Animal characteristics

Be sure to answer all questions in complete sentences as these are your notes for this topic.

Station 1 – Functions of animals #1:

1. All animals: (circle a choice in each section)
    a. are prokaryotic / eukaryotic
    b. are multicellular / unicellular
    c. are autotrophic / heterotrophic
    d. have a cell wall / don't have a cell wall

2. **Feeding:** All animals must consume other organisms for food; however, they have different means of doing so. You should be aware of herbivores, carnivores, and omnivores, but there are some lesser known ways of getting food as an animal.

When we hear "decomposer" we think of bacteria and fungi, but there are some animal decomposers, too. These **detritivores** consume decaying material to recycle nutrients. Watch the video using the QR code. Why is this way of eating important in an ecosystem?

Using the second QR code, watch the video and explain how filter feeders get their food.

Give an example of an animal that exhibits each of the following feeding types:

Herbivore: Carnivore:
Omnivore: Detritivore:
Filter feeder:

3. **Respiration:** Why do animals need to obtain oxygen and get rid of carbon dioxide? What are some different ways that animals are able to do this?

4. **Response:** Name two specific ways animals are able to respond to their environments.

Station 2 - Functions of animals #2:

1. **Circulation:** What are some things that animals may need to circulate through their bodies?

2. **Excretion:** The diagram at the table outlines animal excretion. At the top are the molecules that are broken down into smaller compounds, followed by the animals that metabolize them, and at the bottom are the end waste products to be excreted.

What are the two biomolecules that produce toxic waste when broken down?

What are the three main types of waste products that animals excrete?

3. **Movement:** What are some examples of animals that don't move?

Using the QR code at the table, watch the video. Why is coral considered an animal if it doesn't move as an adult?

4. **Reproduction.** After the human body unit, you know quite a bit about sexual reproduction. What are some ways that animals can asexually reproduce?

Watch the video at this station (using the QR code) to see four unusual ways that animals get it on.

Station 3 – Animal body plans:

1. Define the following types of symmetry and give an example of each:

   Asymmetry –

   Radial Symmetry -

   Bilateral Symmetry –

2. There are multiple organisms or pictures of organisms at the table. List the types of symmetry that each exhibit in the following table.

Organism	Symmetry	Organism	Symmetry

Station 4 - cephalization:

1. What is cephalization?

2. What type of symmetry do organisms with cephalization usually exhibit?

3. One of these things is not like the other…Which organism at your table does not show cephalization?

4. What evolutionary advantage would having most of your sensory organs in one area allow for?

Station 5 – Characteristics #1:

1. What is the difference between exo- and endoskeletons?

2. Give 3 examples of organisms with endoskeletons.

3. Give 3 examples of organisms with exoskseletons.

4. Why do you think that there are many marine organisms, like jellyfish and sponges, that do not have a skeleton?

5. Step #1: Banish the phrases "warm-blooded" and "cold-blooded" from your vocabulary. The only time blood is cold is when you are dead. Step #2: Instead use the terms "endothermic" and "ectothermic". What is an ectothermic organism? Give 4 examples.

6. What is an endothermic organism? Give 4 examples of animals that exhibit endothermy.

7. What would be an advantage of being able to internally regulate your body temperature?

Station 6 – Characteristics #2:

1. What is the difference between open and closed circulatory systems?

2. Animals that have open circulatory systems typically have many pumps or hearts (not just one like we do). Why do you believe that having multiple pumps is necessary in this case?

3. Sponges are very simple animals with no tissues and very few types of cells. Since they have no tissues, they can also have no organs that could transport materials through their body. Using your knowledge of where sponges live, how do you believe sponges are able to circulate necessary materials?

4. Use the QR code at the table to learn about cell specialization at bbc.com. What is cell specialization?

5. What is a stem cell?

6. If all of the cells in your body have the same DNA (except gametes) how do these cells perform such different tasks in your body?