ANSWERS ANIMALS PARADE REVIEW

STATION #1
Tell the PHYLA for each of these organisms
 EARTHWORMS \_\_***ANNELIDA***\_\_\_\_\_\_\_
 CRAYFISH \_***ARTHROPODA***\_\_\_\_\_\_\_\_\_
Look closely at the bodies of these organisms. In addition to both being invertebrate protostomes with a EUCOELOM, what body characteristic is shared by these two phyla ?
 ***SEGMENTATION***

STATION #2
These models represent the three kinds of coeloms seen in TRIPLOBLASTIC animals.
(Yellow = endoderm, Red = mesoderm, Blue = ectoderm derived tissue)
Identify the type of coelom.

 \_C\_\_ = eucoelom \_\_A\_\_ = acoelom \_\_B\_\_\_ = pseudocoelom

Which of these is found in\_ ROUNDWORMS? \_\_\_***PSEUDOCOELOM***\_\_\_\_\_
Which of these is found in FLATWORMS? \_\_***ACOELOM***\_\_\_\_
Which of these is found in ANNELIDS, MOLLUSKS, ARTHROPODS,
 ECHINODERMS, FISH, AMPHIBIANS, REPTILES, BIRDS, AND MAMMALS? ***EUCOELOM***\_\_\_\_\_

STATION 3
Name the 4 EUKARYOTIC KINGDOMS and compare the cell walls in each.
***1. ANIMALIA - NO CELL WALLS
2. PLANTAE- CELL WALLS CONTAIN CELLULOSE
3. FUNGI- CELL WALLS CONTAIN CHITIN
4. PROTISTA- SOME HAVE CELL WALLS; SOME DON’T;
 WALLS CAN CONTAIN CHITIN, CELLULOSE, SILICON***

STATION 4
Tell one characteristic shared by both ARCHAEA and EUKARYA
***Some introns; histones; methionine starts translation; several kinds of RNA polymerase;***
Tell one way ARCHAEA and BACTERIA are different
***Archaea
No peptidoglycan in cell walls; histones, some introns; live in hostile environments; intermediate size ribosomes; not affected by streptomycin/chloramphenicol; some branched hydrocarbons in membrane lipids; several kinds of RNA polymerase; met starts translation***

***BACTERIA-
peptidoglycan in cell walls; No histones; no introns; not extremophiles; smallest ribosomes; affected by many antibiotics like streptomycin/chloramphenicol; unbranched hydrocarbons in membrane lipids; one kind of RNA polymerase; f-met starts translation***

 STATION 5
To which phylum does this organism belong? \_\_***ECHINODERMATA***\_\_
 Name the characteristics seen in this phylum. Circle all that apply.

 Circulation: open circle

 Adult symmetry: none radial bilateral

 Backbone: invertebrate vertebrate

 Embryonic development: protostome deuterostome

 \_\_***ENDO*** skeleton (See Pin #5)
 ***WATER VASCULAR***  system with ***TUBE FEET\_\_\_*** (See pins #1 & #2)
 ***SPINY*** skin (See Pin #4)

Explain why this organism is placed in the BILATERIA group if it has radial symmetry?
 ***LARVAE ARE BILATERAL***

STATION 6
Match the type of reproduction below with the groups of animals below

 A. OVIPARITY B. OVOVIVIPARITY C. VIVIPARITY

\_\_A\_\_\_\_ Birds

\_\_A\_\_\_\_ Monotremes

\_\_C\_\_\_\_ Marsupials

\_\_C\_\_\_\_ Placental mammals

\_\_C\_\_\_\_ Humans

Which CLASS of vertebrates shows all three kinds of parity? \_\_***REPTILES*\_**\_\_\_\_\_\_\_\_\_\_\_\_

STATION 7
How is the skin of a reptile different than that of an amphibian?
 ***Amphibians have thin, moist skin; Reptiles have thick, dry, scaly skin***

How does this feature relate to the way these organisms breathe?
 ***AMPHIBIANS CAN BREATHE THROUGH THEIR SKIN: REPTILES CAN NOT***

STATION 8

Which of these pairs have the closest TAXONOMIC RELATIONSHIP?
 A. Earthworm & snake – ***Same domain & Kingdom; different Phyla*** B. crayfish & tick- ***Same domain, kingdom, & phyla; different classes***
 C. amoeba & archea- ***different domains*** D. dolphin & horse- **same domain, kingdom, phylum & class**

STATION 9
CRAYFISH belong in the PHYLUM \_***ARTHROPODA***\_\_\_\_ and the CLASS \_\_***CRUSTACEA***\_\_\_\_\_

Which characteristics do they have?
 Circulation: OPEN CLOSED
 Symmetry: None Radial Bilateral
 Backbone: invertebrate vertebrate
 Embryonic development: spiral determinate radial indeterminate

 \_\_***EXO*** skeleton (See pin #1)
 Breathe with \_***GILLS***\_\_ (#2)
 **JOINTED** \_\_\_\_ appendages (#3)

STATION 10
To which PHYLUM does this organism belong? \_\_\_\_***CNIDARIA***\_\_\_\_\_\_
Organisms in this group are TRIPLOBLASTIC DIPLOBLASTIC
Explain what this means.
 ***Embryo develops only 2 germ layers***

Use the phylogenetic tree you competed.
What characteristic separates this phylum from PORIFERANS? \_\_\_***TISSUES***\_\_\_
What characteristic separates this phylum from PLATYHELMINTHES and other higher organisms?
  **BILATERAL SYMMETRY**

STATION 11
USE THE HAT PROVIDED TO DEMONSTRATE THE TWO BODY FORMS SEEN IN CNIDARIANS. Draw them in the space below and give an example of each.



Name the one opening digestive cavity seen in this group. ***GASTROVASCULAR CAVITY***


STATION 12
Rats are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mammals MONOTREME MARSUPIAL PLACENTAL

Name 2 characteristics share by ALL mammals

 ***HAIR or FUR; MAKE MILK FOR YOUNG***

STATION 13
Name 3 characteristics of birds visible in this specimen
 ***WINGS, FEATHERS, HOLLOW BONES; THREE CHAMBERED HEART; ENDOTHERMIC***
STATION 14
Green glands, nephridia, flame cells, and Malpighian tubules are all examples organs that belong to which body system? ***EXCRETORY***
What organ do you have that serves the same function as these? ***KIDNEYS***

STATION 15
Use your notes and look at the hearts of the organisms provided to fill in the chart below

|  |  |  |
| --- | --- | --- |
| ORGANISM | # of heart chambers | # of loops in circulatory system |
| FISH | 2 | 1 |
| AMPHIBIANS | 3 | 2 |
| REPTILES | 3 | 2 |
| BIRDS | 4 | 2 |
| MAMMALS | 4 | 2 |

STATION 16
The pins in this specimen are marking some of the characteristics of OSTEICHTHYES. NAME THEM.

 1. Integument covered with ***SCALES*** 2. Lungs or a ***SWIM BLADDER***.3. ***GILLS*** for gas exchange
 4. ***FINS*** 5. ***2*** chambered heart; ***1*** loop circulatory system

STATION 17
Name TWO groups of organisms that are ENDOTHERMIC
 ***BIRDS & MAMMALS***

STATION 18
To which phylum does this organism belong?
 ***PORIFERA***

Look at the phylogenetic tree you completed for animals. Which characteristic does this group lack that is seen in all other animals? ***TISSUES***

What type of symmetry is seen in this group?
 **ASYMMETRY (NONE)**

19. What evolutionary advancement allowed reptiles to move into new habitats and not have to return to water to reproduce? ***AMNIOTIC EGG***

20. All vertebrates are deuterstomes and invertebrates are protostomes except ***ECHINODERMS***.

21. Clams, oysters, slugs, octopus, and snails belong in the Phylum ***MOLLUSCA***

22. Label the blastopore in this diagram. Tell how the fate of this opening differs in protostome vs deuterostome embryos.
***BLASTOPORE BECOMES ANUS IN DEUTEROSTOMES AND MOUTH IN PROTOSTOMES***

23. Name the 3 germ layers that form in triploblastic embryos and tell an organ that is derived from each.
 ***ENDODERM- LINING OF DIGESTIVE TRACT; DIGESTIVE ORGANS; PANCREAS; LIVER
 MESODERM- MUSCLE; ORGANS BETWEEN GUT AND BODY WALL; EXCRETORY; CIRCULATORY;
 ECTODERM- SKIN; BODY COVERINGS; NERVOUS SYSTEM***

24. Name the type of development shown by these organisms.

 ***INDIRECT***