Crayfish

C E P H A L O T H O R A X Y W
A E N I T S E T N I S H P X A
R P R N T C A R A P A C E P L
D I G E S T I V E G L A N D K
I Z T Y C B H A B D O M E N I
A S E X O R G A N S E O J A N
C W W J M A S R I T L T S L G
S I D E P I L E H C U S O G L
T M A Y O N X D T B N C G N E
O M I N U J Y D E X N I U E G
M E V E N T R A L N E R V E S
A R I H D E K L S R T O T R C
C E O O E U T B O E N L B G J
H T I E Y R Z N N A A Y S B P
W S W A E L H M A D E P O R U

Abdomen
Antenna
Antennule
Bladder
Brain
Carapace
Cardiac stomach
Cephalothorax
Cheliped
Compound eye
Digestive gland
Green gland
Intestine
Pyloric stomach
Sex organs
Swimmerets
Telson
Uroped
Ventral nerve
Walking legs

Crayfish

ERAV EVNNLRET _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

ANANTEN _ _ _ _ _ _ _

ANRIB _ _ _ _ _

AXHORTCAHOLPE _ _ _ _ _ _ _ _ _ _ _ _ _

BDONMEA _ _ _ _ _ _ _

BREDALD _ _ _ _ _ _ _

CAREPACA _ _ _ _ _ _ _ _

CIRMHAOAC TSCDA _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

ENENLUNTA _ _ _ _ _ _ _ _ _

ENGGADLI TVISED _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

EPOUDR _ _ _ _ _ _

KNASLWIGEL G _ _ _ _ _ _ _ _ _ _ _ _

NGDAGN LEER _ _ _ _ _ _ _ _ _ _ _

PHEDILEC _ _ _ _ _ _ _ _

RUROMTS _ _ _ _ _ _ _

TEINITSEN _ _ _ _ _ _ _ _ _

TNOESL _ _ _ _ _ _

WSRTEEMMSI _ _ _ _ _ _ _ _ _ _

XENSRAGO S _ _ _ _ _ _ _ _ _ _

YDUO EENOPMC _ _ _ _ _ _ _ _ _ _ _ _

YOIH MCTRAOSCLP _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Grasshopper

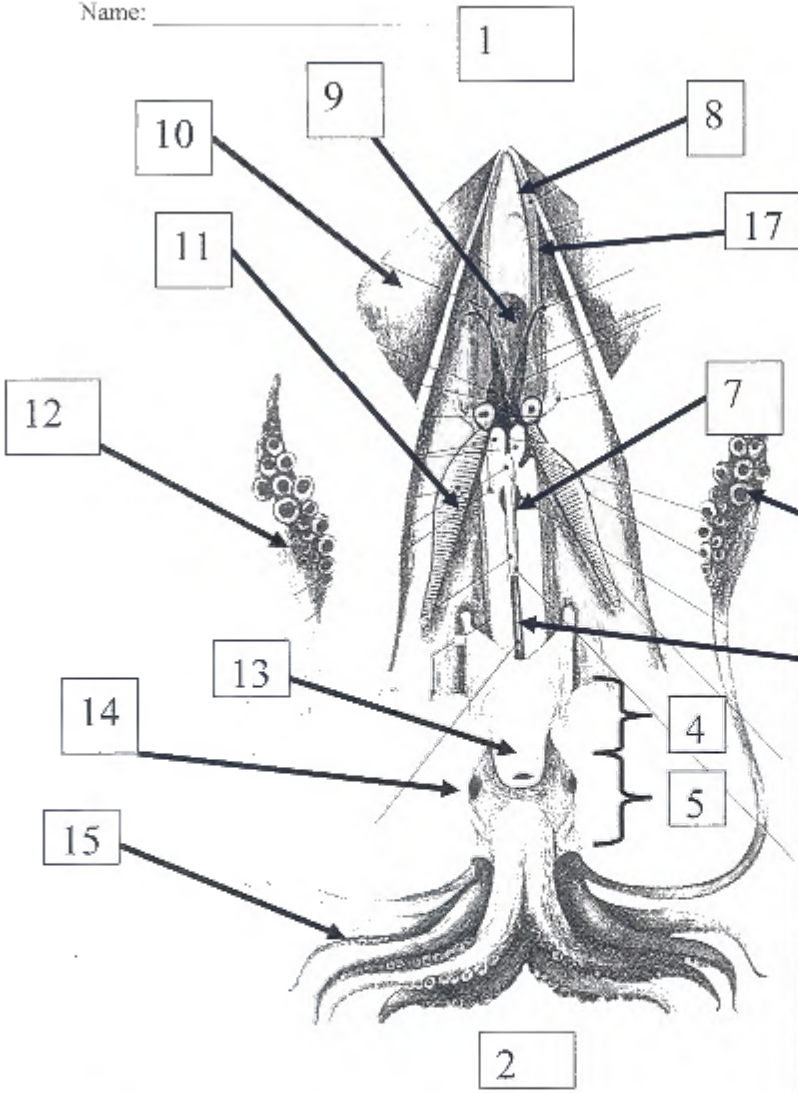
V W C A A C E C C I R T S A G
A E S U S R A T O C R N M S J
B M N E P R T J M R I A U T T
E A R T I O V I P O S I T O R
□ X N Y R A H P O P Y H O M A
T I O G A A E F U B E G N A C
U L T A C I L I N I T I O C H
B L E N L B B N D C L P R H E
U A L G E I I T E H P L P R A
L N E L S T D I Y R B A E E T
E T K I B D N N E H V M H C R
S E S O P H A G U S E E K T O
U N O N F E M U R B A L C U A
D N X R L D R Q B R K P C M Q
B A E N I T S E T N I C R E C

Antenna
Aorta
Cerci
Compound eye
Crop
Esophagus
Exoskeleton
Femur
Ganglion
Gastric ceca
Heart
Hypopharynx□
Intestine
Labrum
Malpighian
Mandible
Maxilla
Ocelli
Ovipositor
Pronotum
Rectum
Spiracles
Stomach
Tarsus
Tibia
Trachea
Tubules
Ventral nerve c

The Grasshopper

SSYAADINVLLGRA	_ _ _ _ _ _ _ _ _ _ _ _ _ _
AHCTMOS	_ _ _ _ _ _ _
AIBIT	_ _ _ _ _
ALGONGIN	_ _ _ _ _ _ _ _
ASUSRT	_ _ _ _ _ _
ATECGC CIARS	_ _ _ _ _ _ _ _ _ _ _
CALSPERIS	_ _ _ _ _ _ _ _
DBMENLAI	_ _ _ _ _ _ _
EICRC	_ _ _ _ _
ERUMTC	_ _ _ _ _ _
FURME	_ _ _ _ _
HTRAE	_ _ _ _ _
IESENTNTI	_ _ _ _ _ _ _ _
IGNIPAHLAM	_ _ _ _ _ _ _ _ _
L NEVTVREARNE	_ _ _ _ _ _ _ _ _ _ _ _
LOEICL	_ _ _ _ _ _
LONEOTEEKXS	_ _ _ _ _ _ _ _ _ _
LTSUEBU	_ _ _ _ _ _ _
MAXLLIA	_ _ _ _ _ _ _
MURBAL	_ _ _ _ _ _
NNATENA	_ _ _ _ _ _ _
OEUSGAHPS	_ _ _ _ _ _ _ _
PROC	_ _ _ _
RATAO	_ _ _ _ _
RHATECA	_ _ _ _ _ _ _
RHPXNYYHOAP	_ _ _ _ _ _ _ _ _ _
ROMUTONP	_ _ _ _ _ _ _
SPITROVIOO	_ _ _ _ _ _ _ _ _
YEDOENC UOPM	_ _ _ _ _ _ _ _ _ _ _

Name: _____



1. What is the Phylum?

_____.

Dorsal, Ventral, Anterior, or Posterior?

2. What is the class?

_____.

Dorsal, Ventral, Anterior, or Posterior?

3. What is this region called?

_____

4. What is this region called?

_____

5. What is this region called?

_____

Internal &External of the Squid

Name the structure:

6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. Name the 3 parts of this item

_____ _____ _____

17. hard structure used for support _____

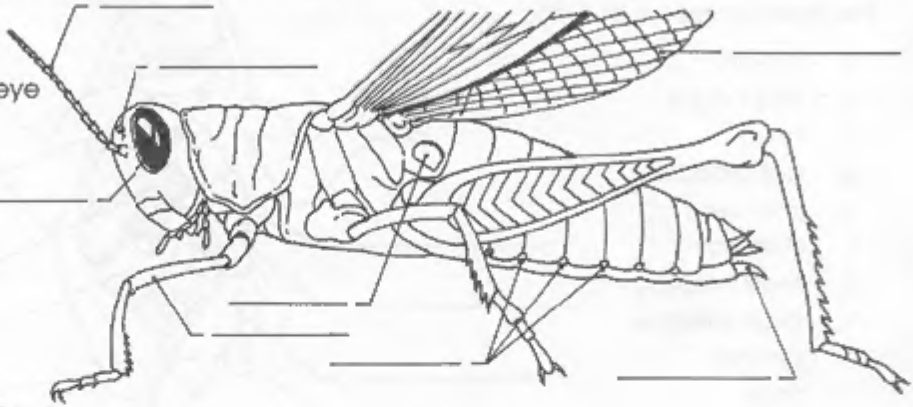
THE GRASSHOPPER

Name _____

External Anatomy

Label the following parts of the external anatomy of the grasshopper.

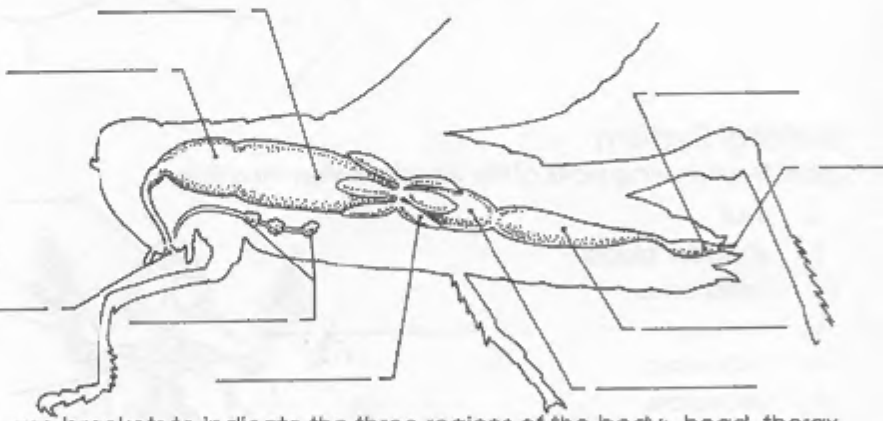
a. antenna
b. simple eye
c. compound eye
d. ear
e. legs
f. wings
g. egg-laying apparatus
h. spiracles



Digestive System

Label the following parts of the digestive system of the grasshopper.

a. crop
b. gizzard
c. stomach
d. intestine
e. mouth
f. anus
g. gastric caeca
h. salivary glands
i. rectum



On the top diagram, use brackets to indicate the three regions of the body: head, thorax and abdomen.

Fill in the blanks with the correct answers.

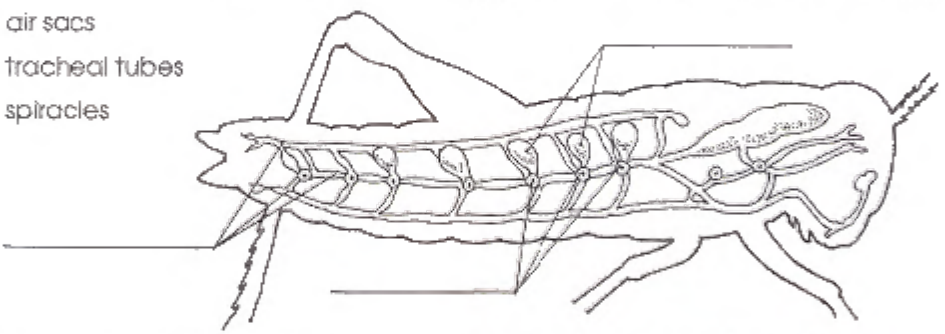
The grasshopper ingests food through the _____. The food is temporarily stored in the _____, after which it passes to the _____ for mechanical grinding. Digestion takes place in the _____ and _____. Undigested waste is egested through the _____. On its thorax, a grasshopper has _____ pairs of _____ legs and _____ pairs of wings. The _____ on the abdomen are used to carry oxygen.

GAS EXCHANGE IN LIVING ORGANISMS

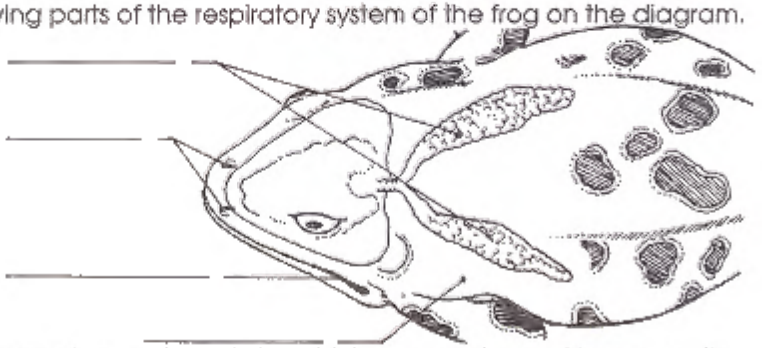
Name _____

Fill in the blanks with the correct answers.

1. In the simplest organisms, where the outer membrane of the organism is in direct contact with the environment, the exchange of gases occurs by the process of _____ .
2. In plants, the exchange of gases occur mainly through the _____ and _____ .
3. In the hydra, gas exchange occurs directly between the water and the cells through the process of _____.
4. In the earthworm, the exchange of gases occurs through the _____ .
5. Label the following parts of the respiratory system of the grasshopper on the diagram.
   a. air sacs
   b. tracheal tubes
   c. spiracles



6. Label the following parts of the respiratory system of the frog on the diagram.
   a. lungs
   b. skin
   c. nostrils
   d. mouth



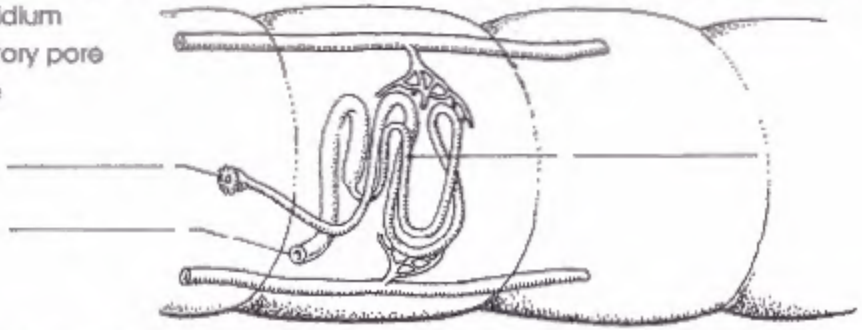
7. Openings in the grasshopper's body by which gases enter and leave are the _____ .
8. These openings are attached to _____ which deliver and receive gases at the moist membranes of the animal's internal tissues.

EXCRETION IN LIVING ORGANISMS

Name _____

Fill in the blanks with the correct answers.

1. In one-celled organisms and plants, excess water or toxic substances can be contained in _____. Specialized types of these organelles, called _____ _____, can expel these substances from the cell.
2. In the hydra, metabolic waste products are discharged directly into the _____. Gases are also exchanged between the cells and the _____.
3. Label the following parts of the excretory system of the earthworm on the diagram.
   a. nephridium
   b. excretory pore
   c. tubule



4. Label the following parts of the excretory system of the grasshopper on the diagram.
   a. Malpighian tubules
   b. rectum
   c. intestine
   d. anus

Fill in the blanks with the correct answers.

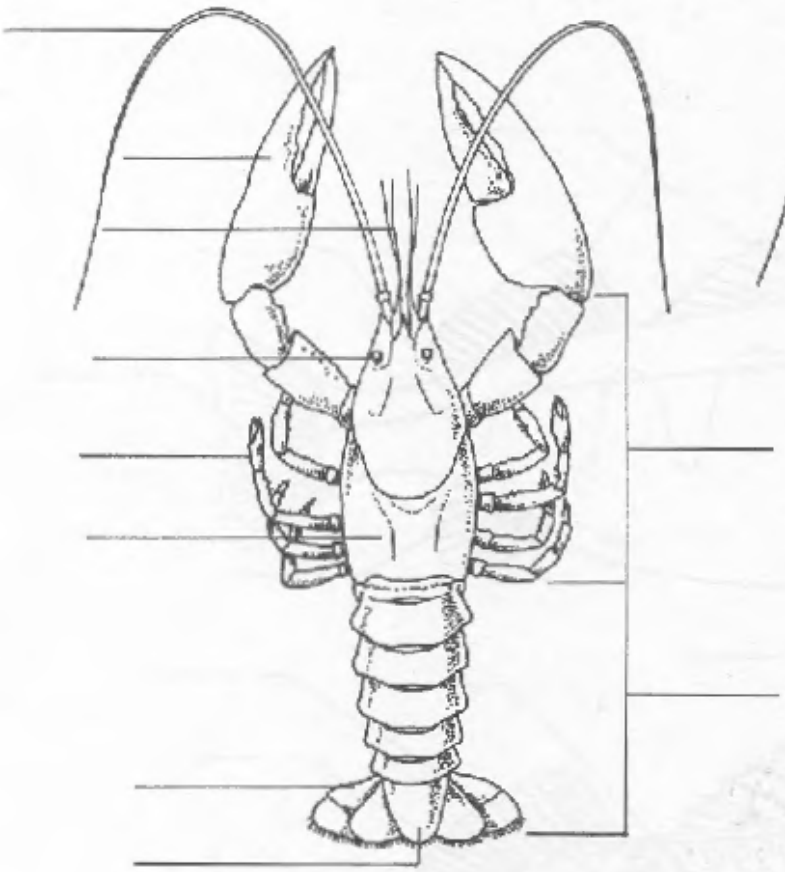
In the earthworm, water, mineral salts and urea are filtered out of the body fluids into the _____, and are then excreted. There are _____ nephridia in most of the body segments. Each nephridium does the same job as the _____ in a human. The sites in the grasshopper in which water, mineral salts and uric acid accumulate are called _____. These tubules remove cell wastes from the _____ and pass them into the _____. From here they are eliminated from the body along with the _____ wastes.

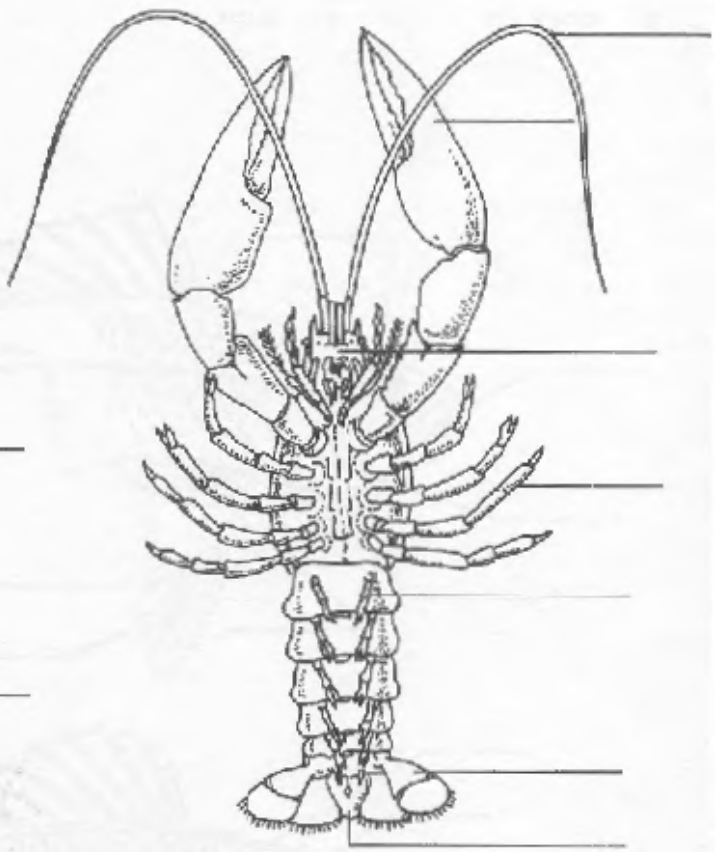
STRUCTURE OF A CRAYFISH

Name _____

Label the following parts of the crayfish on the diagrams of the dorsal and/or ventral views below.

a. carapace
b. compound eye
c. antennule
d. mandible
e. cheliped
f. antenna
g. walking legs
h. swimmerets
i. uropod
j. telson
k. anus
l. cephalothorax
m. abdomen





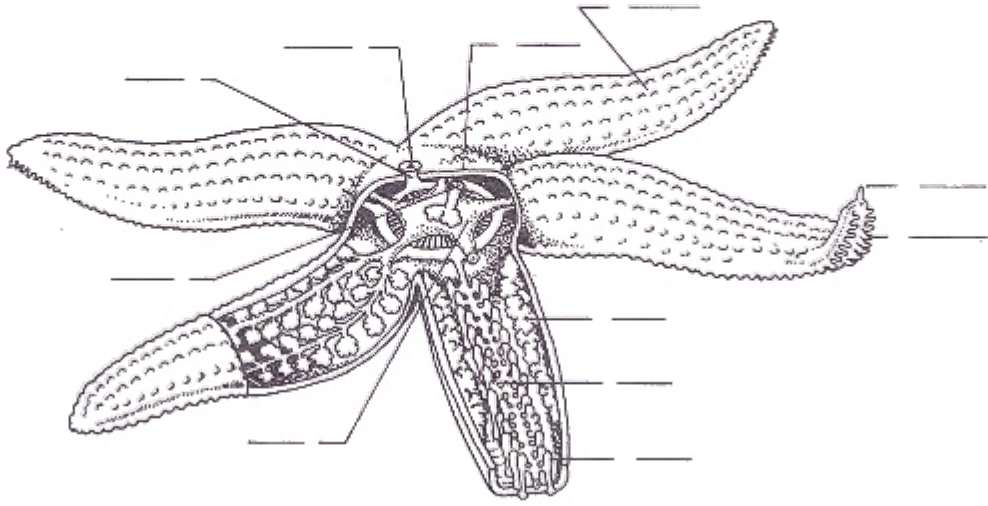
Fill in the blanks with the correct answers.

Crayfish seize their food with their _____. The _____ and _____ crush and chew the food. The _____ are the excretory organs. The _____ are used for respiration. The "brain" consists of a pair of _____. Two large nerves extend from the _____, around the esophagus and join the _____ nerve cord.

STRUCTURE OF A STARFISH

Name _____

Label the following parts of a starfish on the diagram below. Give the purpose/function of each part.



a. arm _____

b. sieve plate _____

c. stomach _____

d. anus _____

e. tube feet _____

f. ring canal _____

g. stone canal _____

h. radial canal _____

i. ampulla _____

j. gonad _____

k. eyespot _____