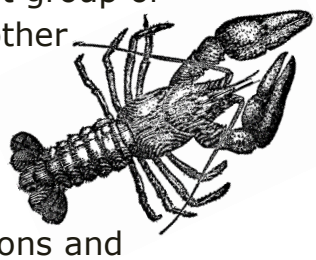
Name: _____

Dissection 101: Crayfish
Student Checklist

Crayfish Checklist: Identify the following structures/locations.

Crayfish are arthropods, which are the most diverse and abundant group of animals on earth. There are more species of arthropods than all other animals combined.



Arthropod characteristics:

- Jointed appendages – bend to move in specific directions and specialized for specific jobs
- Exoskeleton – hardened cuticle, which is an outside layer of skin; it is nonliving tissue called chitin that does not grow with the body and must be removed for growth in a process called molting (shedding)
- Body segmentation – specific regions

☒ Use lines provided for additional notes

☐ External structures

- ☐ Regions (two)
  - ☐ Cephalothorax – head and thorax region

    _____

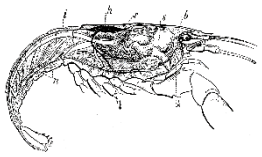
    _____
  - ☐ Abdomen – segmented tail

    _____

    _____
    - ☐ The telson (single – middle section) and uropods (two – outer sections) form the flipper-like structure at the end of the abdomen (tail); used to propel the crayfish in a backward direction (third law of motion)

      _____

      _____



Dissection 101: Crayfish

Student Checklist (Continue page 2)

- ☐ Chelipeds (pinchers) – 1st of the paired walking legs; modified for defense, fighting and capturing prey (can regenerate, but slow)

  _____

  _____

- ☐ Antennae – 2 pair, smaller anterior paired called antennules; used for taste (chemicals in water) & touch

  _____

  _____

- ☐ Carapace – specialized portion of the exoskeleton; covers the head and thorax regions

  _____

  _____

- ☐ Rostrum – anterior section of carapace; protects eyes/head

  _____

  _____

- ☐ Walking legs – 4 pair of jointed legs; for movement

  _____

  _____

- ☐ Maxillipeds – 3 pair of larger appendages near mouth; handle food

  _____

  _____

- ☐ Mandibles – Jaw like structure; move side to side to break food apart

  _____

  _____

- ☐ Swimmerets - structures used to help propel crayfish through the water; move water across gills; hold fertilized eggs and larva in females

  _____

  _____

  - ☐ Male – First 2 pair of swimmerets are hardened/enlarged (copulatory swimmerets); used to deposit sperm from opening of sperm duct to seminal receptacle of female

    _____

    _____

Dissection 101: Crayfish

Student Checklist (Continue page 3)

- ☐ Female (L) – Has a seminal receptacle which is an opening to the female reproductive system (eggs expelled and held by swimmerets after they are fertilized)

  _____

  _____

- ☐ Anus – Complete digestive system

  _____

  _____

☐ Internal Structures

- ☐ Gills - Feather-like structures (increased surface area); used to remove oxygen from water for respiration

  _____

  _____

- ☐ Heart (may be attached to the carapace) - Open circulatory system; keeps blood moving under low pressure

  _____

  _____

- ☐ Digestive gland – Produce enzymes to digest food; absorption of nutrients

  _____

  _____

- ☐ Stomach – Storage and digestion – 2 chambered: cardiac stomach is anterior (closer to the mouth), has a gastric mill which is a teeth-like structure used to break food into smaller pieces; pyloric stomach connects to the intestine

  - ☐ Cardiac Stomach

    _____

    _____

  - ☐ Pyloric Stomach.

    _____

    _____

- ☐ Antennal glands (green glands) – Paired; excretion of body wastes (equivalent to urine)

  _____

  _____

Dissection 101: Crayfish

Student Checklist (Continue page 4)

☐ Ganglia – Nervous tissue

_____

_____

☐ Intestine – Passage of undigested food from the stomach to the anus (complete digestive system)

_____

_____

☐ Draw and label the external structures of the crayfish.

telson	carapace	chelipeds
walking legs	abdomen	cephalothorax
rostrum	antennae	uropod

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