**Evolution of the Muscular System: Worksheet**

Directions~ Please circle the correct multiple choice answer. For true and false questions simply circle true or false at the beginning of the question. For the matching column write the letter in the space provided. For the short answers, please write your answer in the space provided.

**Section 1: Mollusca**

1. How many species are classified into the phylum Mollusca?
   1. 85,000
   2. 90,000
   3. 40,000
   4. 100,00
2. What is Mollusca composed of?
   1. Snails
   2. Slugs
   3. Clams
   4. All of the above
3. What type of water are Mollusca typically found in?
   1. Fresh
   2. Salt
   3. Neither
   4. Both
4. What percent of marine organisms does the phylum Mollusca cover?
   1. 23%
   2. 100%
   3. 59%
   4. 40%
5. True or False- Octopus have four eyes and two arms.
6. How many species of octopi are there? Answer- -
7. What is the main **SLOW** way octopi move around the ocean?
   1. Crawling
   2. Walking
   3. Jet Propulsion
   4. None of the above
8. True or False- The inner skin of octopi is composed of many layers of muscle.
9. What are the three types of muscle found in octopi? Answer- -
10. What is muscular hydrostat? Answer- -
11. What depth does the European squid live in?
    1. 2,600
    2. 5,000
    3. 3,600
    4. None of the above
12. How many limbs does the European Squid have? Answer- -
13. How do squids use their muscles?
    1. Expanding the mantle cavity
    2. Simply sending a wave using the nervous system
    3. None of the above
    4. All of the above
14. What is the mantle? Answer- -
15. What area is the oyster native to?
    1. Zimbabwe
    2. Iceland
    3. Pacific Coast of Asia
    4. Australia
16. What do the kidneys do using the adductor muscle?
    1. Expel waste products
    2. Digest Food
    3. None of the Above
    4. All of the above
17. Also what is the adductor muscle responsible for? Answer- -

**Section 2: Porifera**

1. What comes to mind when the word Porifera is used?
   1. Sponges
   2. Archae Bacteria
   3. Tigers
   4. Toucans
2. How many species of sponges are there throughout the world? Answer- -
3. True or False- The demosponge moves around in the ocean by use of muscles?
4. True or False- The red boring sponge is found in Brazil.
5. True or False- The sea squirt has one of the most complicated muscular systems in the world with more than 30 different types.

**Section 3: Cnidaria**

1. What does the phylum Cnidaria consist of?
   1. Marine Animals
   2. Stationary Land Organisms
   3. Archae Bacteria
   4. None of the above
2. What are the four major groups of Cnidarians? Answer- -
3. True or False- A box jellyfish sting is a laughable matter.
4. True or False- Jellyfish are marine invertebrates.
5. What is a good analogy for the muscular system of a jellyfish?
   1. Starting a car
   2. Opening an umbrella
   3. Flying an Airplane
   4. Getting on the train
6. True or False- A jellyfish has a ring of muscle around its belly.
7. The maroon anemone has fibers on its outside walls. Are they considered muscle tissue?
   1. Yes
   2. No
8. True or False- The lesser starlet coral has cells that are run by muscle fibers.

**Section 4: Platyhelminthes**

1. True or False- Most flatworms are either pests or parasites.
2. True of False- Platyhelminthes are extremely complex vertebrates.
3. How long can pork tapeworms grow?
   1. 10 Feet
   2. 8 Feet
   3. 6 Feet
   4. 4 Feet
   5. 2 Feet
   6. 1 Foot
4. True or False- The divided flatworm is a hermaphrodite.
5. True or False- The blue flatworm is blue on its underside.
6. What coats the pharynx?
   1. Muscular Coat
   2. Tissue Coat
   3. Brain Matter
   4. None of the above

**Section 5: Nematoda**

1. True or False- Nematodes are the most diverse of all the animal phyla.
2. How many members does this phylum contain?
   1. One Million
   2. One Hundred
   3. One Hundred Thousand
   4. One Hundred Billion
3. True or False- The Worm is not a hermaphrodite.
4. True or False- Nematodes have been used for investigation of neural development in animals.
5. True or False- The hookworm is not a leading cause of maternal and child morbidity in underdeveloped parts of the world.
6. What do pine wood nematodes require to move?
   1. Vectors
   2. Plasma
   3. Suckers (Suction Cups)
   4. None of the above

**Section 6: Annelida**

1. What is the phylum Annelida composed of? Answer- -
2. True or False- Two muscles run through an earthworm’s body.
3. What are those two muscles running through the earthworm’s body?
   1. Answer- - 45
4. True or False- Polychaetes have muscles that allow them to swim.
5. The outermost layer of muscle for a leech is known as the… Answer- -

**Section 7: Arthropoda**

1. True or False- The phylum Arthropoda has the most living organisms under its name.
2. What does the phyla Arthropoda include? Answer- -
3. What are the two types of muscle in a bumblebee? Answer- -
4. Why do wasps have muscles?
   1. No reason
   2. To bend their hind legs
   3. To bend their arms
   4. None of the above
5. What do arthropods have that we as humans do not?
   1. Exoskeleton
   2. Nerves
   3. None of the Above
   4. All of the Above

**Section 8: Echinodermata**

1. What is the second largest phylum?
   1. Echinodermata
   2. Chordata
   3. Mollusca
   4. Cnidaria
2. Where are the muscles in a starfish?
   1. Eyes
   2. Various Limbs
   3. Hind Quarters
   4. Legs
3. How do starfish move? Answer- -
4. True or False- Sea Urchins do not have muscles near their mouth.
5. True or False- Sea cucumbers are constantly using their muscular system.

**Section 9: Chordata**

1. True or False- Chordata is the least physically complex of the all the phyla.
2. As humans we are classified into which phylum?
   1. Echinodermata
   2. Chordata
   3. Mollusca
   4. Cnidaria
3. True or False- Muscles barely control anything in the human body.
4. What are the three categories of muscles in humans?
5. What do skeletal muscles do?
6. Why are cardiac muscles SO important?
7. How many muscles are in a goldfish’s tail?
   1. 3
   2. 6
   3. 8
   4. 9

Thanks for completing the worksheet!!