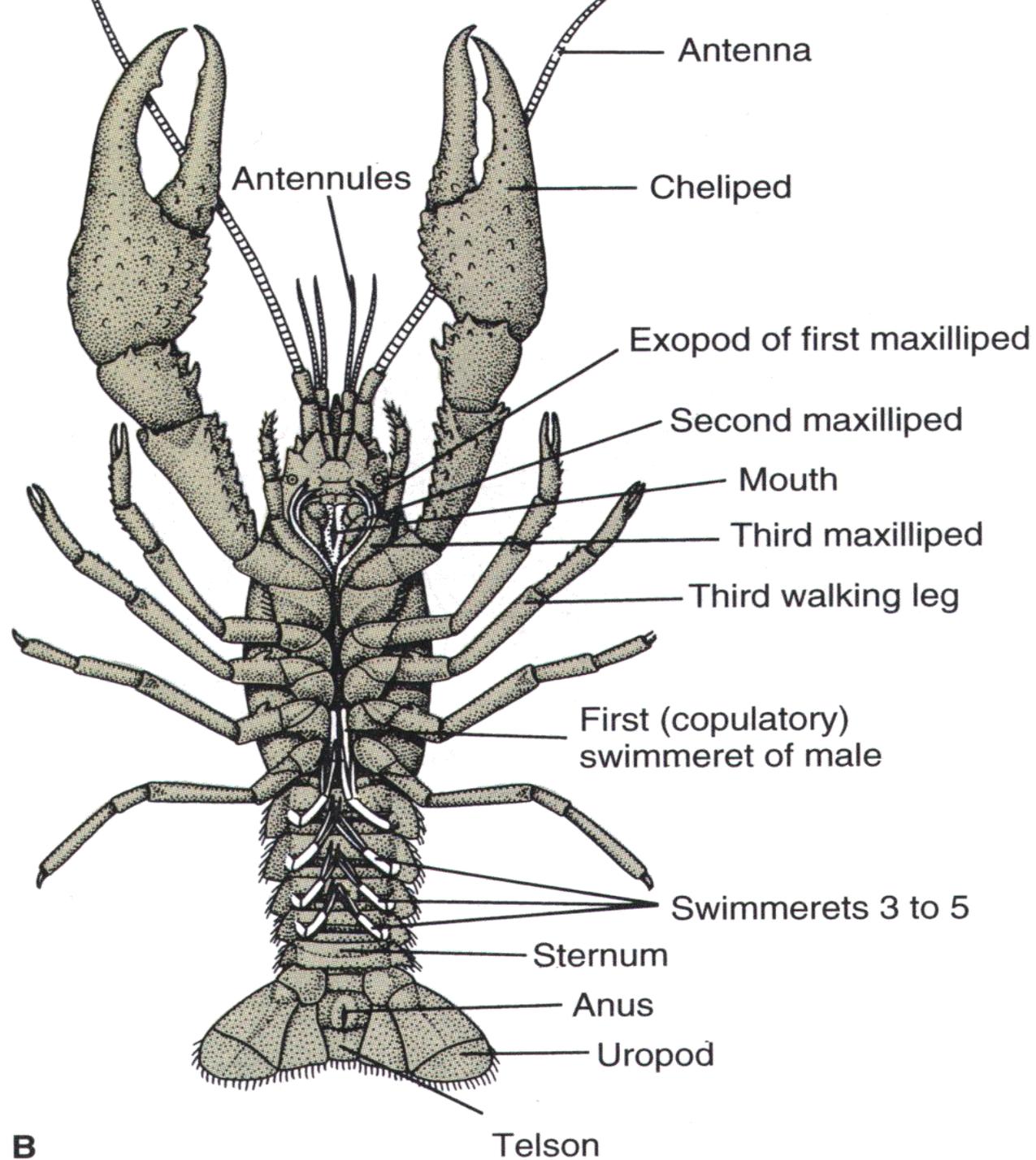


Dorsal View



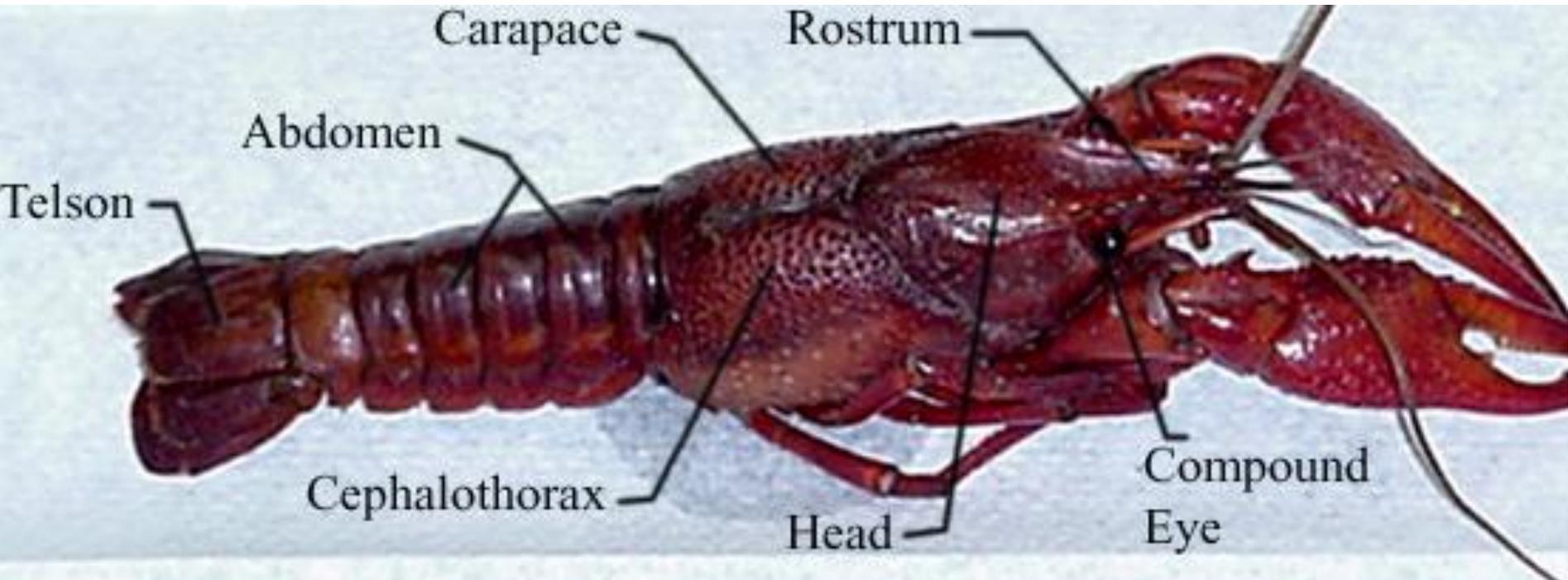
Use the diagram on the following two slides to fill in the blanks of your lab sheet.

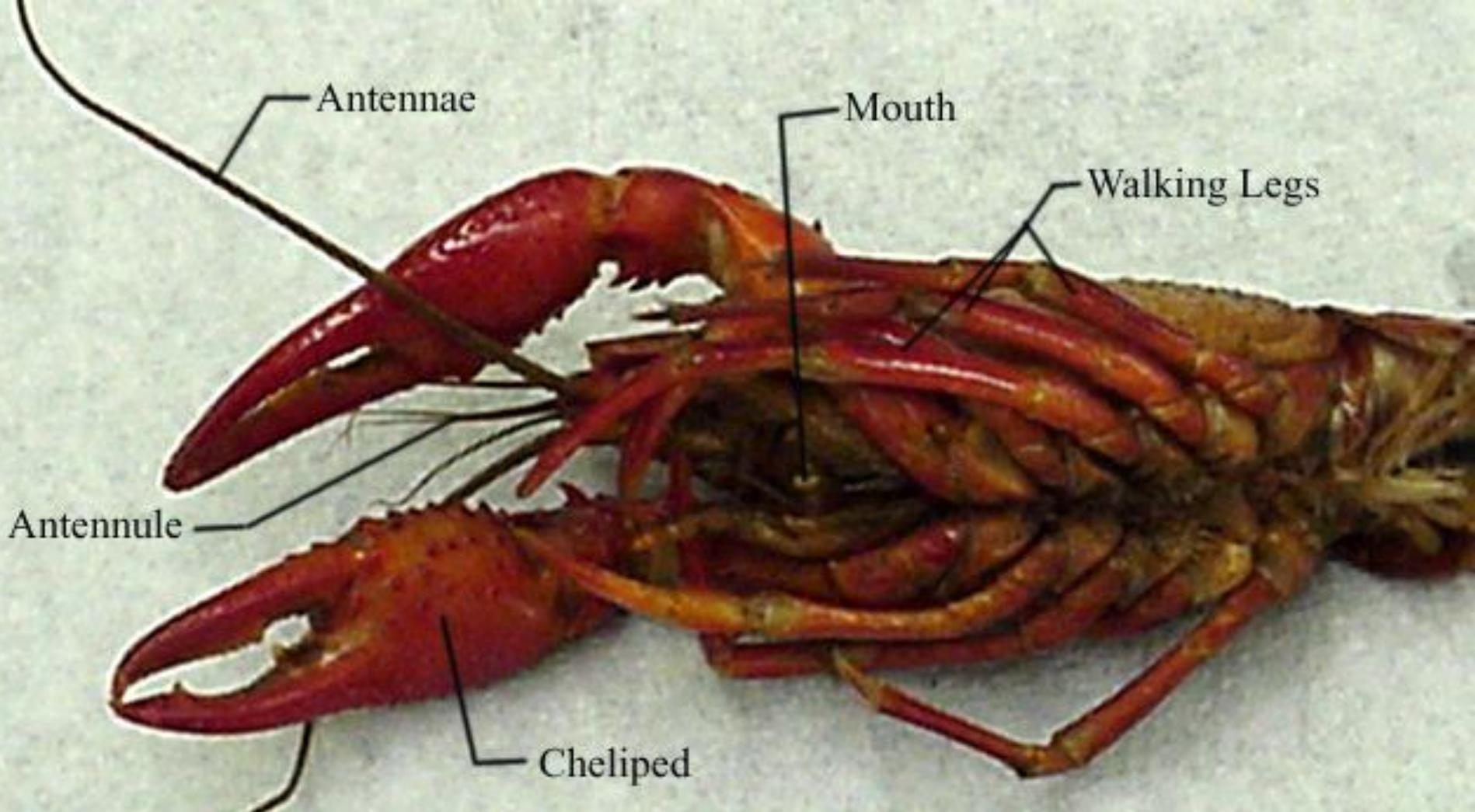
Ventral View



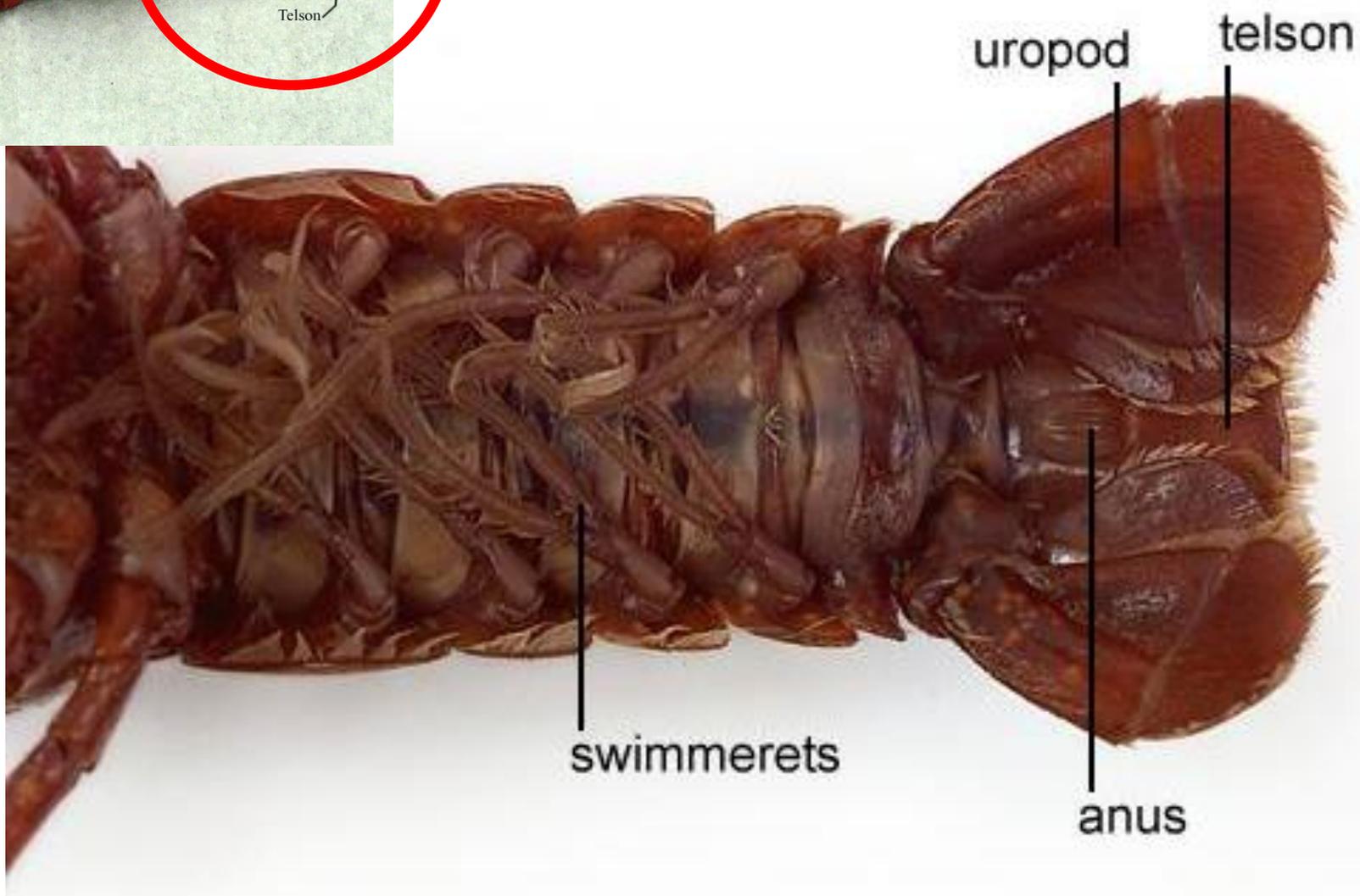
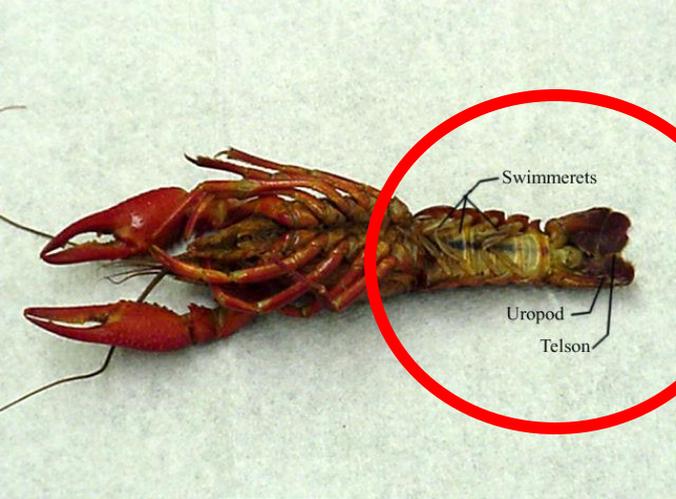
External anatomy – dorsal view

Review the external parts with your lab partner... repeat the structures verbally **out loud** as you point to each one





What is the function of the Cheliped? How is this adapted appendage different from the walking legs? Why? Discuss this with your team.



Swimmerets

Uropod

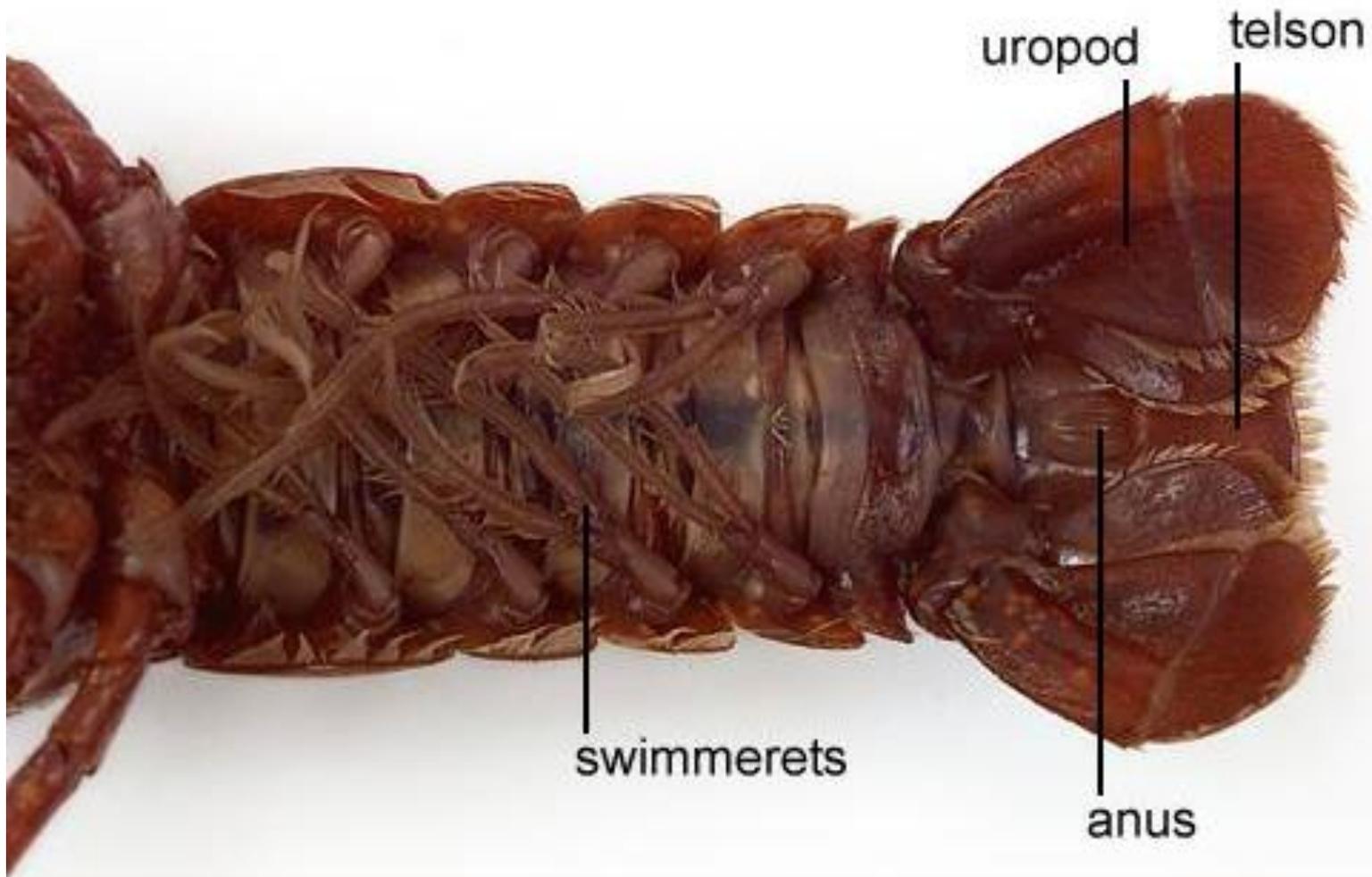
Telson

uropod

telson

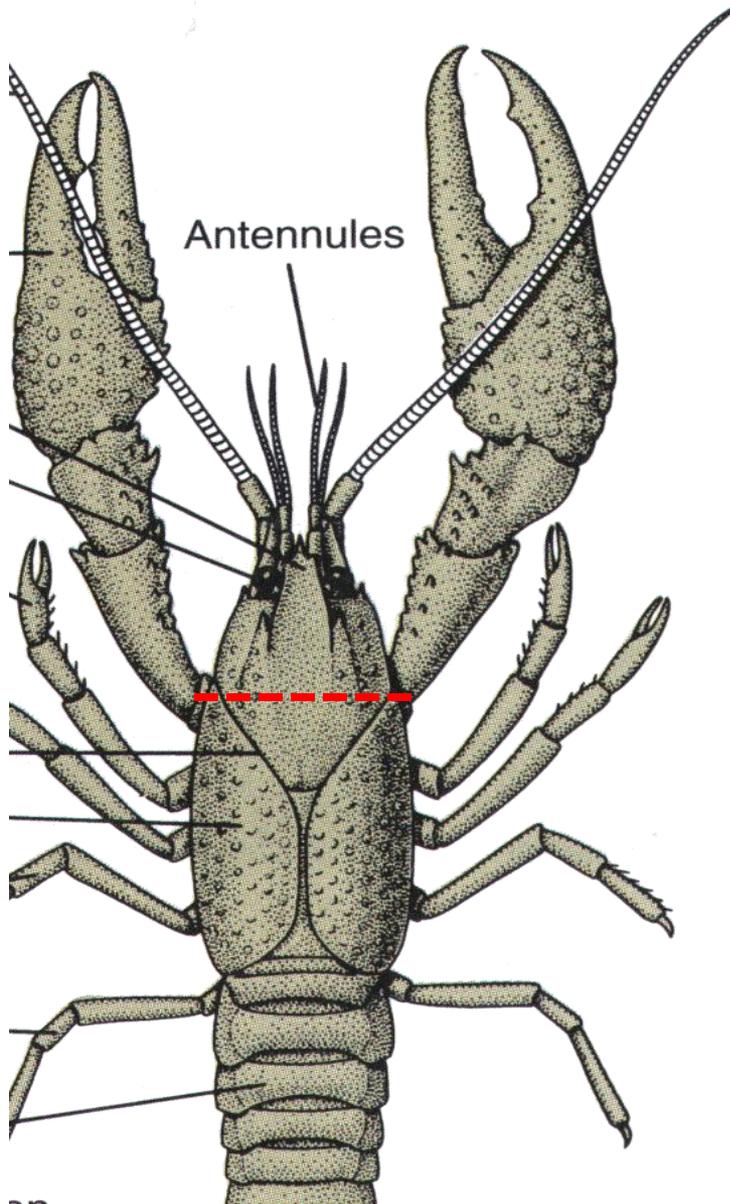
swimmerets

anus



What would you expect to be the function of the telson and uropod?

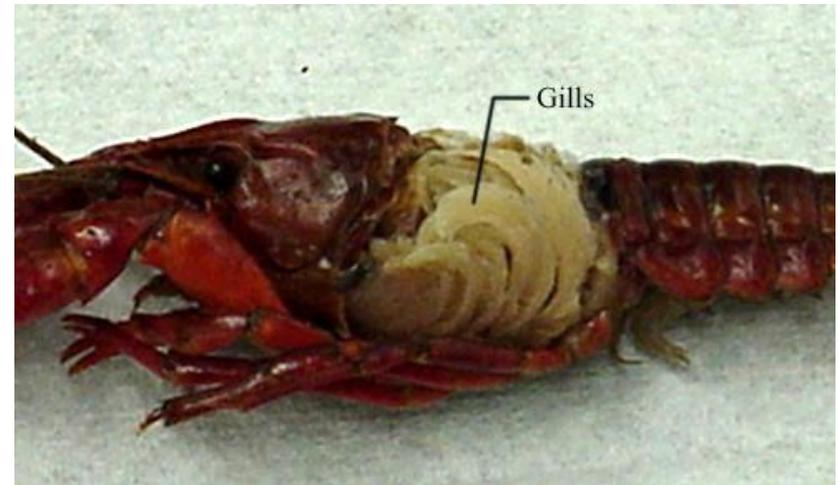
Swimming

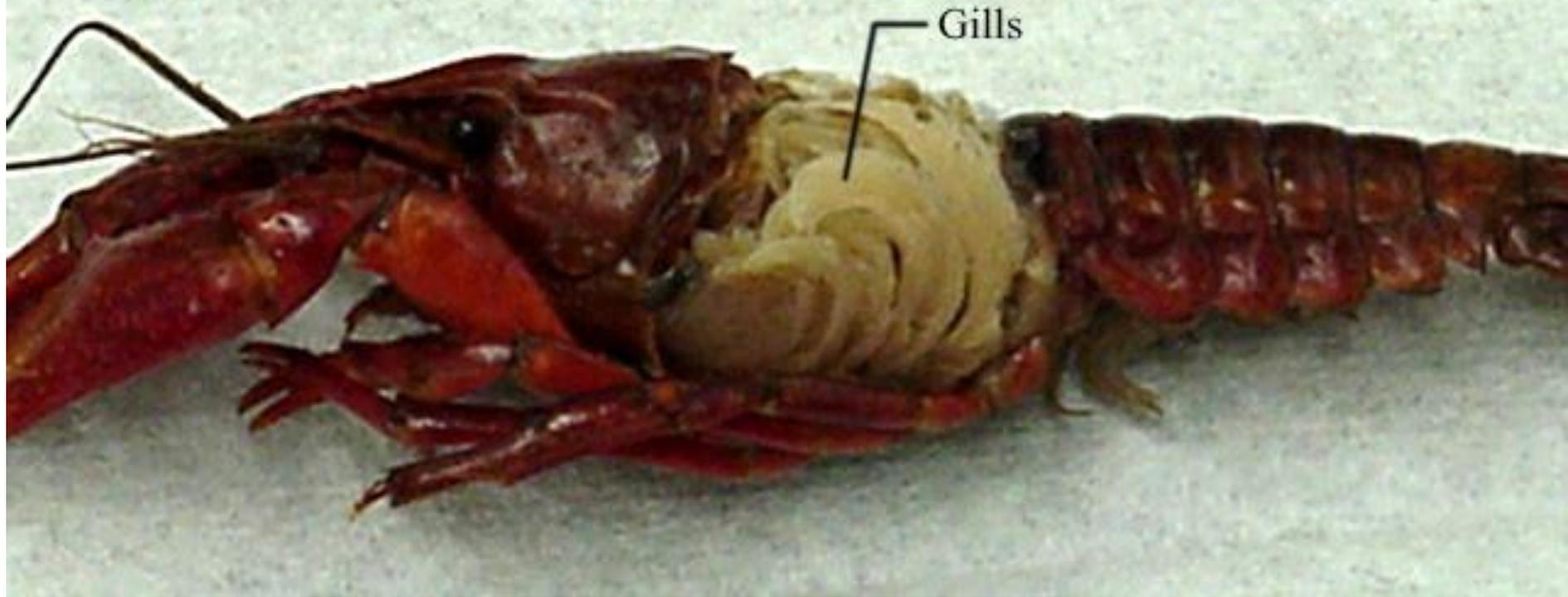


TO BEGIN...

Carefully remove the **carapace** by cutting across the line using your forceps.

LOCATE the **Gills**, check them off on your lab sheet... then say to your partner "Am I still breathing?"





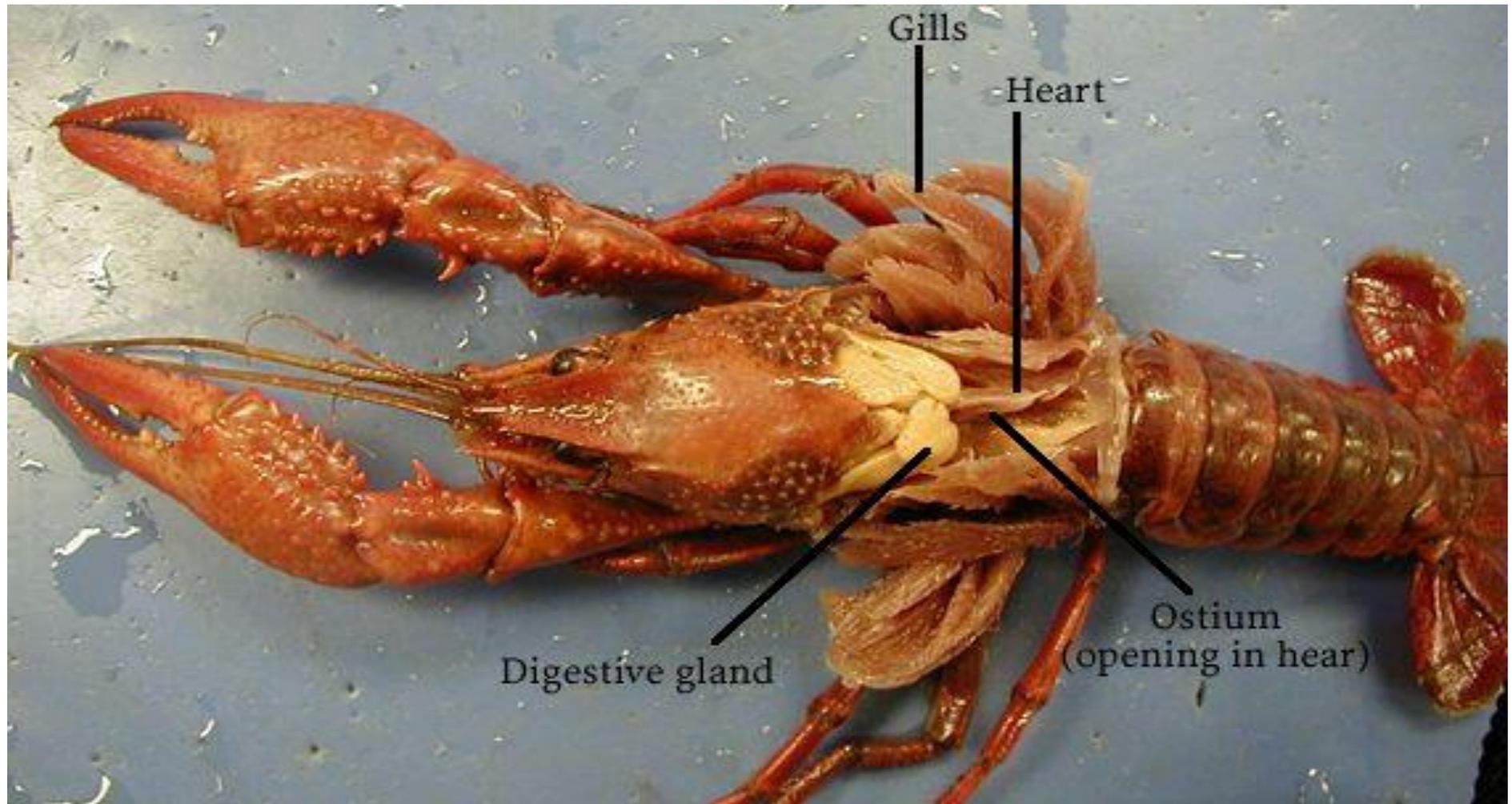
The function of the gills is **gas exchange**. Oxygen from the water is absorbed through the gills and circulated by blood through the body. Carbon dioxide is expelled from the gills into the surrounding water. **Why does carbon dioxide build up in the crayfish? Ask the smartest kid at your table.**



You can get a better look at the gill structure by carefully pulling off one of the walking legs... **TRY IT...** then sing... “the Gill is connected to the leg bone, the leg bone’s connected to the hip bone ...”

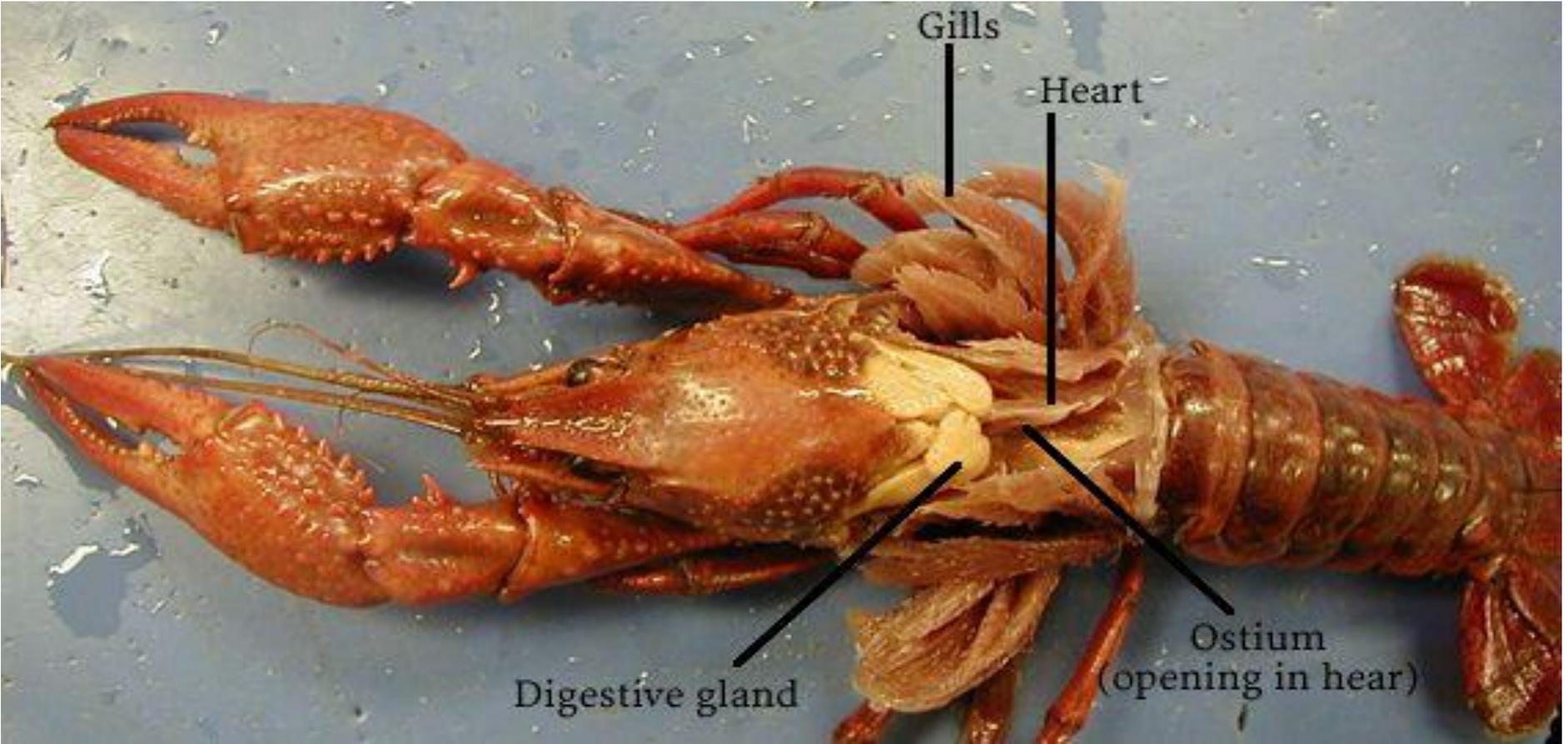
Why is it important that gills have lots of surface area?
Talk together. ps... crayfish don’t have bones!

NEXT: Move the gills out of the way.
LOCATE the heart and digestive gland. Check these off on your lab sheet

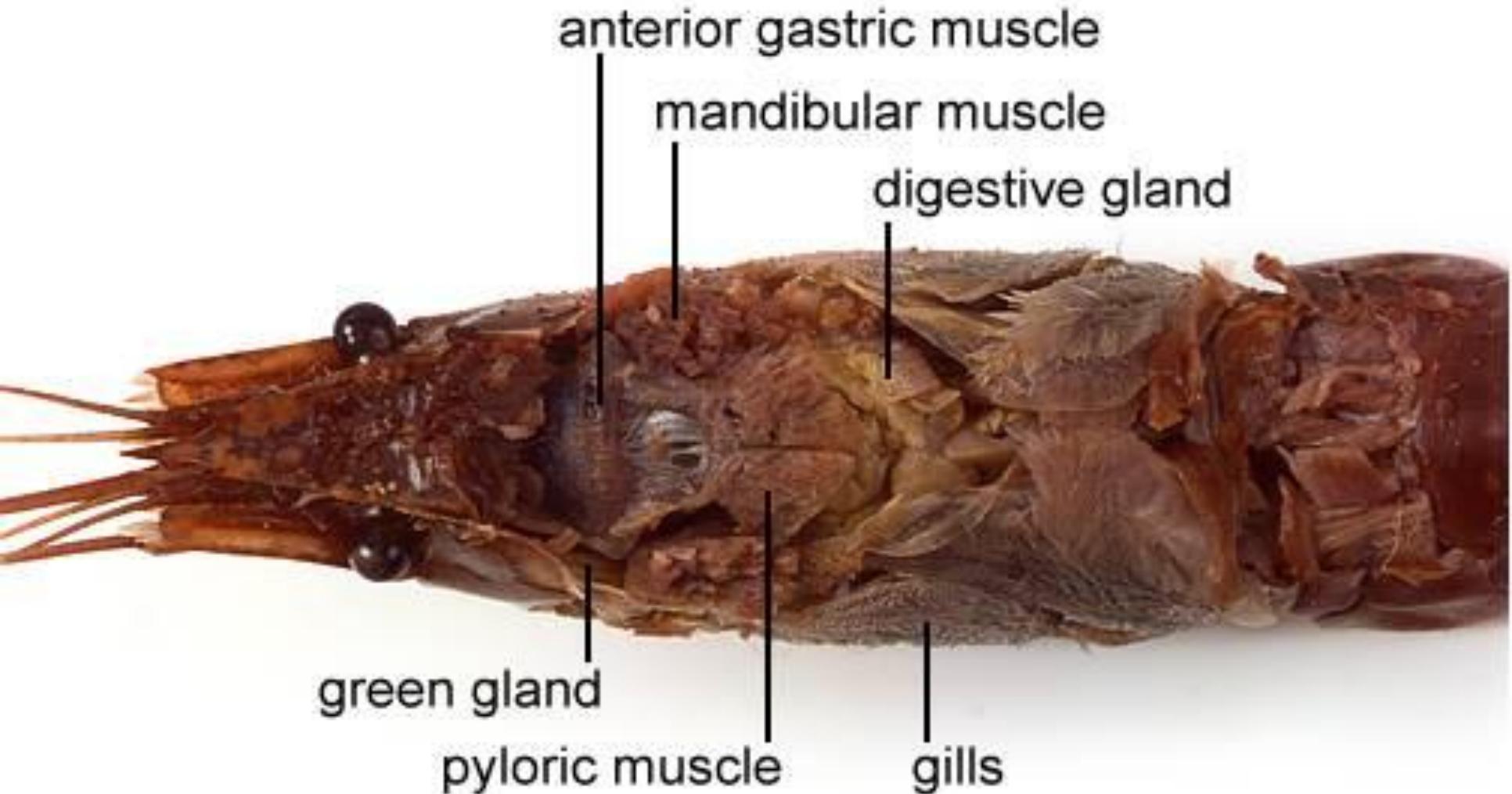


What is the function of the heart? Crayfish have an “open circulatory system”. Blood moves through cavities in the body rather than through veins. When you read this, yell out loud...

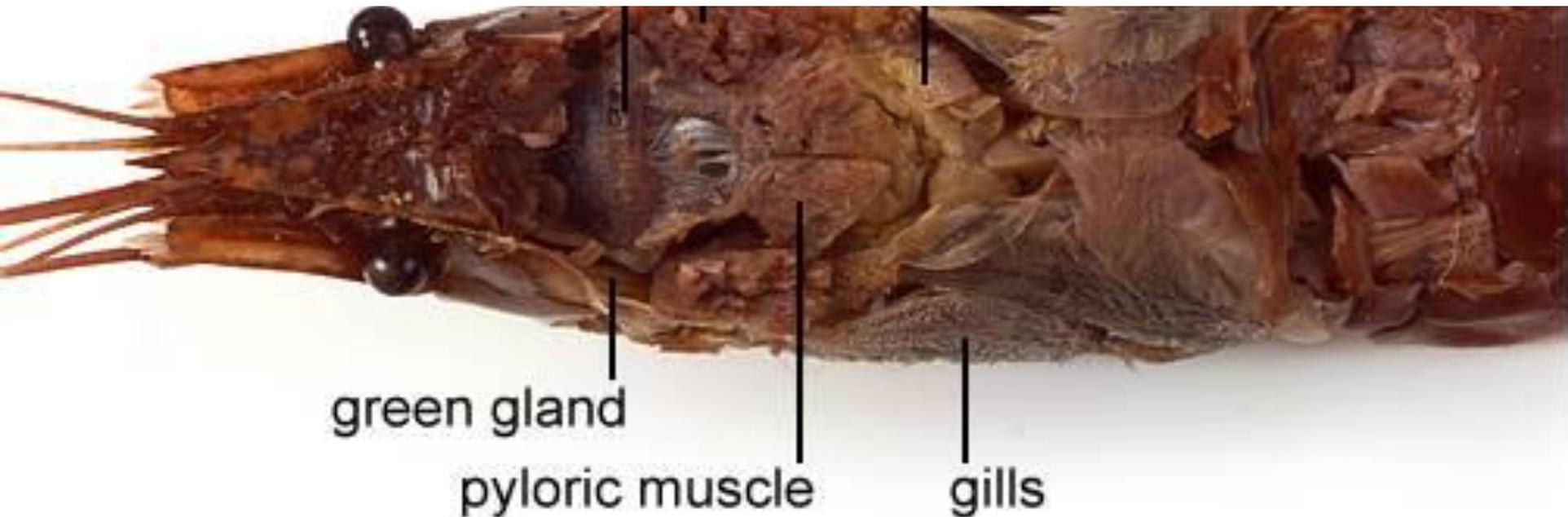
“Circulation, baby! Keep it moving!”



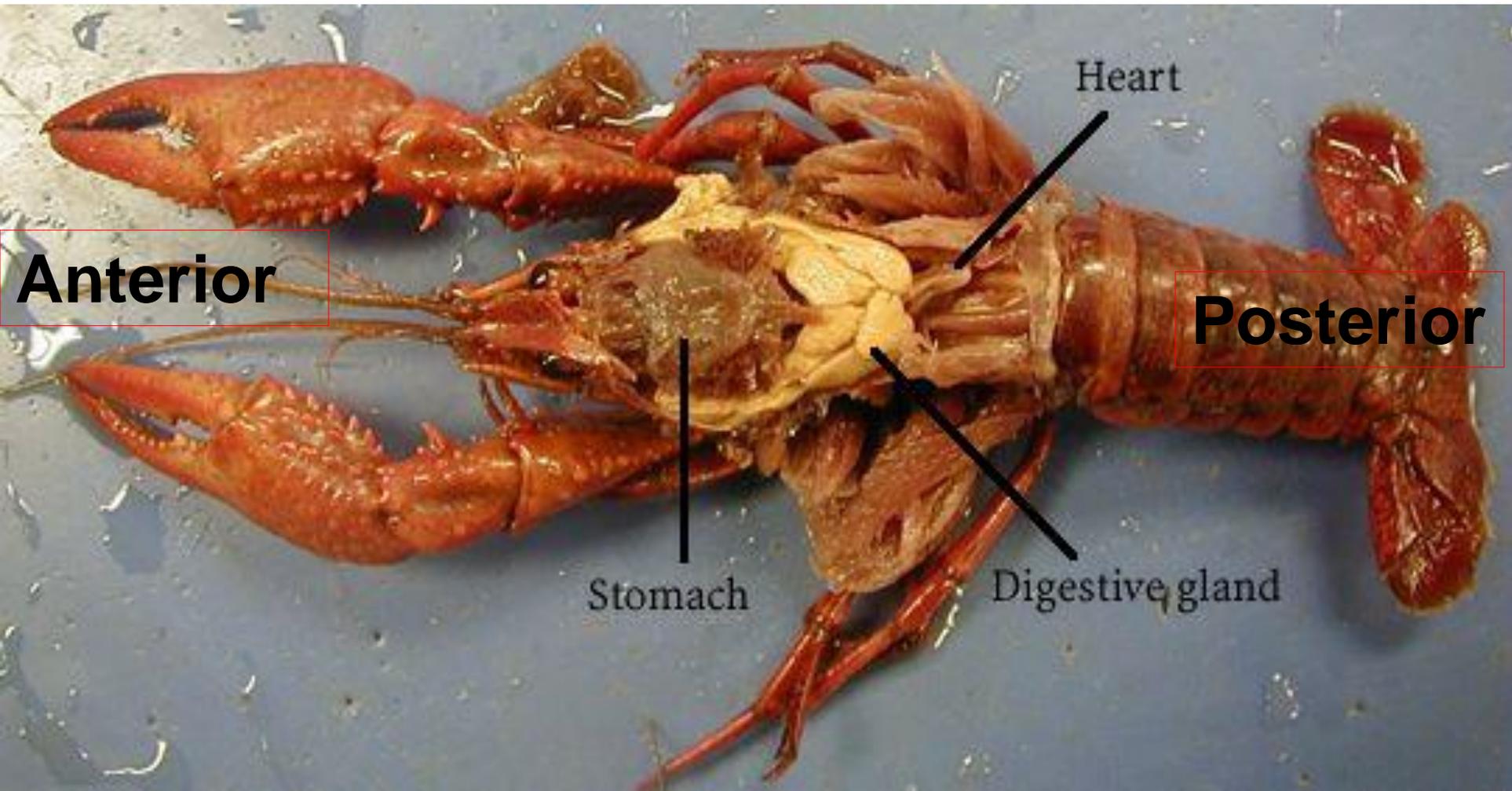
Here are some other structures to see... locate the green gland... check it off on your sheet



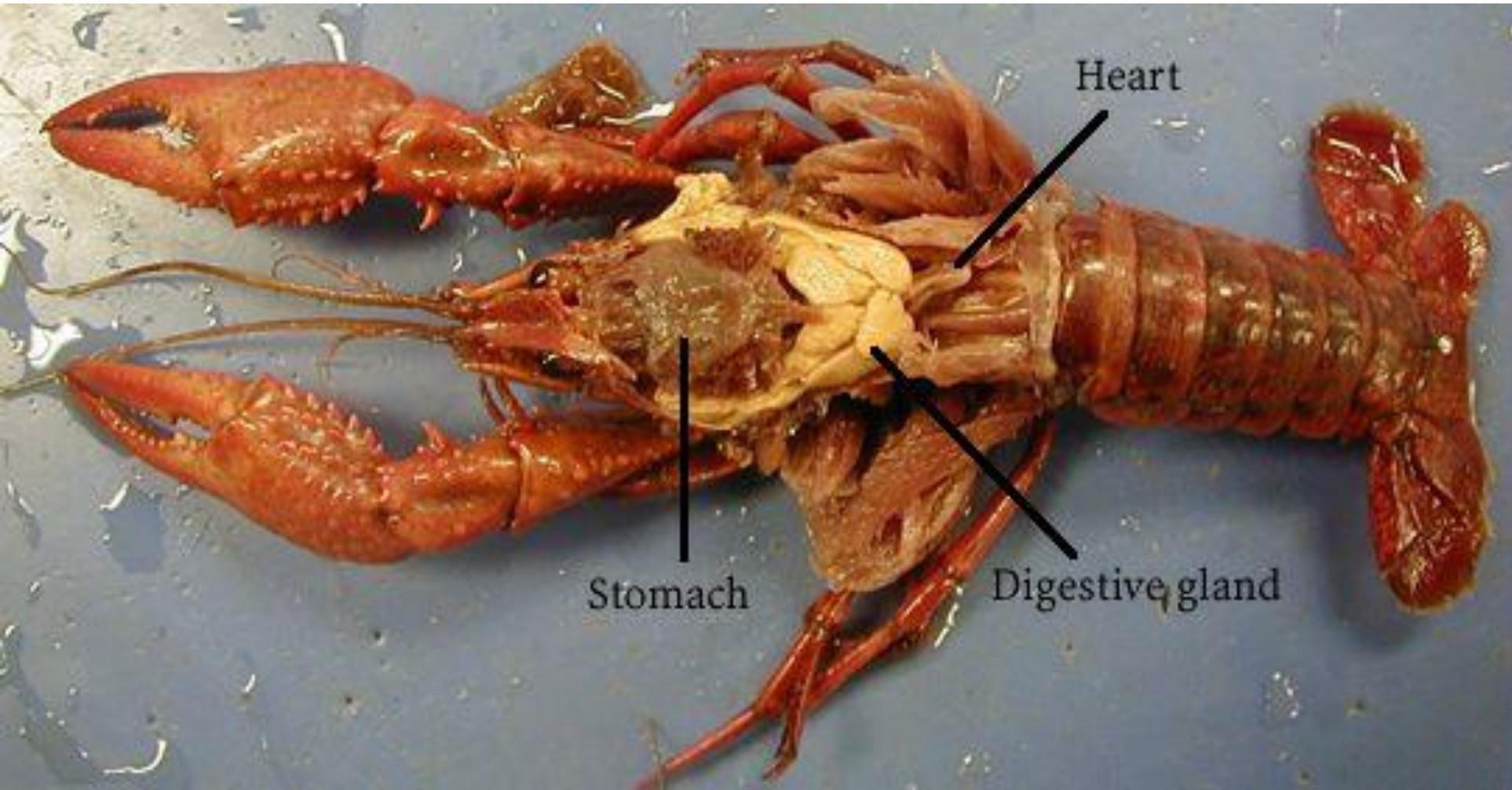
The green gland collects waste materials from the blood and excretes the waste through pores at the base of each antenna. What organs serve a similar purpose in humans?



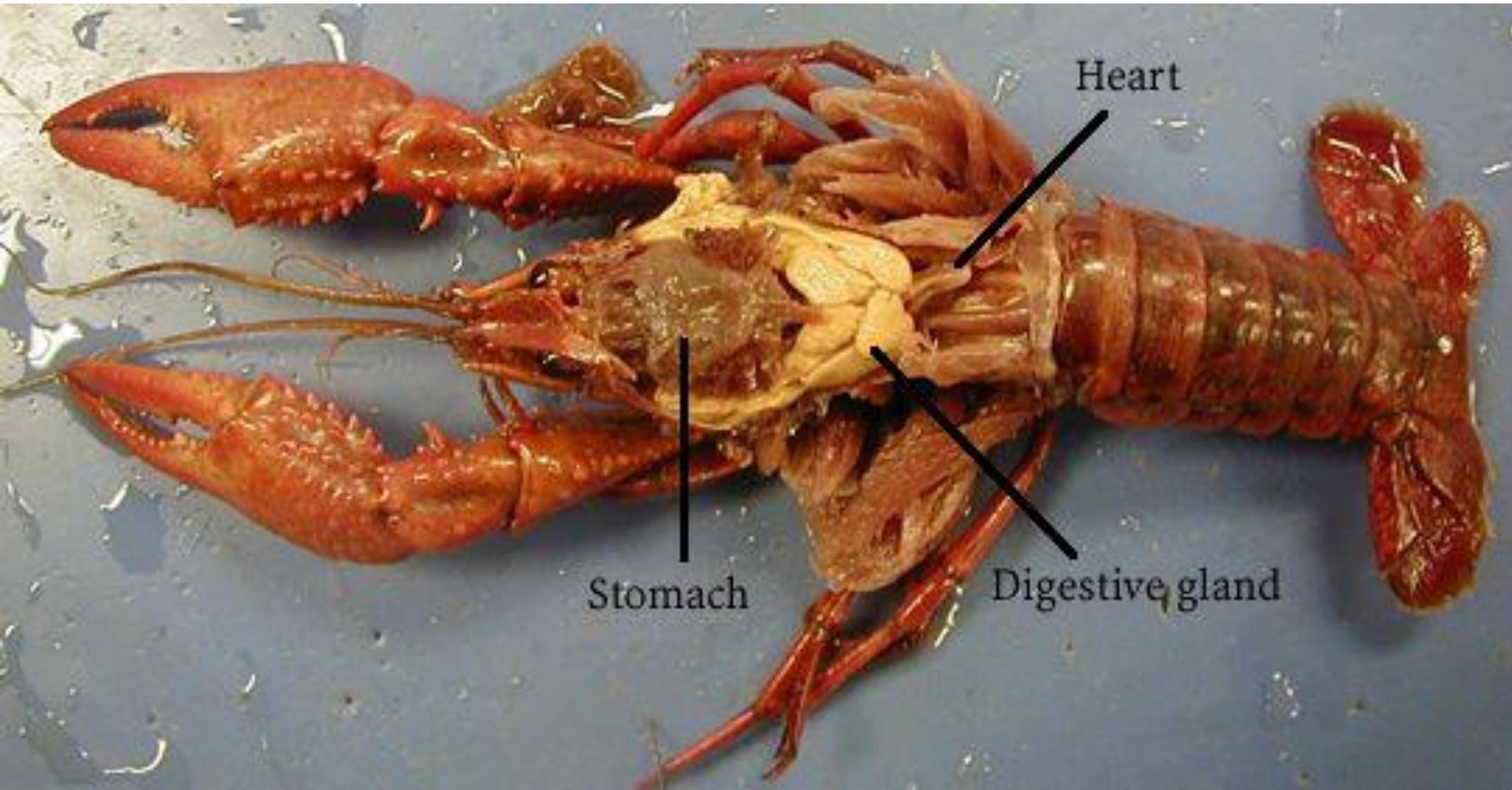
Remove the anterior part of the carapace.
LOCATE the stomach... check this off on your
lab sheet.



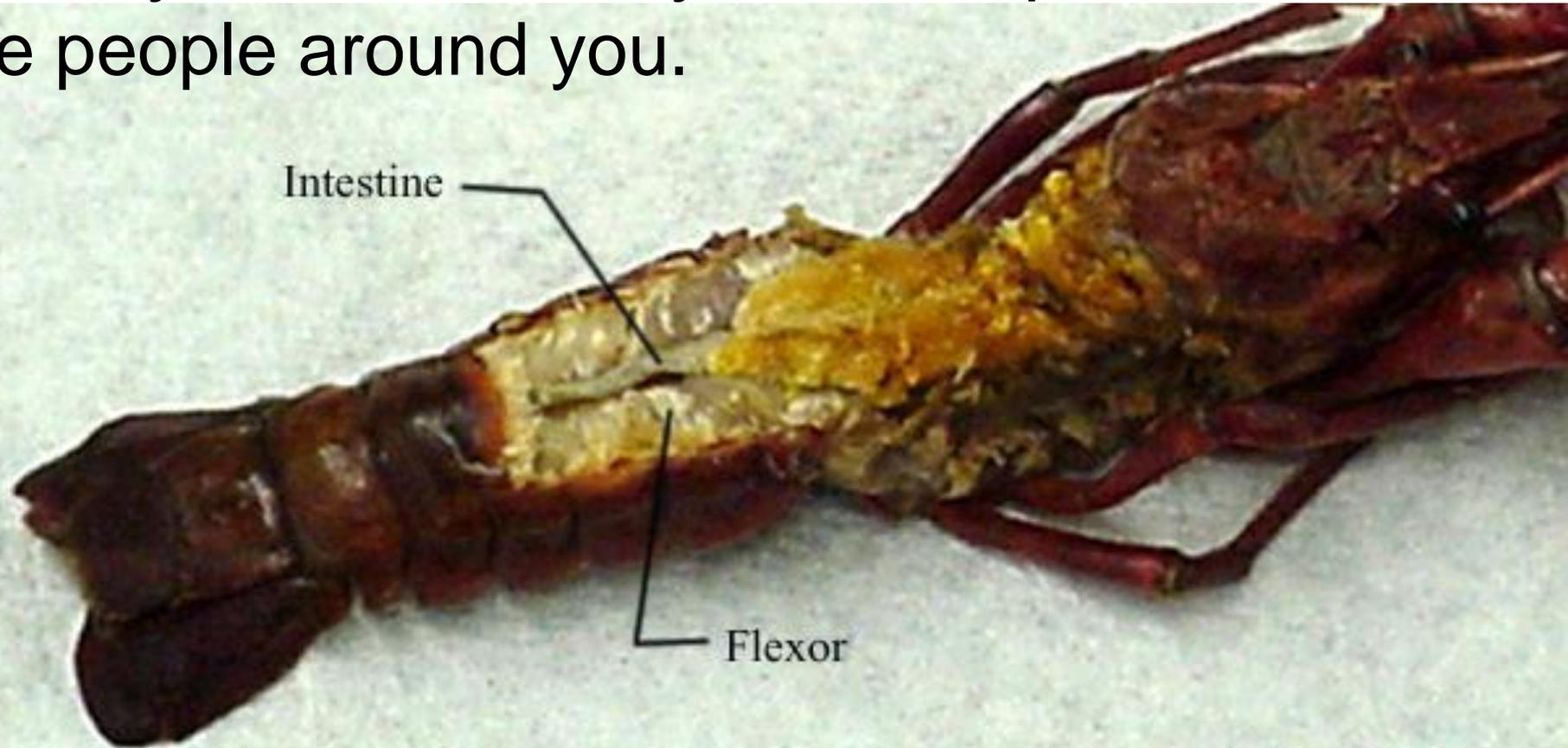
What is the function of the stomach? When you read this, say out loud... “Di Di Di gestion”



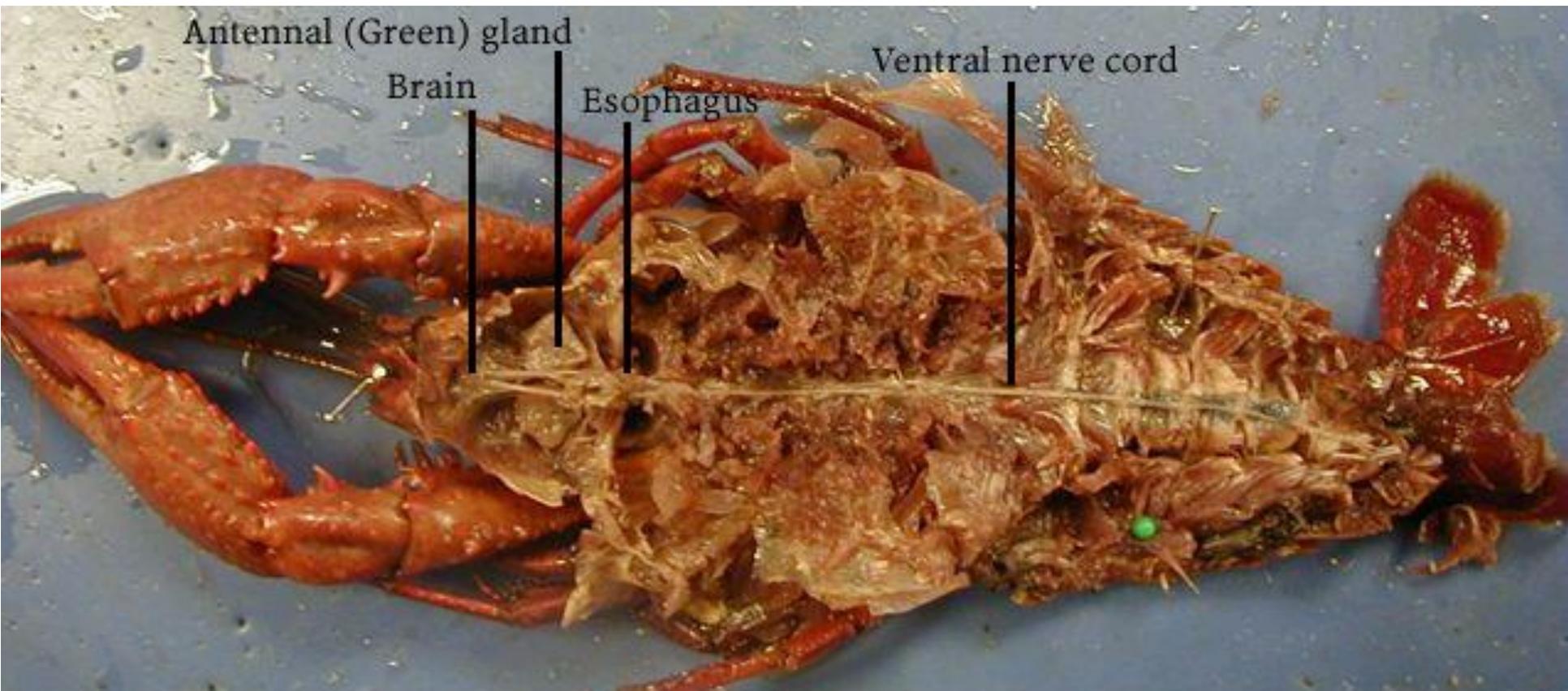
OPTIONAL... remove the stomach and open it up. Look for teeth-like structures made of chitin... chomp, chomp!



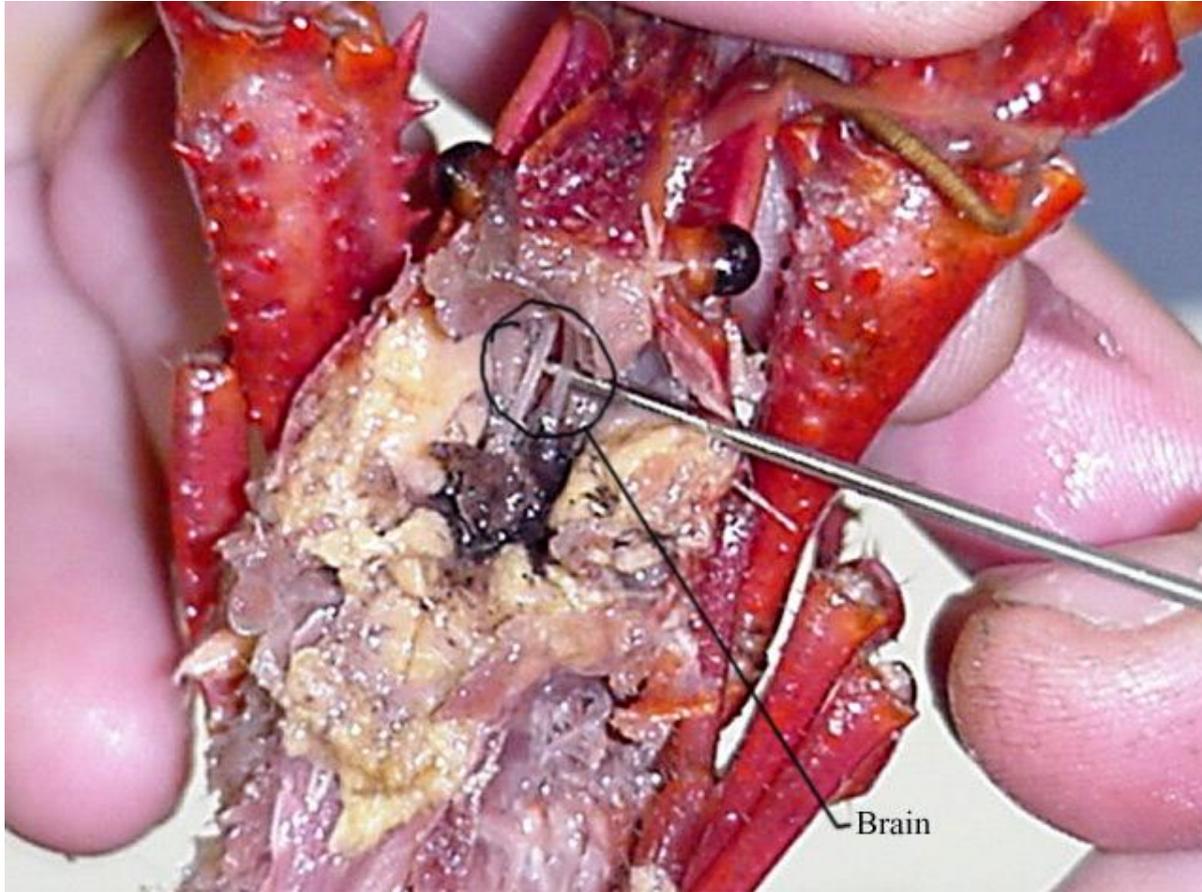
Remove the shell of the abdomen and LOCATE the intestine – it a tube between the fleshy flexor muscles in the tail... check these off on your lab sheet. The intestines absorb nutrients. When you read this say “suck it up” 3 times to the people around you.



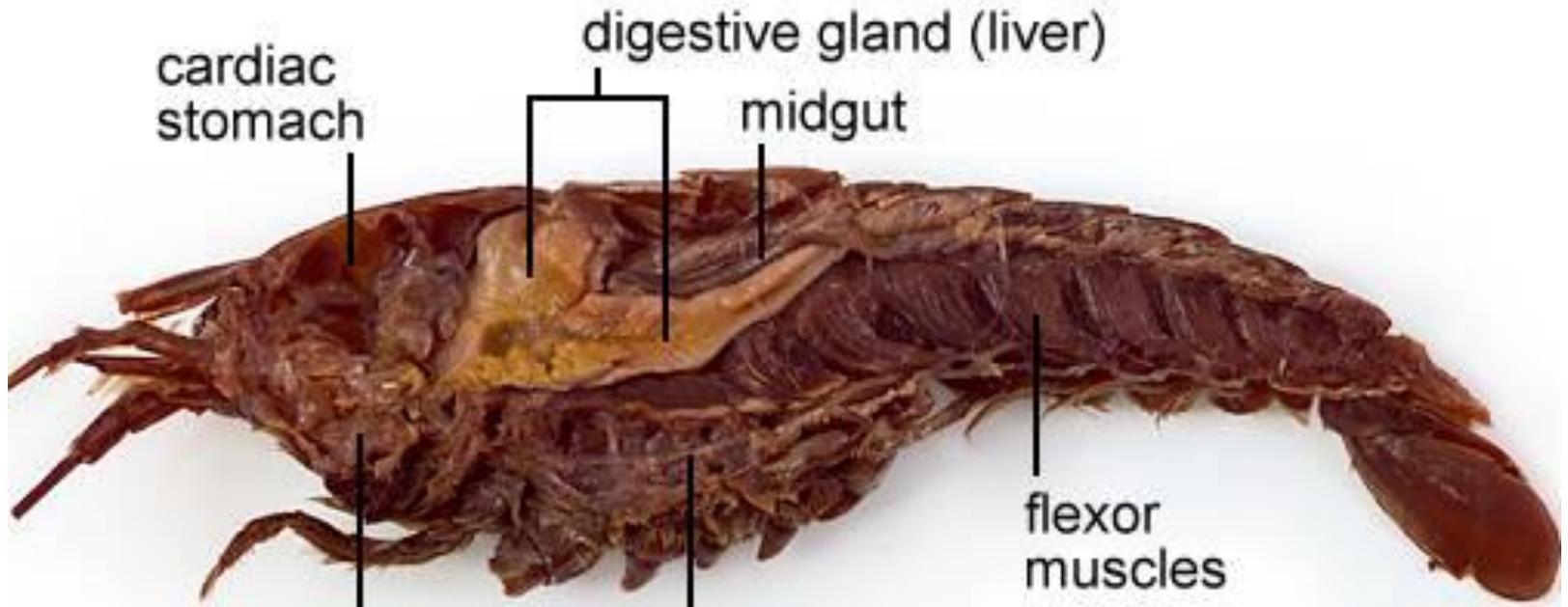
OK... be careful on this part... remove all the organs you've identified so far. We want to find the ventral nerve cord that runs along the bottom of the crayfish. Trace the nerve cord anterior and find the two nerves that lead to the brain. The brain is the tissue at the end of these two nerves



Here's another pic of the brain... it's really almost more of a "state of mind" than a place...



Let's think through the digestive system... food enters the mouth, is initially ground up by maxillae, then goes through the esophagus into the stomach. Digestive juices from the digestive gland break down food and begins absorption. Food passes to the intestine for further digestion and absorption. Waste materials leave the intestine and are expelled through the anus



Clean up...

Ahhh... It ain't over until we clean up!

1. Crayfish remains go in trash can – wipe out the tray with a paper towel into the trash can first before washing tray.
2. Wash tray and tools
3. Return tray and tools to lab table

Don't forget... you will be tested on the parts. Google "Crayfish dissection" for online help

