



**Teacher's Pet**

**INTERNAL  
BIOLOGY OF  
LIVING  
ORGANISMS**


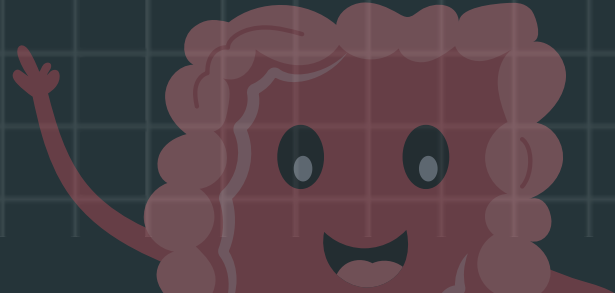
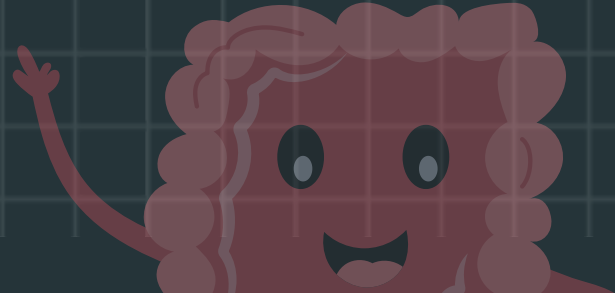
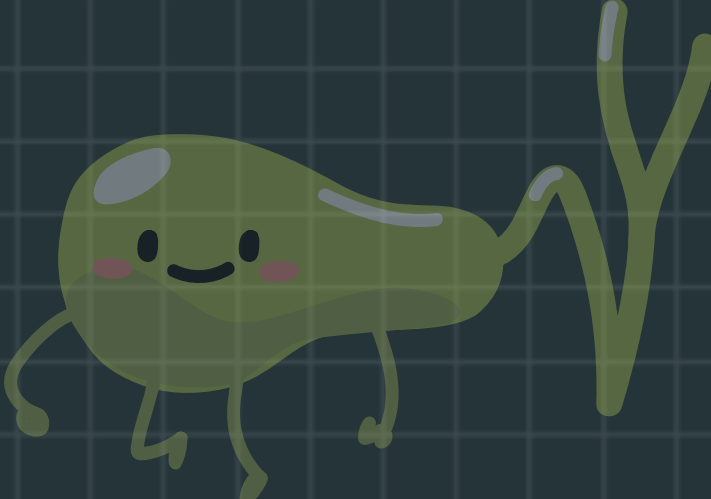
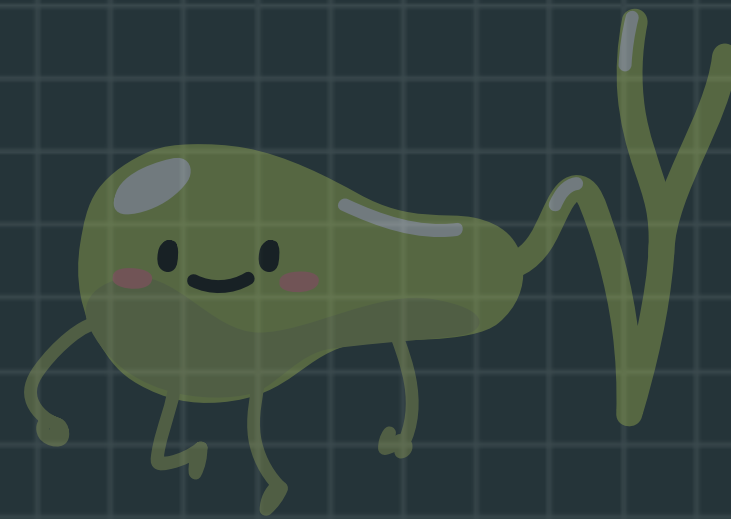

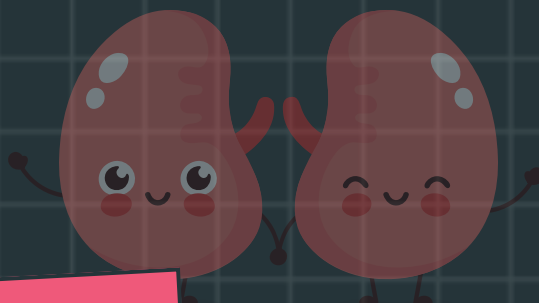
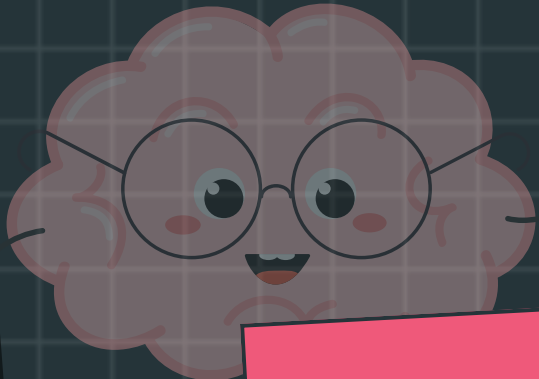
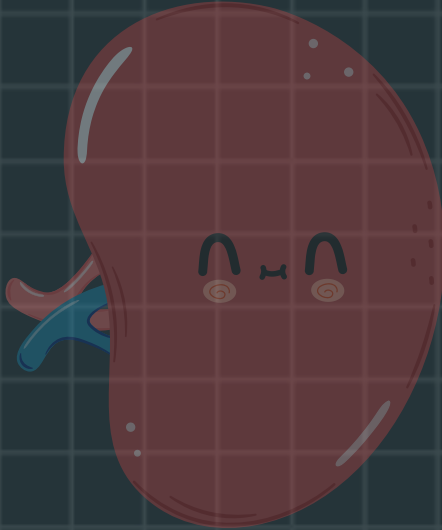


# GUIDING QUESTION

**HOW ARE ORGANISMS  
SUPPORTED BY VITAL BIOLOGICAL  
PROCESSES AND SYSTEMS?**



**INTRODUCTION VIDEO**



**Humans are complex organisms with biological systems that carry out vital biological processes.**

**VIDEO REVIEW QUESTION #1**

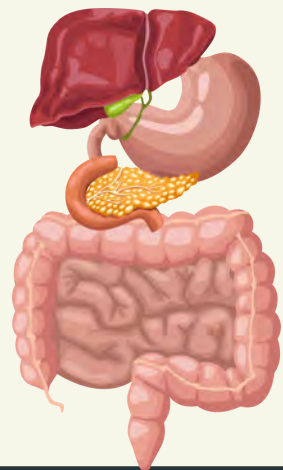
Can you name an important biological system from the video?

**VIDEO REVIEW  
QUESTION # 1**

Can you name an important biological system from the video?

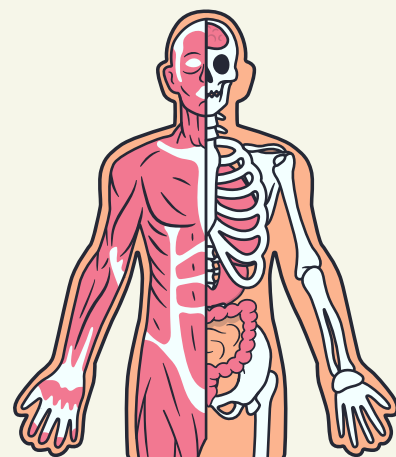
**1**

Digestive  
System



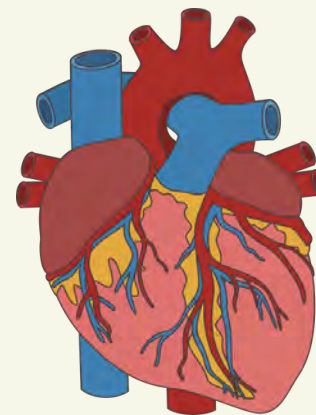
**2**

Musculoskeletal  
System



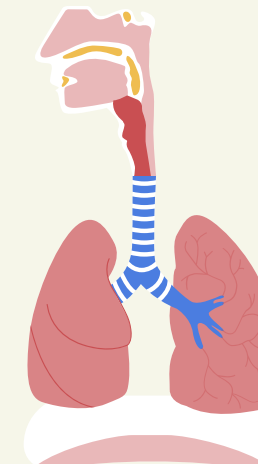
**3**

Circulatory  
System



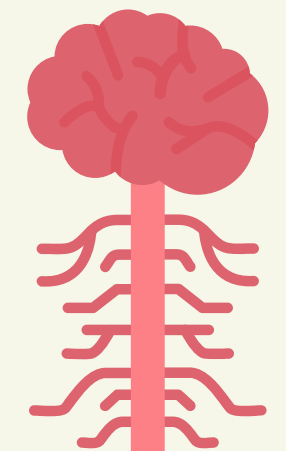
**4**

Respiratory  
System



**5**

Nervous  
System



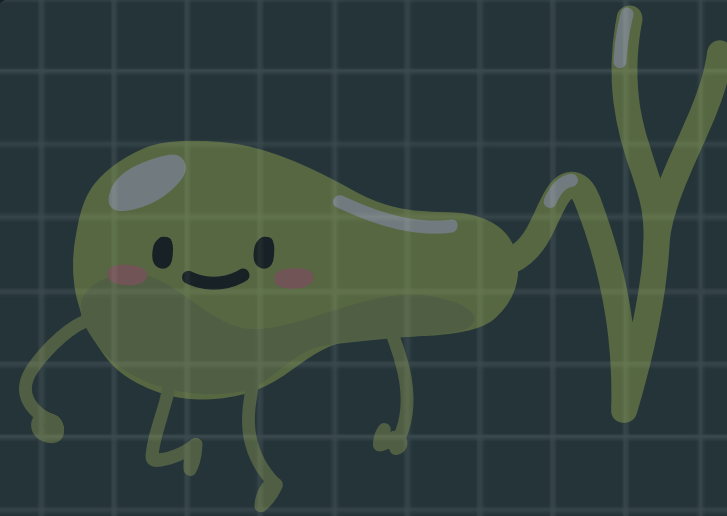
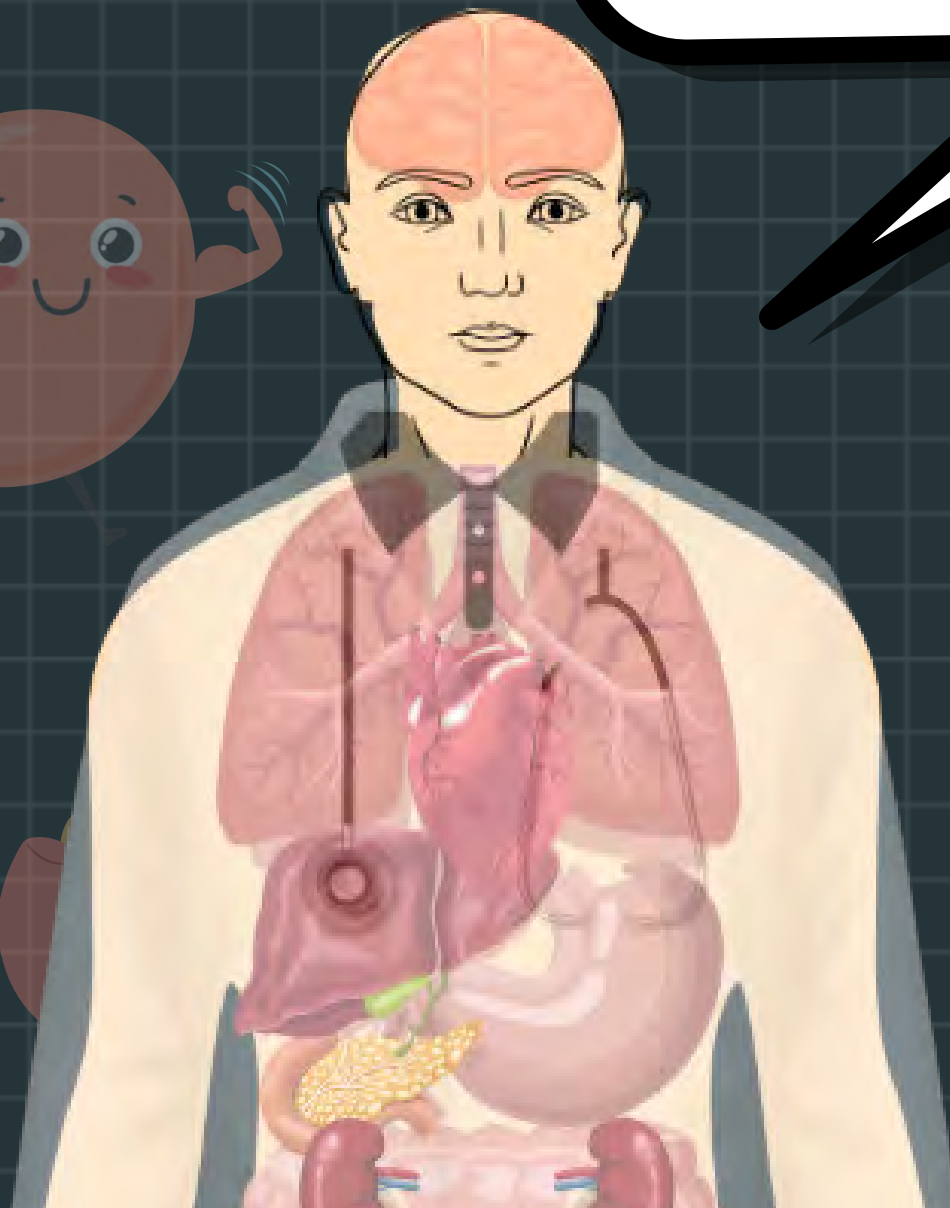


**There are 5 vital biological processes of complex organisms.**



**VIDEO REVIEW QUESTION #2**

Can you name a vital biological process from the video?

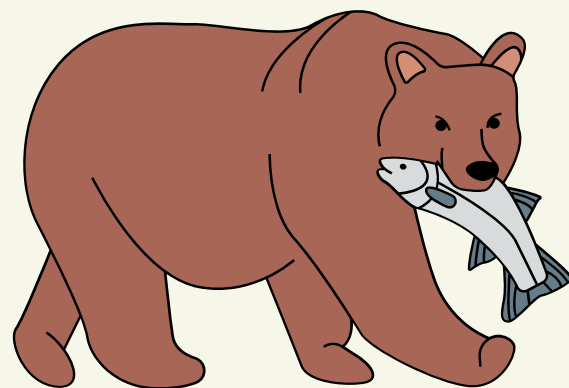


**VIDEO REVIEW  
QUESTION # 2**

Can you name a vital biological process from the video?

**1**

Movement



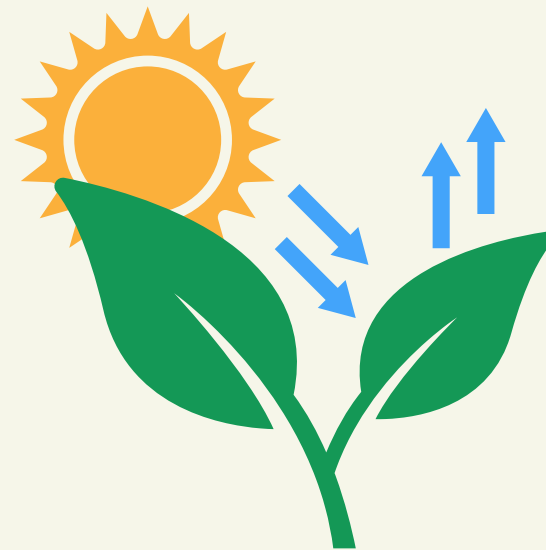
**2**

Nutrition



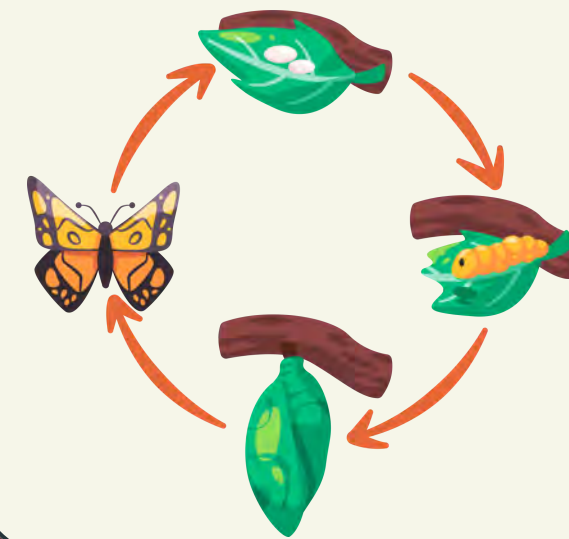
**3**

Respiration



**4**

Growth



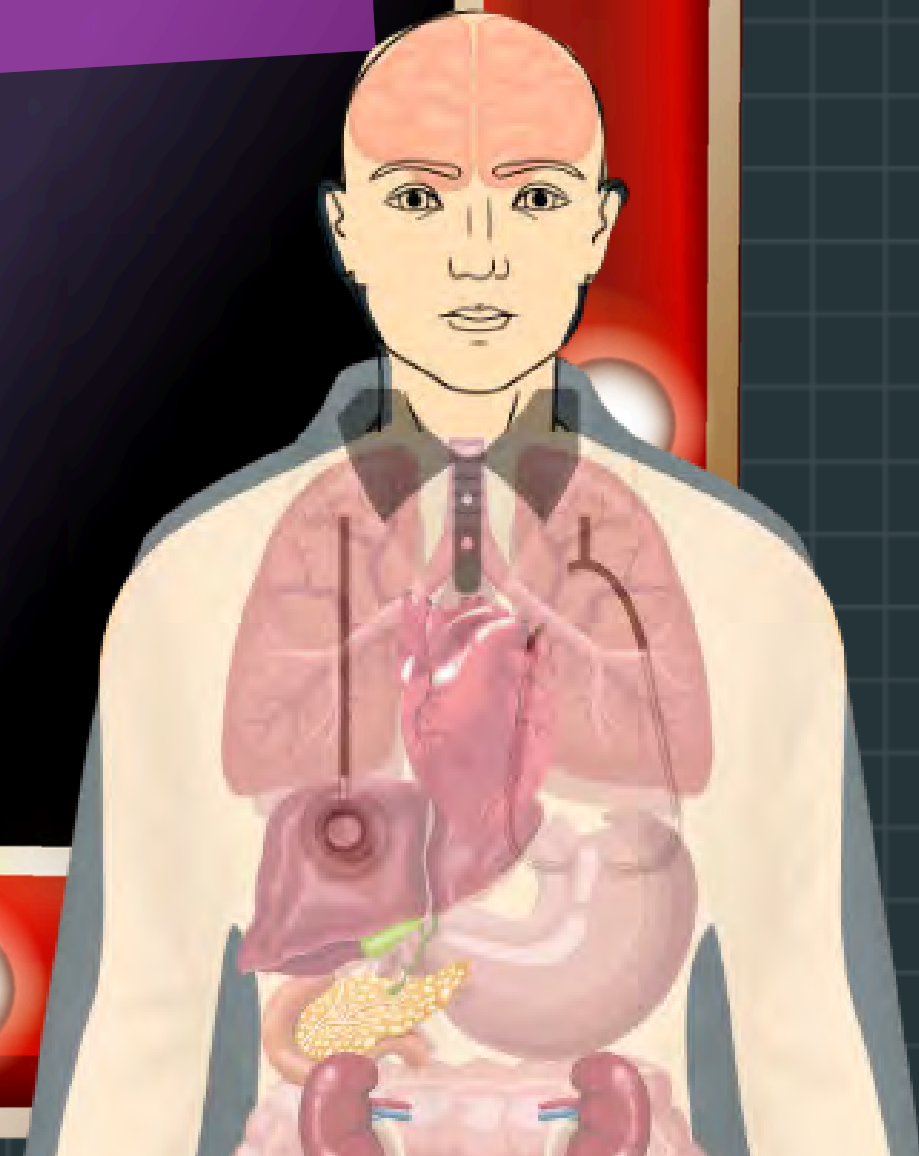
**5**

Reproduction



# ANATOMY ADVENTURES

## TRIVIA GAME

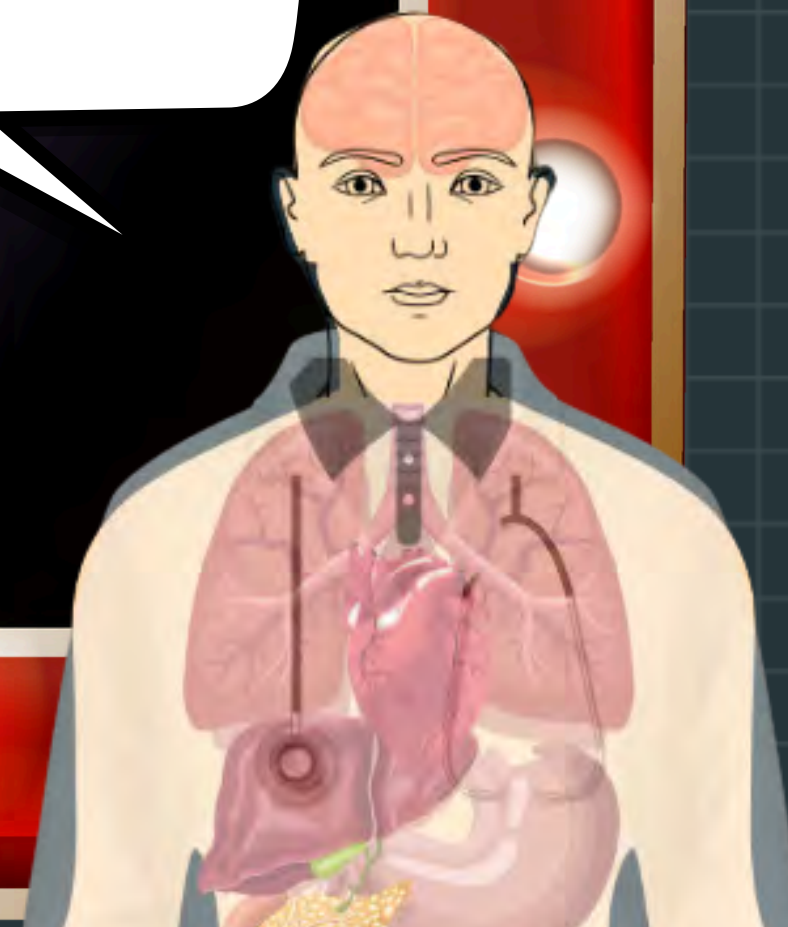




# TRIVIA RULES

- Split into 4 teams.
- 30 seconds to discuss as a group and chose an answer.
- One student will be chosen to share the group's answer & why they chose that answer.
- Your answer will not count if you call out.

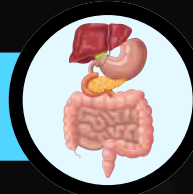
Be a good sport!  
and  
have FUN!



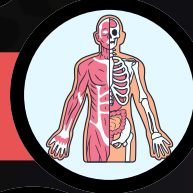
When answering, you must connect biological systems to biological processes.

### BIOLOGICAL SYSTEMS

1. Digestive system



2. Musculoskeletal System



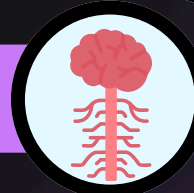
3. Circulatory System



4. Respiratory System



5. Nervous System



### BIOLOGICAL PROCESSES

1. Movement



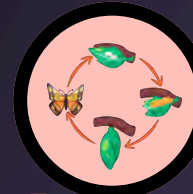
2. Nutrition



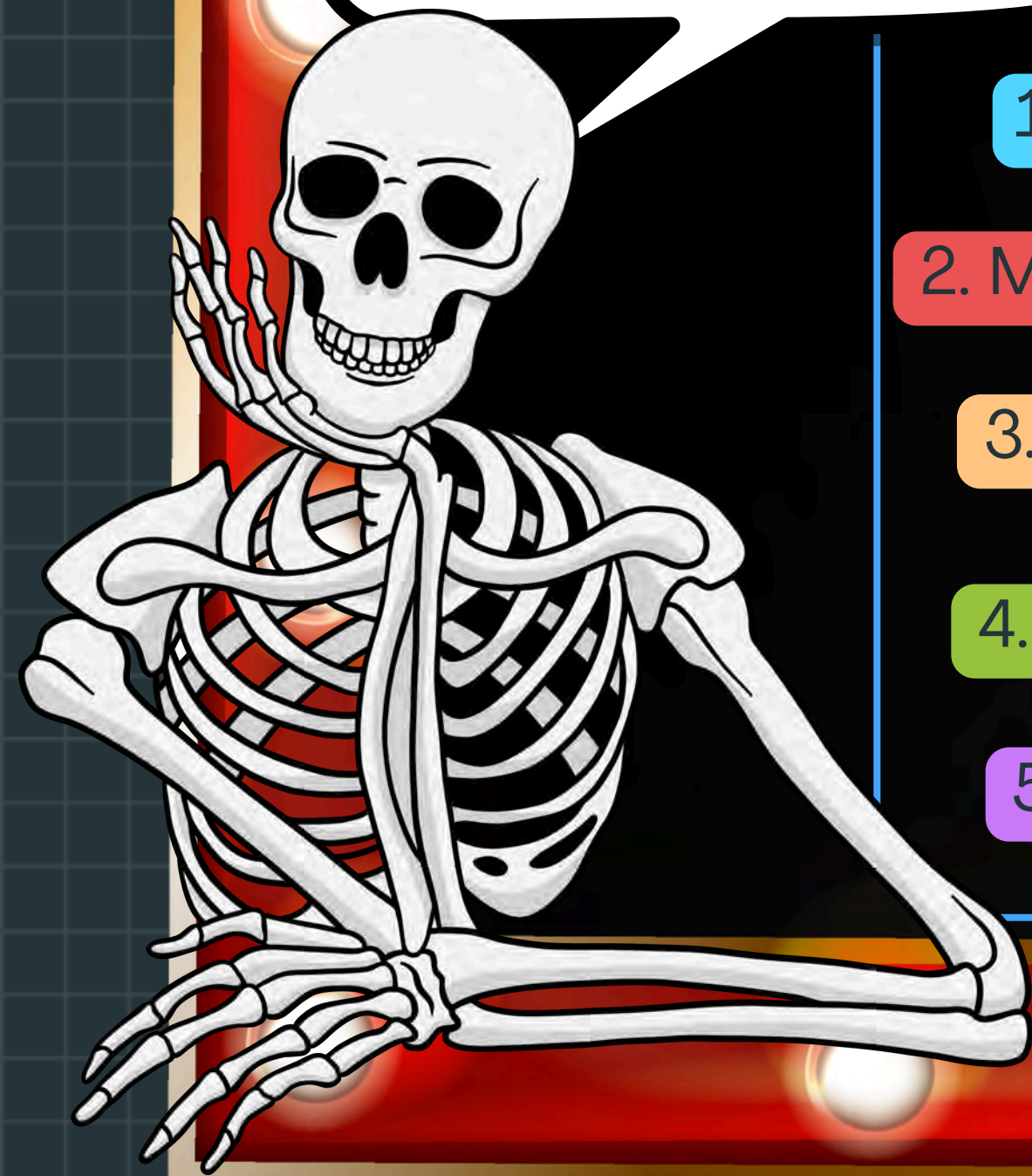
3. Respiration



4. Growth

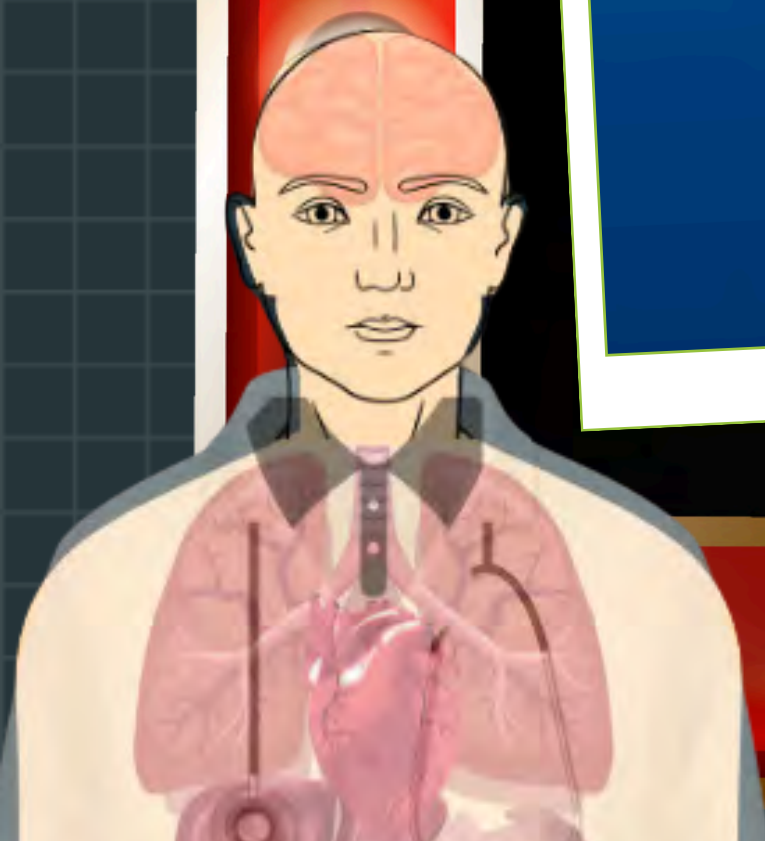


5. Reproduction



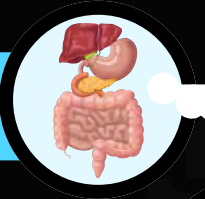
**QUESTION # 1**

Which system is MOST responsible for a blue whale's nutrition, providing energy to grow and move?

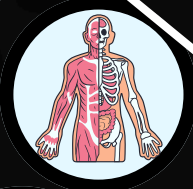


**BIOLOGICAL SYSTEMS**

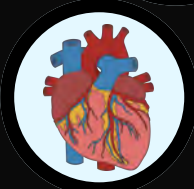
1. Digestive system



2. Musculoskeletal System



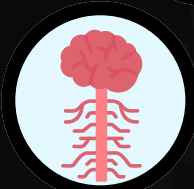
3. Circulatory System



4. Respiratory System



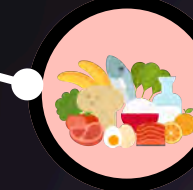
5. Nervous System



**BIOLOGICAL PROCESSES**



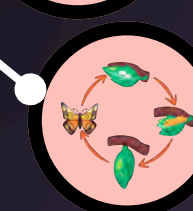
1. Movement



2. Nutrition



3. Respiration



4. Growth

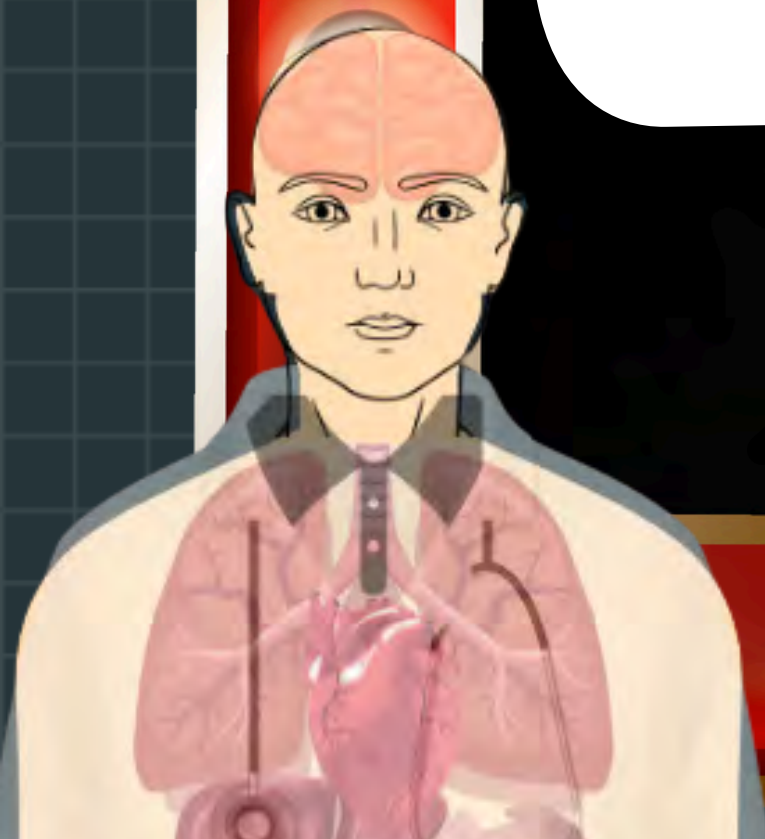


5. Reproduction

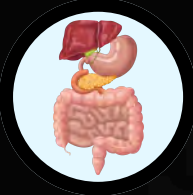
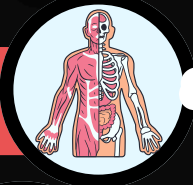
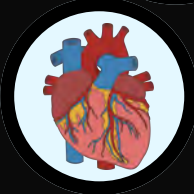

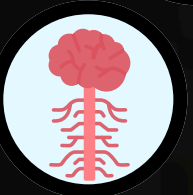
Let's connect biological systems to biological processes.

**QUESTION # 2**




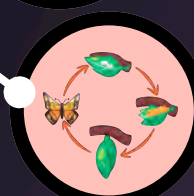

Which system helps  
a dinosaur the  
**MOST** to move fast  
and grow so big?

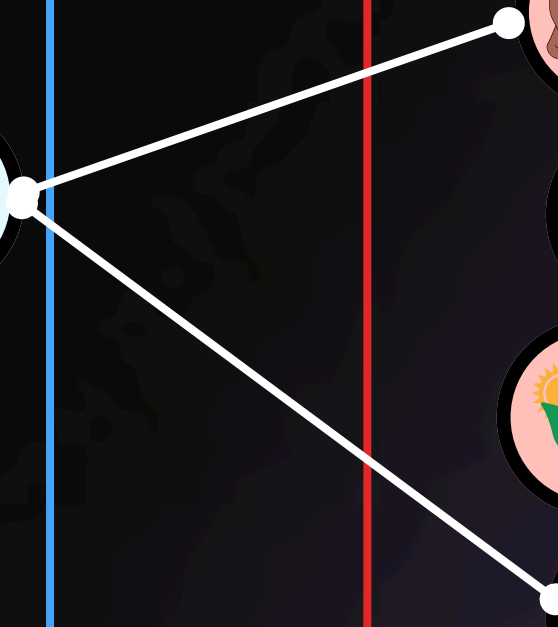


**BIOLOGICAL SYSTEMS**

- 1. Digestive system 
- 2. Musculoskeletal System 
- 3. Circulatory System 
- 4. Respiratory System 
- 5. Nervous System 

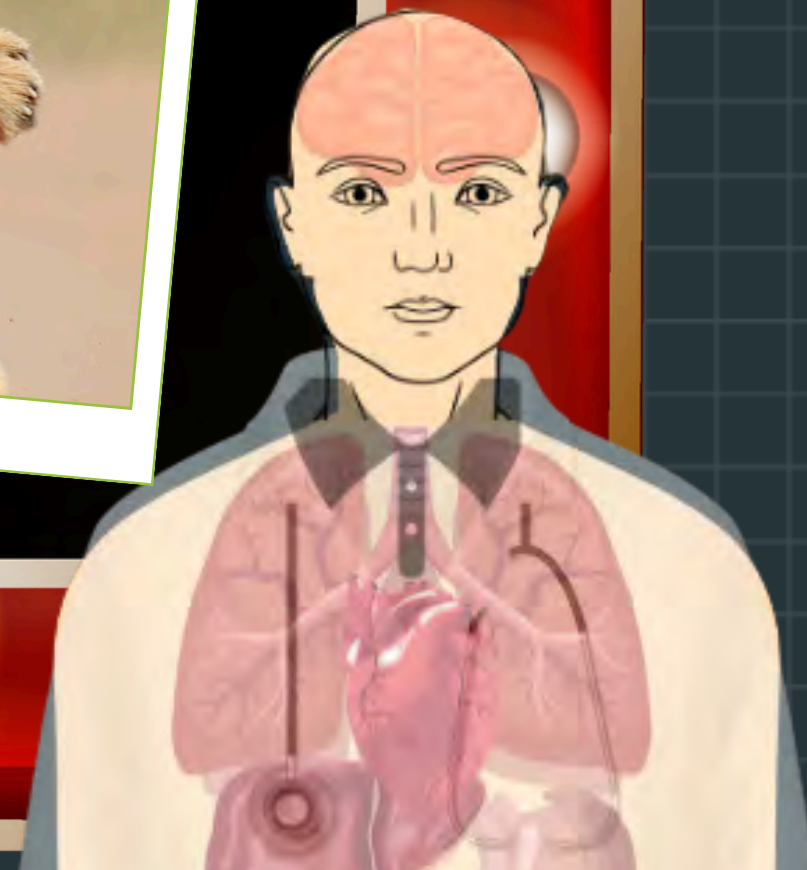
**BIOLOGICAL PROCESSES**

- 1. Movement 
- 2. Nutrition 
- 3. Respiration 
- 4. Growth 
- 5. Reproduction 



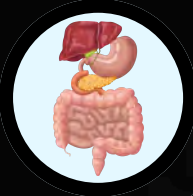
**QUESTION # 3**

Which 3 systems help a cheetah pump blood and breath oxygen while she runs and grows?

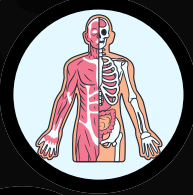


## BIOLOGICAL SYSTEMS

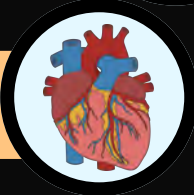
1. Digestive system



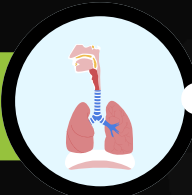
2. Musculoskeletal System



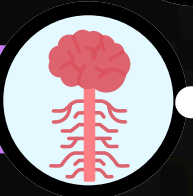
3. Circulatory System



4. Respiratory System



5. Nervous System



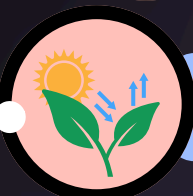
## BIOLOGICAL PROCESSES



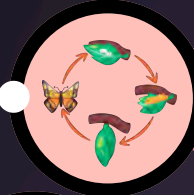
1. Movement



2. Nutrition



3. Respiration



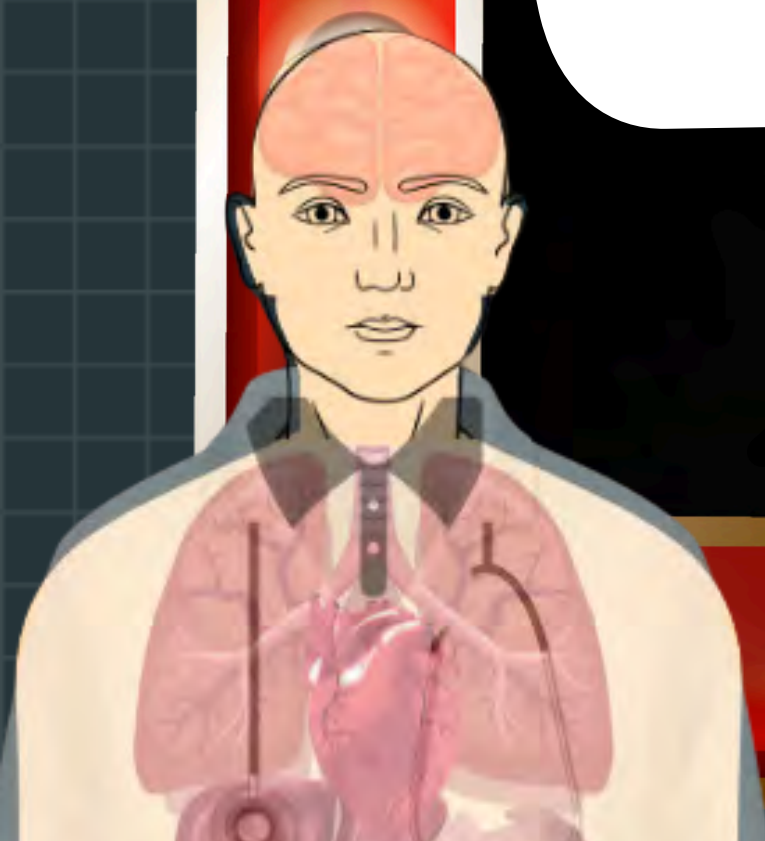
4. Growth



5. Reproduction

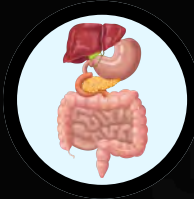
**QUESTION # 4**

Which system allows butterflies to get oxygen while they grow and fly?

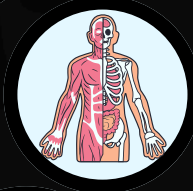


## BIOLOGICAL SYSTEMS

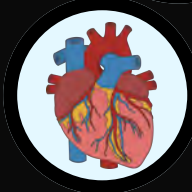
1. Digestive system



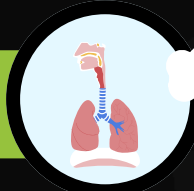
2. Musculoskeletal System



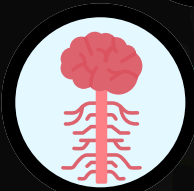
3. Circulatory System



4. Respiratory System

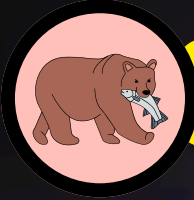


5. Nervous System



## BIOLOGICAL PROCESSES

1. Movement



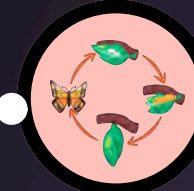
2. Nutrition



3. Respiration



4. Growth



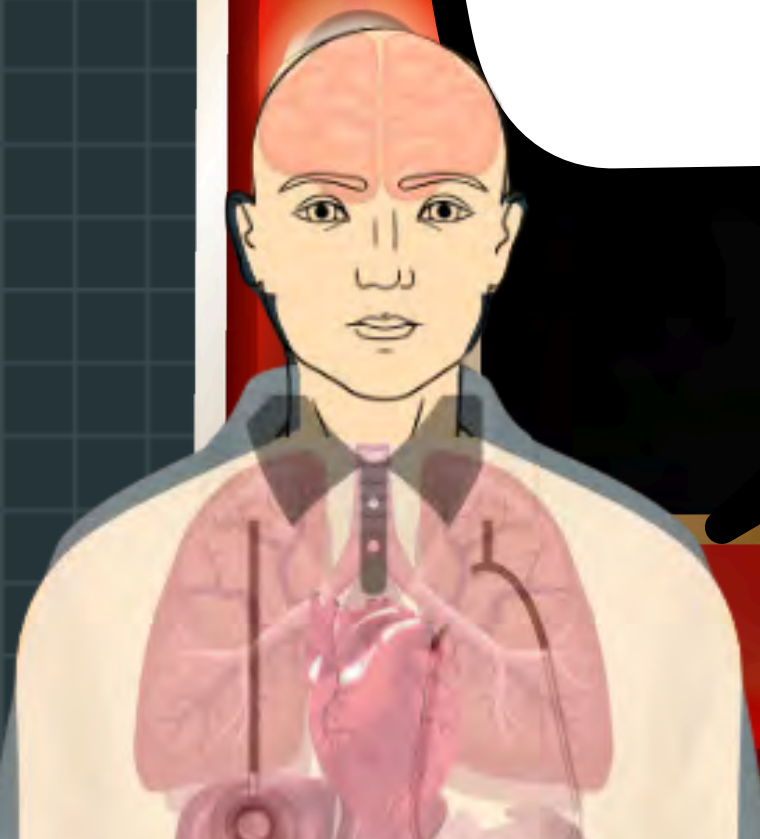
5. Reproduction



## FUN FACT!

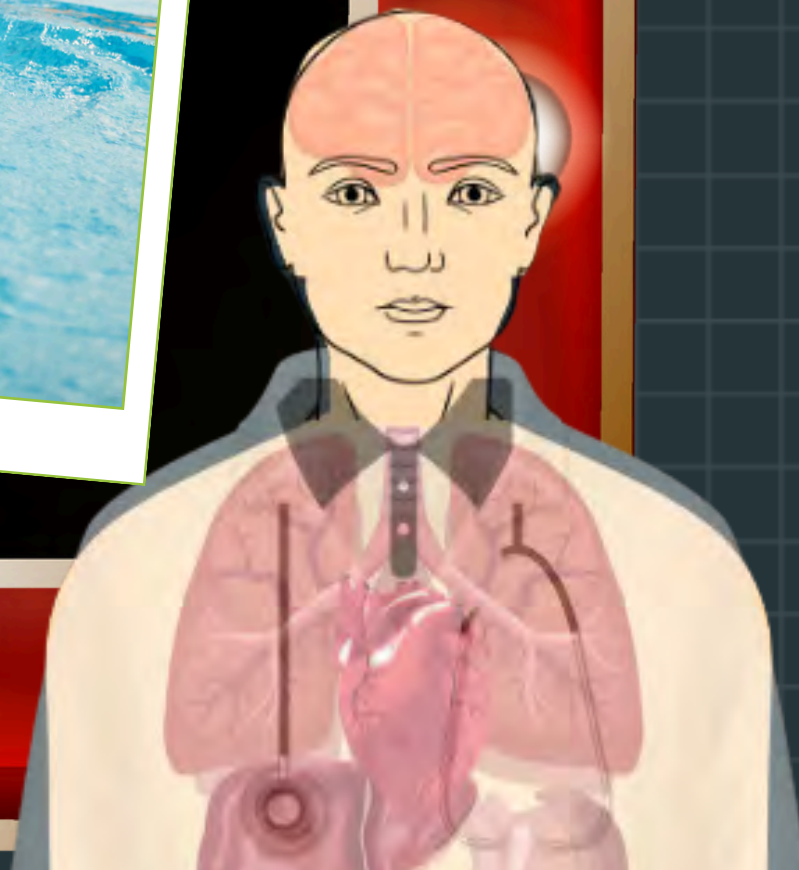
Butterflies breathe through tiny holes along the sides of their bodies called SPIRACLES.

Oxygen flows directly into the trachea then to the rest of the body.



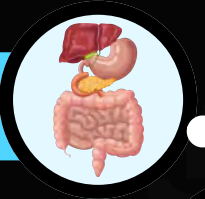
**QUESTION # 5**

Which systems work together to help us swim?  
We need energy for the heart, lungs, and muscles!

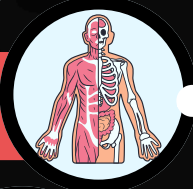


## BIOLOGICAL SYSTEMS

1. Digestive system



2. Musculoskeletal System



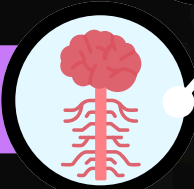
3. Circulatory System



4. Respiratory System

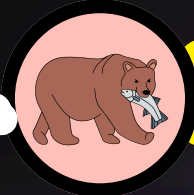


5. Nervous System



## BIOLOGICAL PROCESSES

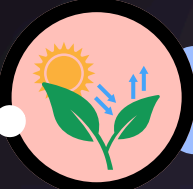
1. Movement



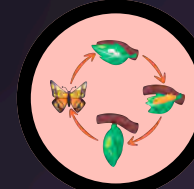
2. Nutrition



3. Respiration



4. Growth



5. Reproduction

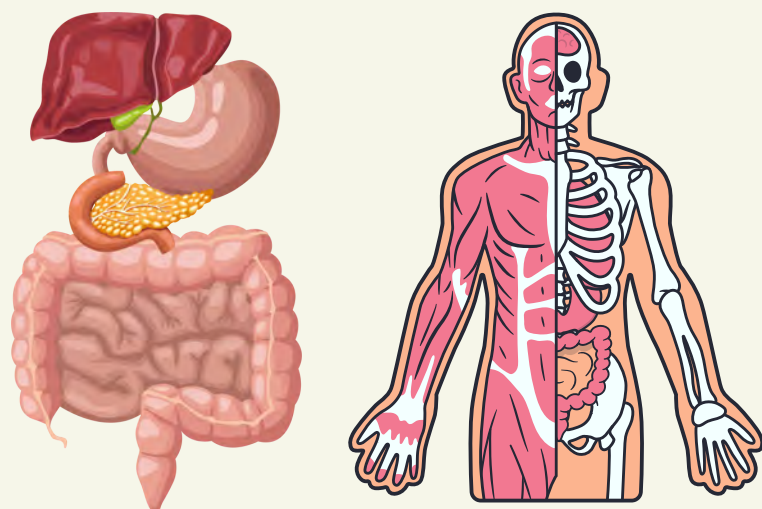


# STATION OVERVIEW

4 Stations  
20 minute rotations

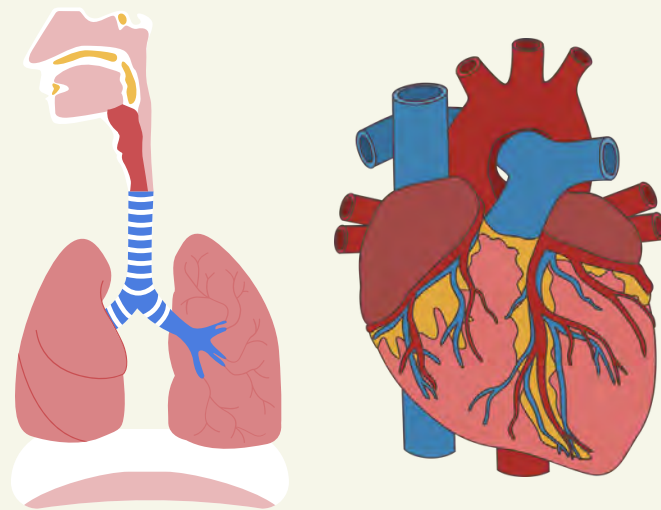
## STATION # 1

Guts, Muscles & Bones – Oh My!



## STATION # 2

Pump it Up!



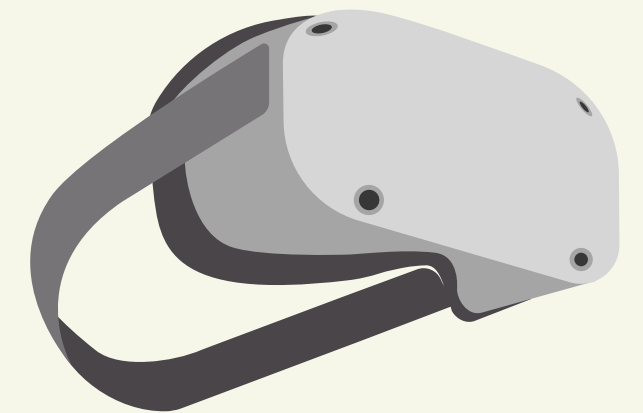
## STATION # 3

Transport Systems in Plants



## STATION # 4

VR Station:  
Human Body Systems

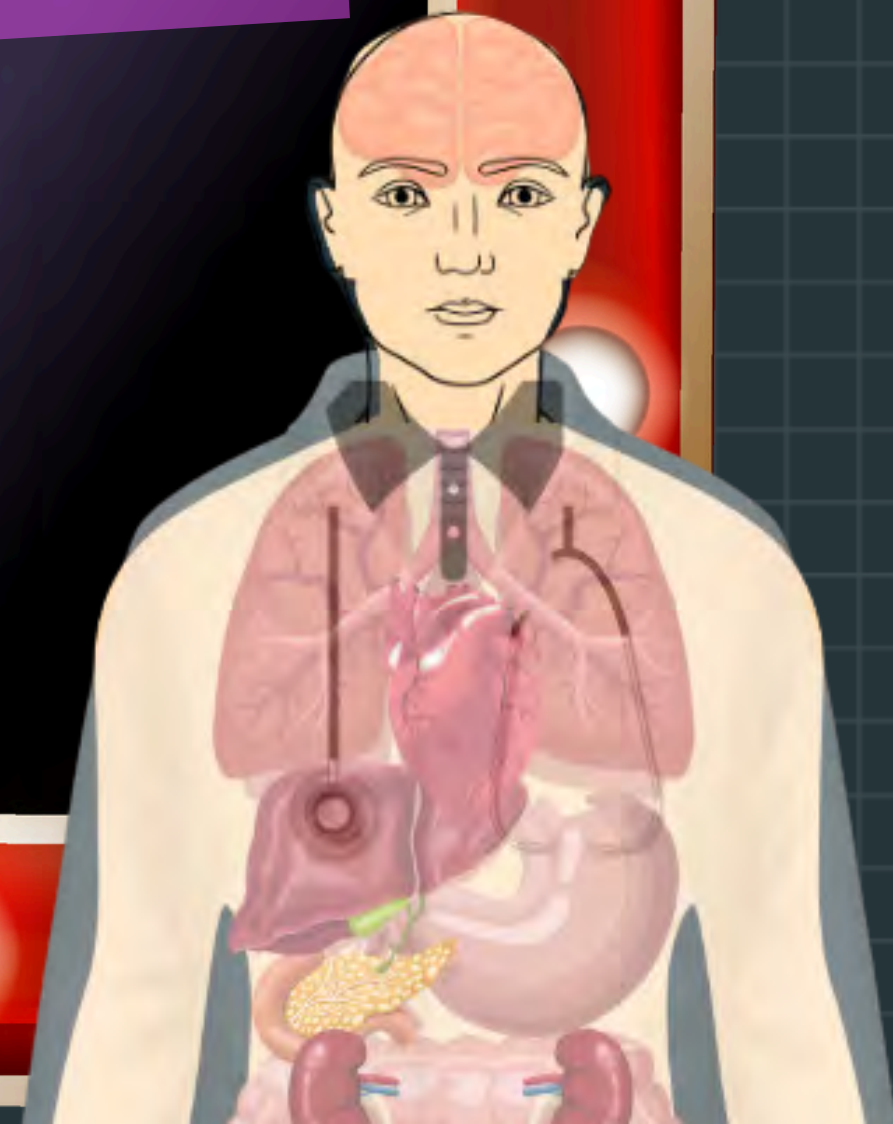


**ANATOMY**

**ADVENTURES**

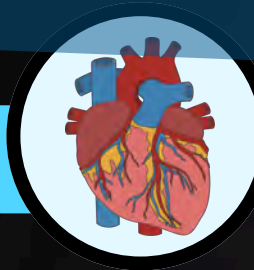
**LIGHTNING**

**ROUND**

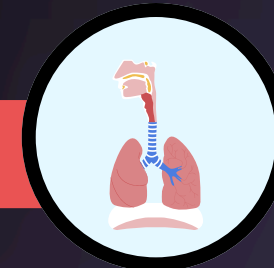


# LIGHTNING ROUND

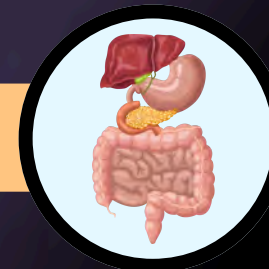
1. What is the function of the heart?



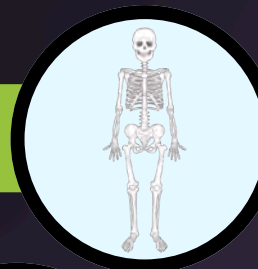
2. What is the function of the lungs?



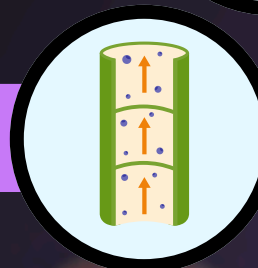
3. What is the function of the intestines?



4. What is the function of our skeleton?



5. What is the function of plant xylem?



**PRIZE**

**TAKEAWAY**



# OVERVIEW OF HOW TO ASSEMBLE TAKE AWAY

You get to assemble and take your own Professor Organ home with you!



**Teacher's Pet HUMAN TORSO MODEL ASSEMBLY INSTRUCTIONS**

As you assemble your model use this picture for reference to learn about the inside of your body!

**Assembly Parts**

- Sternum
- Lungs
- Liver
- Stomach
- Small Intestine
- Kidney
- Heart
- Large Intestine
- Base
- Front of Body
- Back of Body

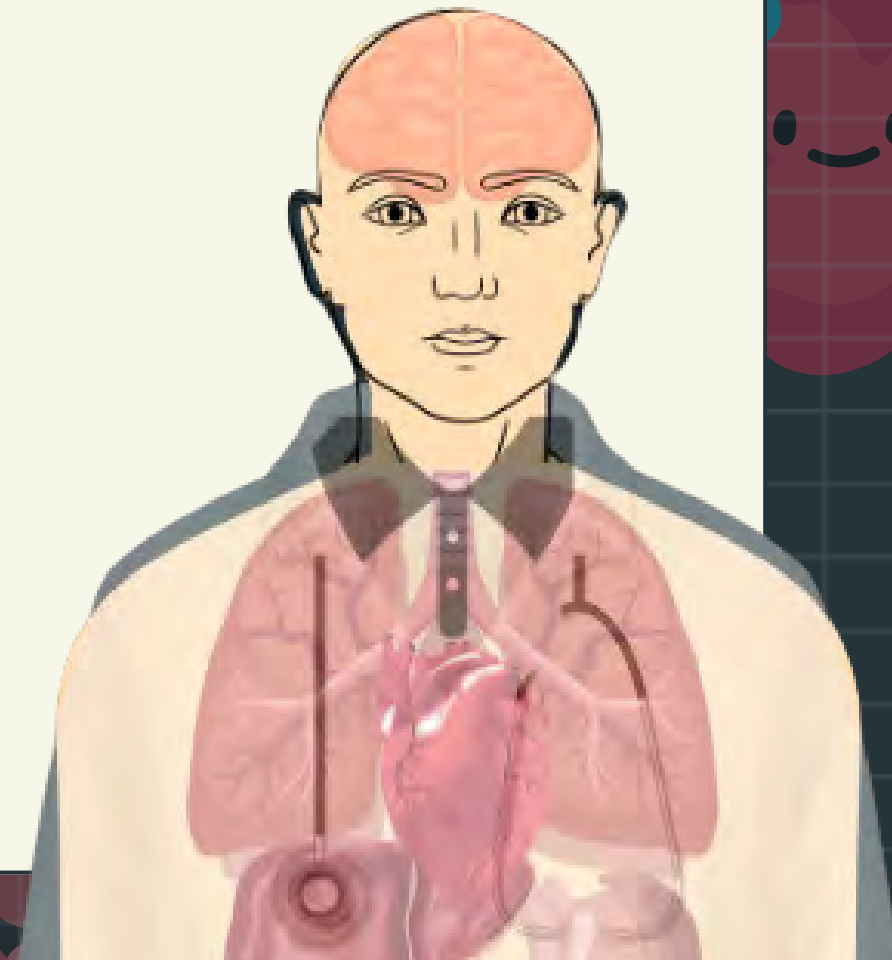
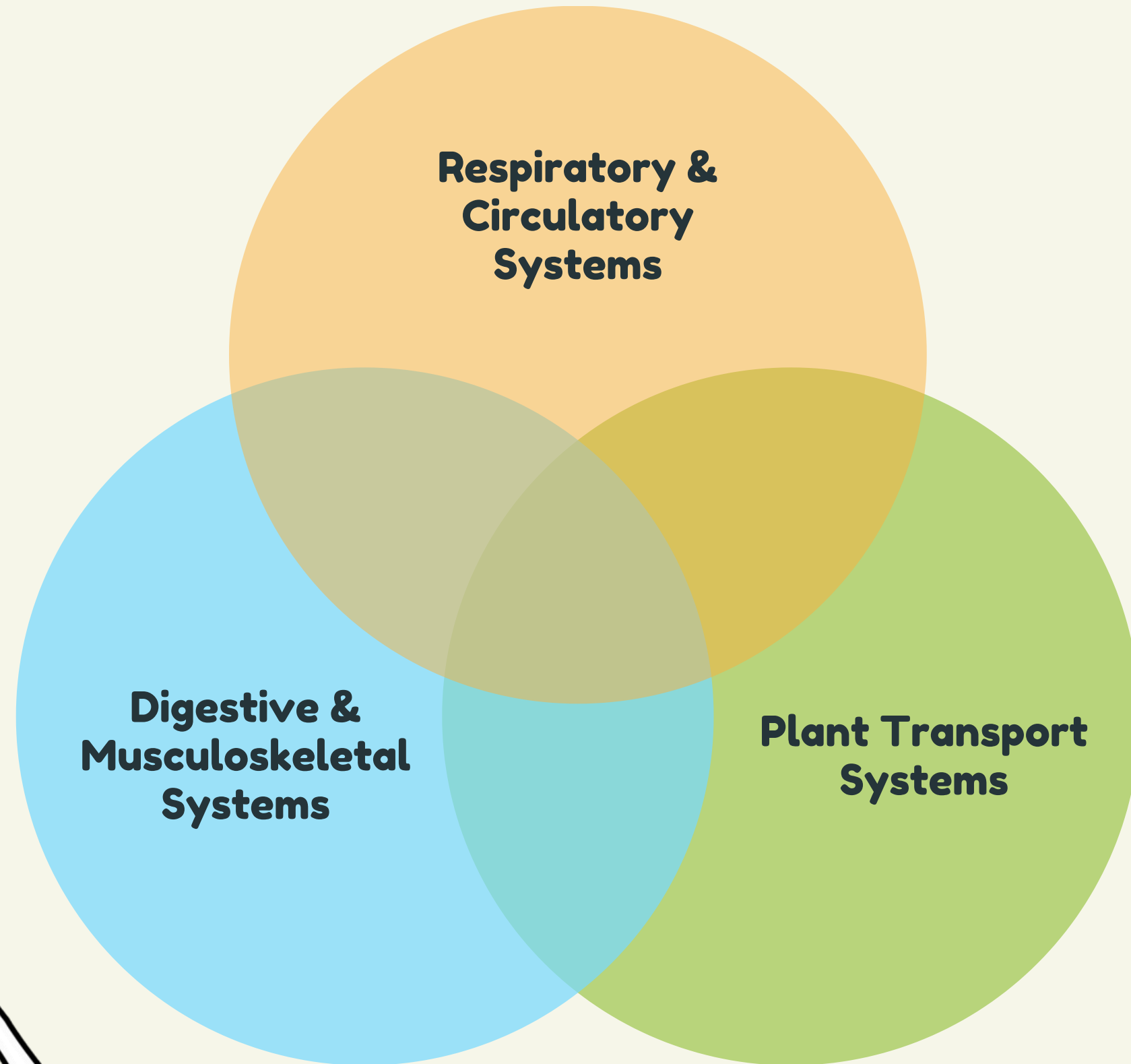
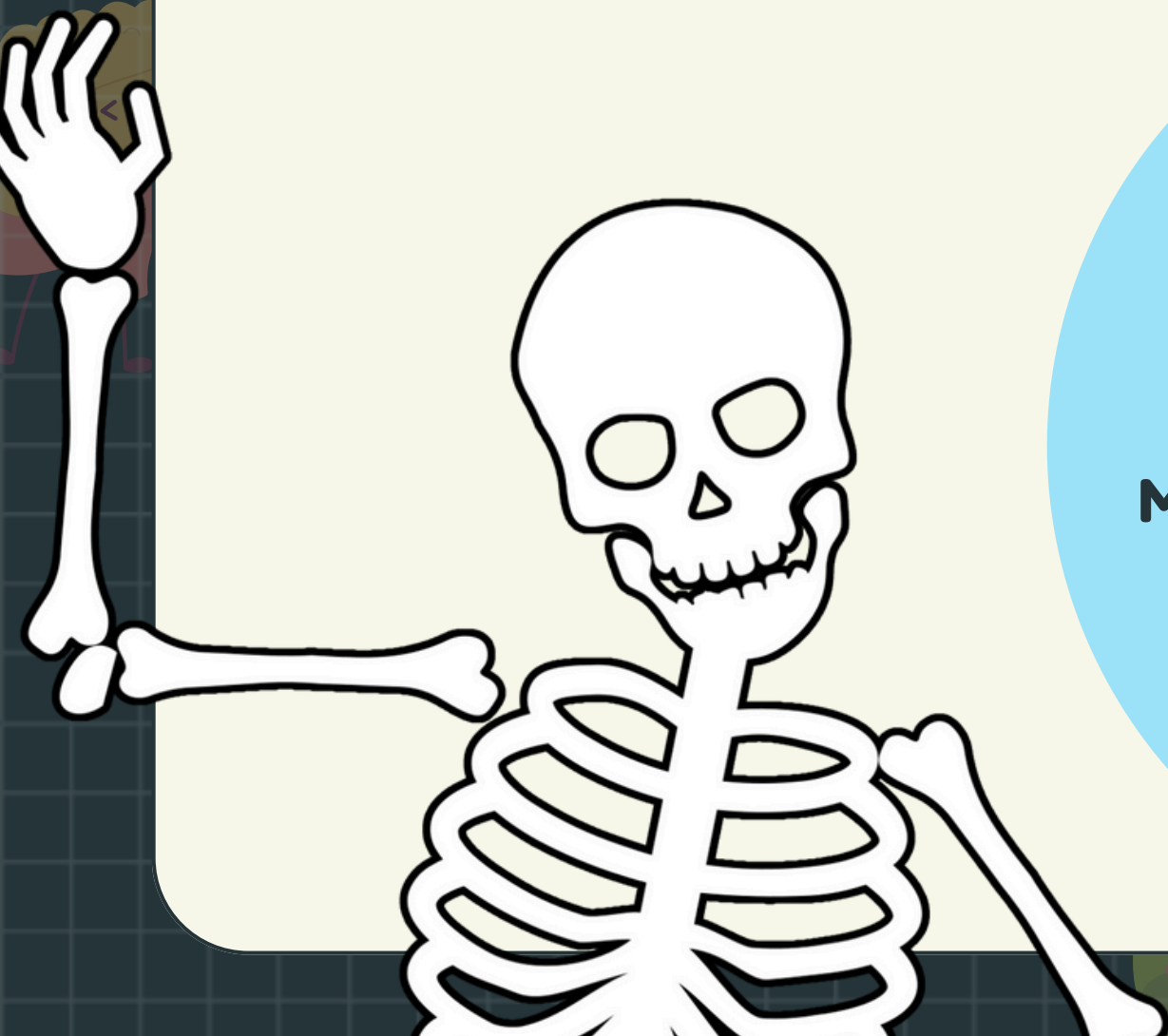
**Step-by-Step Instructions**

- Step 1: Connect the lungs to each side of the heart.
- Step 2: Attach the liver to the bottom of the heart.
- Step 3: Attach the stomach to the liver.
- Step 4: Connect the large intestine, small intestine, and kidneys together.
- Step 4: Join the stomach and small intestine together to finish building the internal organs.
- Step 5: Connect the front and back body pieces to form the human torso.
- Step 6: Place the organs inside the body and cover them with the sternum to keep everything in place.
- Step 7: Insert the human torso into the base to complete your model.

Note: This instruction sheet can be found in the Teacher's Package.



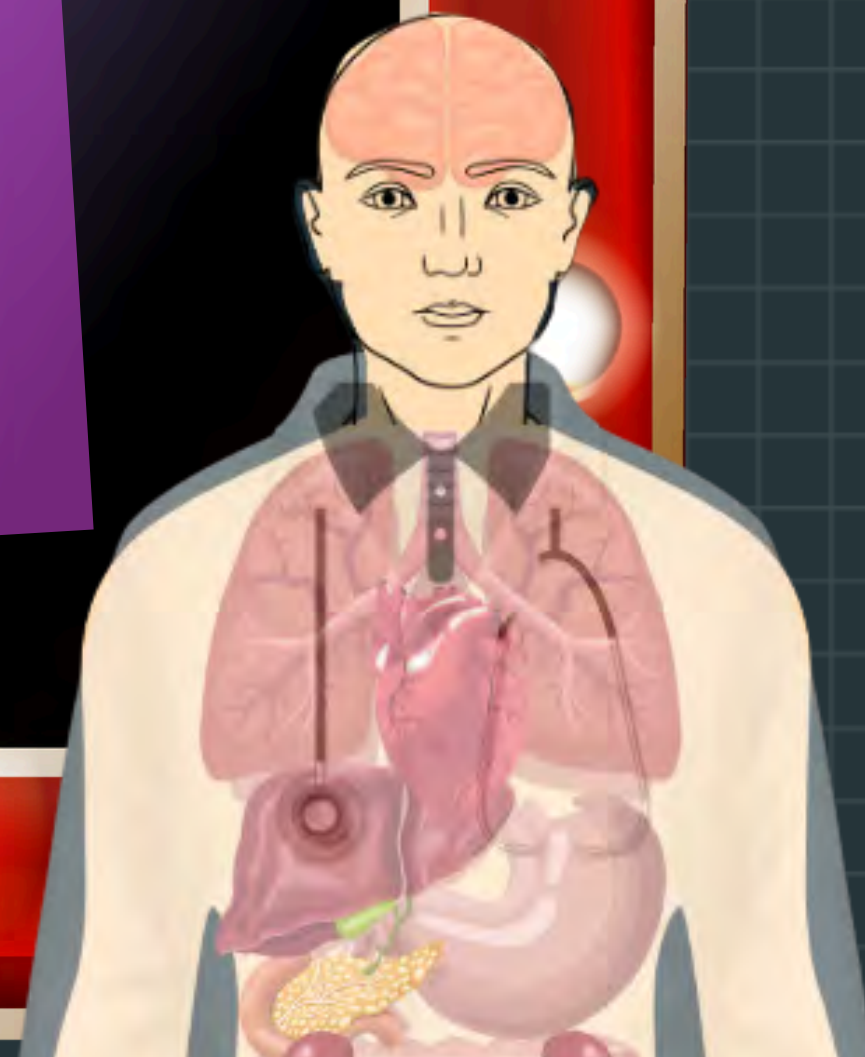
# CONCLUSION: HOW ARE ORGANISMS SUPPORTED BY VITAL BIOLOGICAL PROCESSES & SYSTEMS?





**THANK**

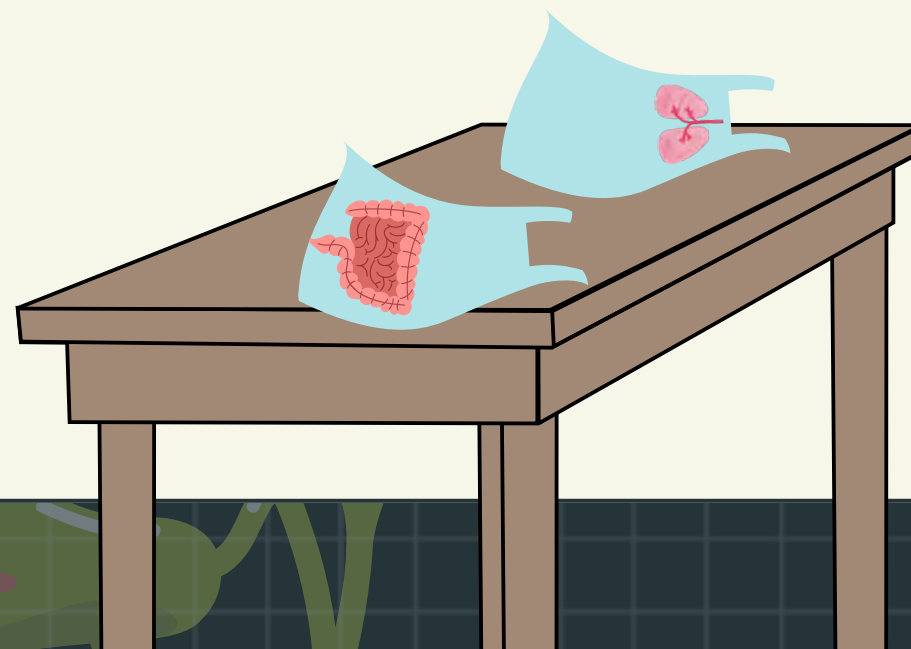
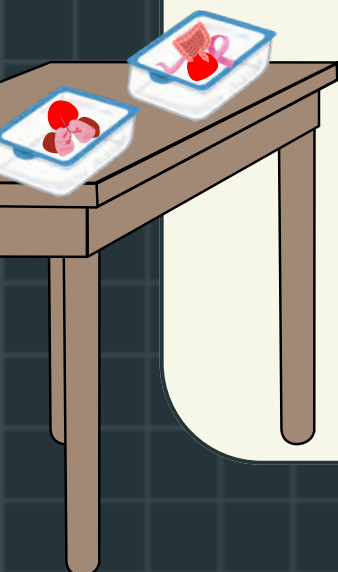
**YOU!**



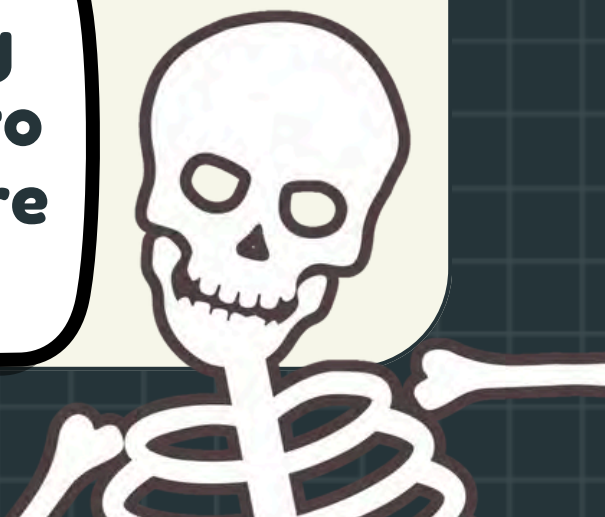
# STATION # 1: GUTS, BONES, & MUSCLES - OH MY!

## PROFESSOR ORGAN'S RELAY RACE

1. Split into 2 teams (2 lines).
2. Place blank aprons on the table and organ containers next to them.
3. Grab an organ from the container and put it on the apron.
4. High-five the next teammate and go to the back of the line.
5. Be the first team to hold up a completed apron!



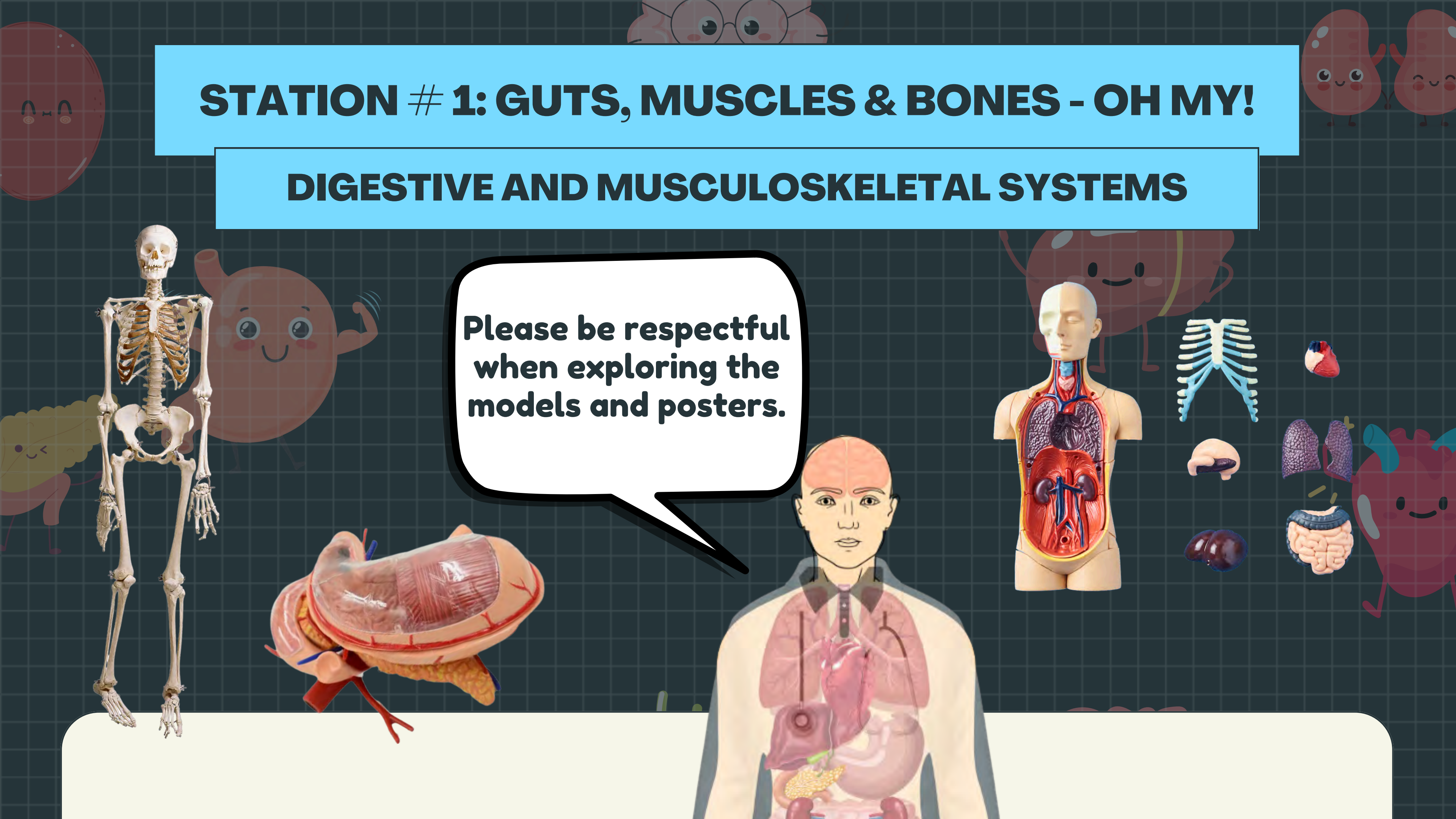
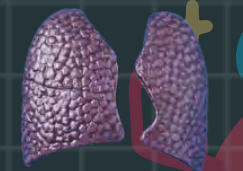
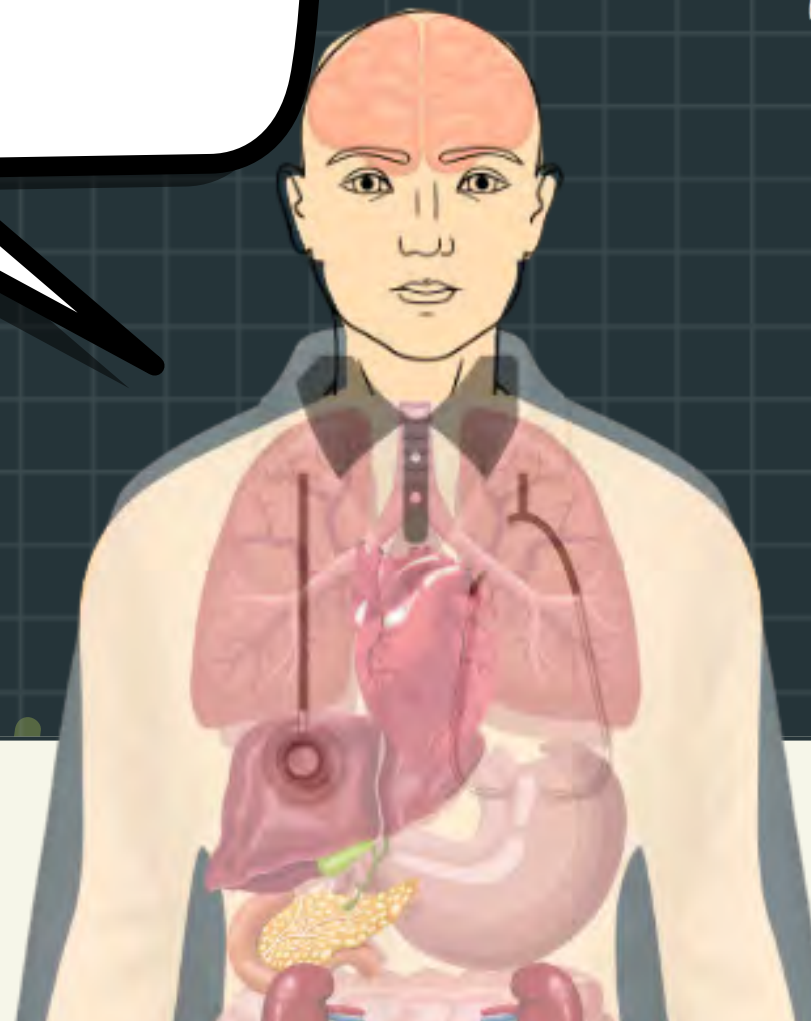
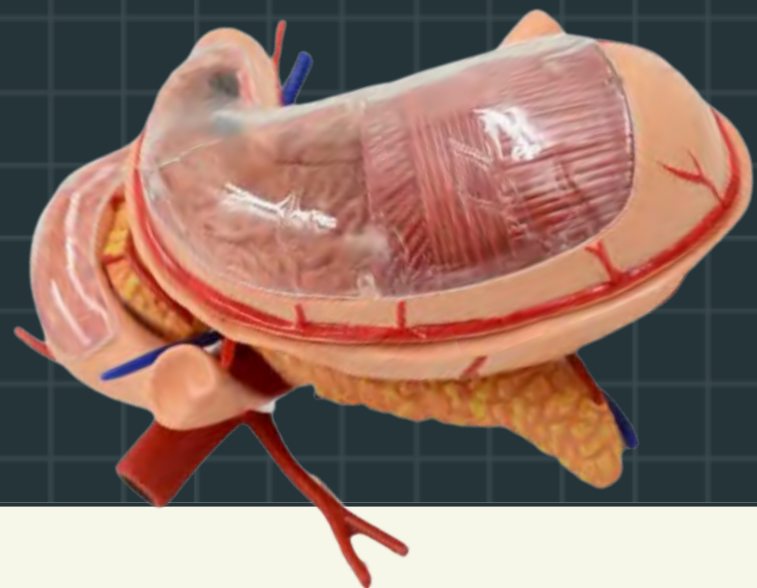
When removing organs, hold onto the Velcro before pulling it off!



# STATION # 1: GUTS, MUSCLES & BONES - OH MY!

## DIGESTIVE AND MUSCULOSKELETAL SYSTEMS

Please be respectful  
when exploring the  
models and posters.

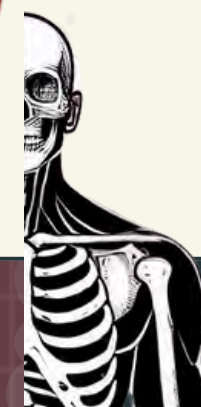
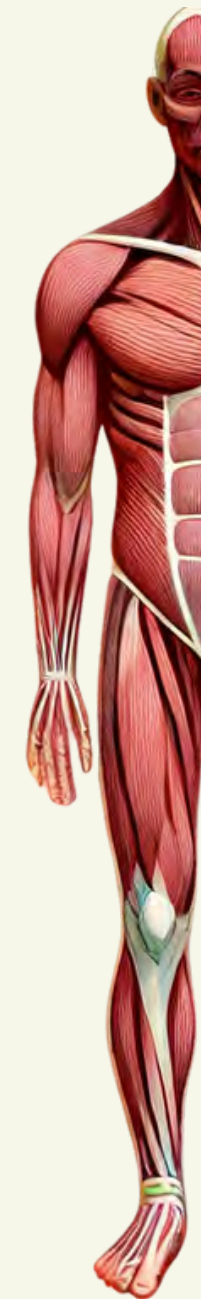
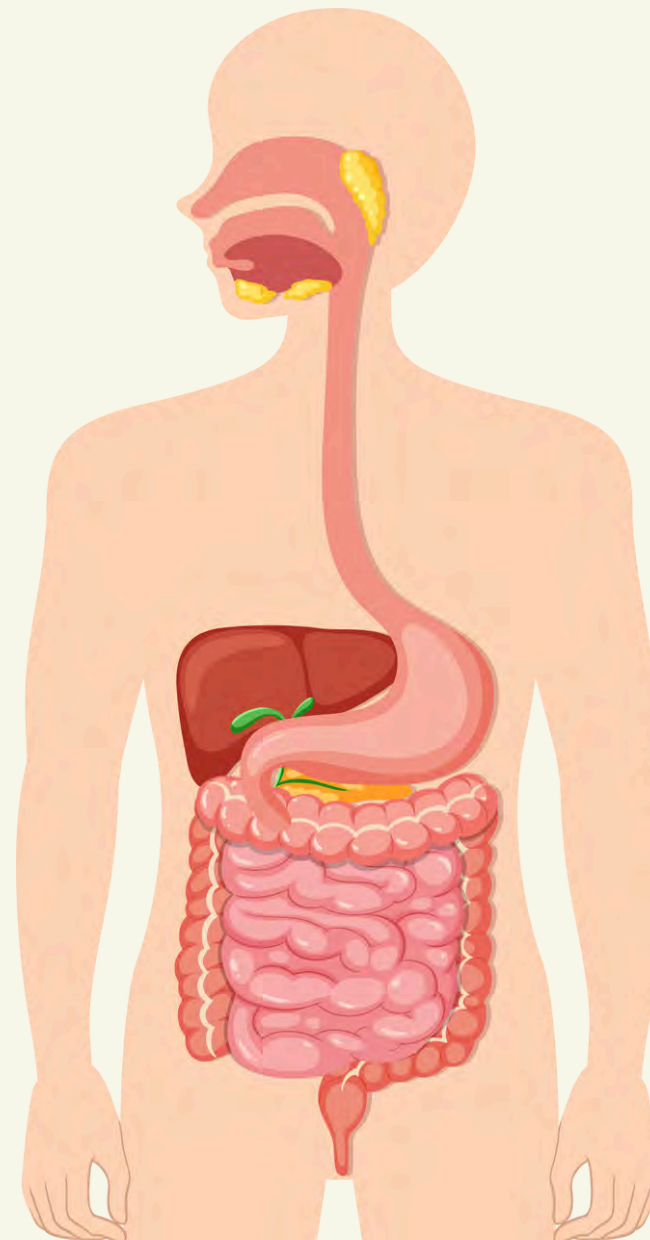


# STATION # 1: GUTS, MUSCLES & BONES - OH MY!

## DIGESTIVE SYSTEM

## MUSCULOSKELETAL SYSTEMS

Label the diagrams & match the organ functions in your worksheet.

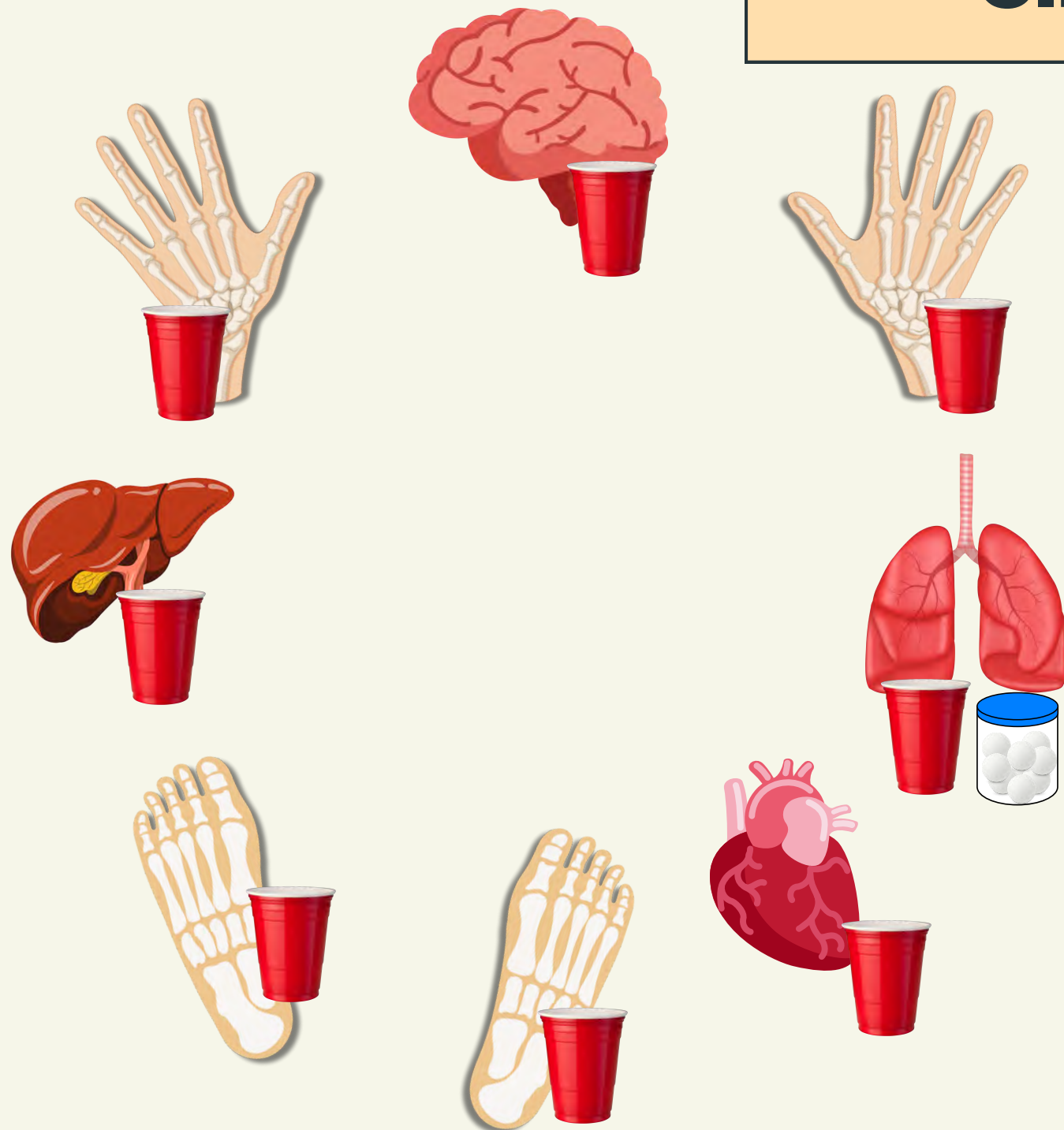


 = OXYGEN

## STATION # 2: PUMP IT UP!

### CIRCULATION RACE

The cups represent the blood vessels that carry oxygen to our body parts!

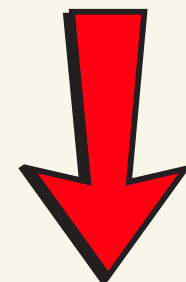
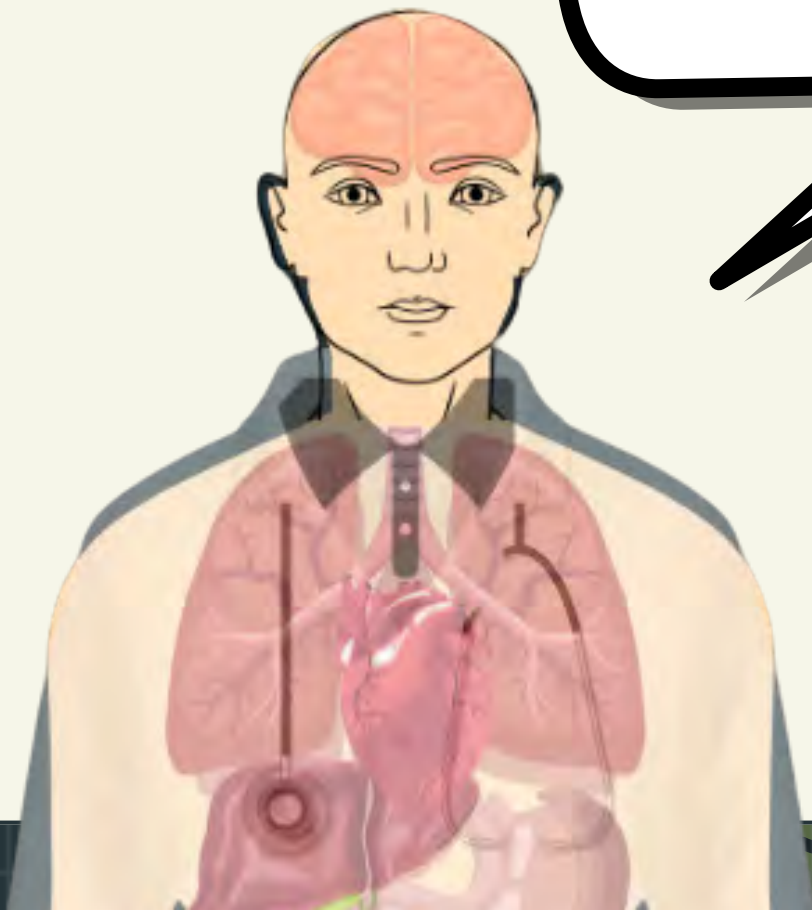


1. Stand up around the desks/table.
2. Everyone holds an empty cup and a card.
3. Student at the lungs starts as the “Blood Hopper” (BH).
4. BH hops to the lungs to collect a ball in the cup and gives the student with the heart a high-five.
5. Hop around the table to a body part.
6. Person at the body part switches spots with BH (pass card off and turn it over).
7. The new BH student hops to the lungs to collect a ball, gives the heart a high-five and hops to a different body part.
8. Repeat until each team member has a ball (oxygen).
9. Record time to complete the race.

## STATION # 2: PUMP IT UP!

### LUNG & HEART FUNCTION MODELS

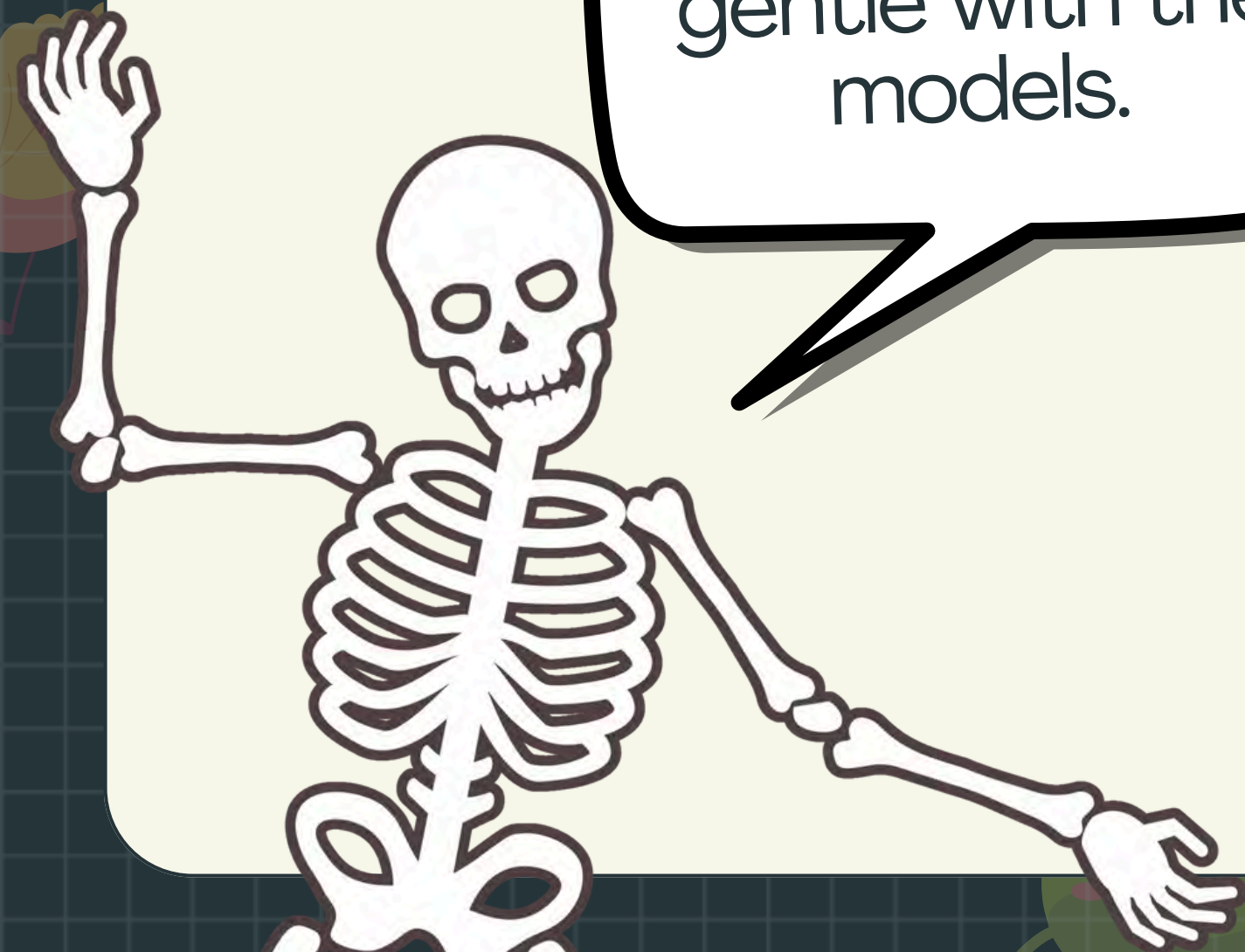
Pull out the diaphragm and watch the lungs fill with air.



## STATION # 2: PUMP IT UP!

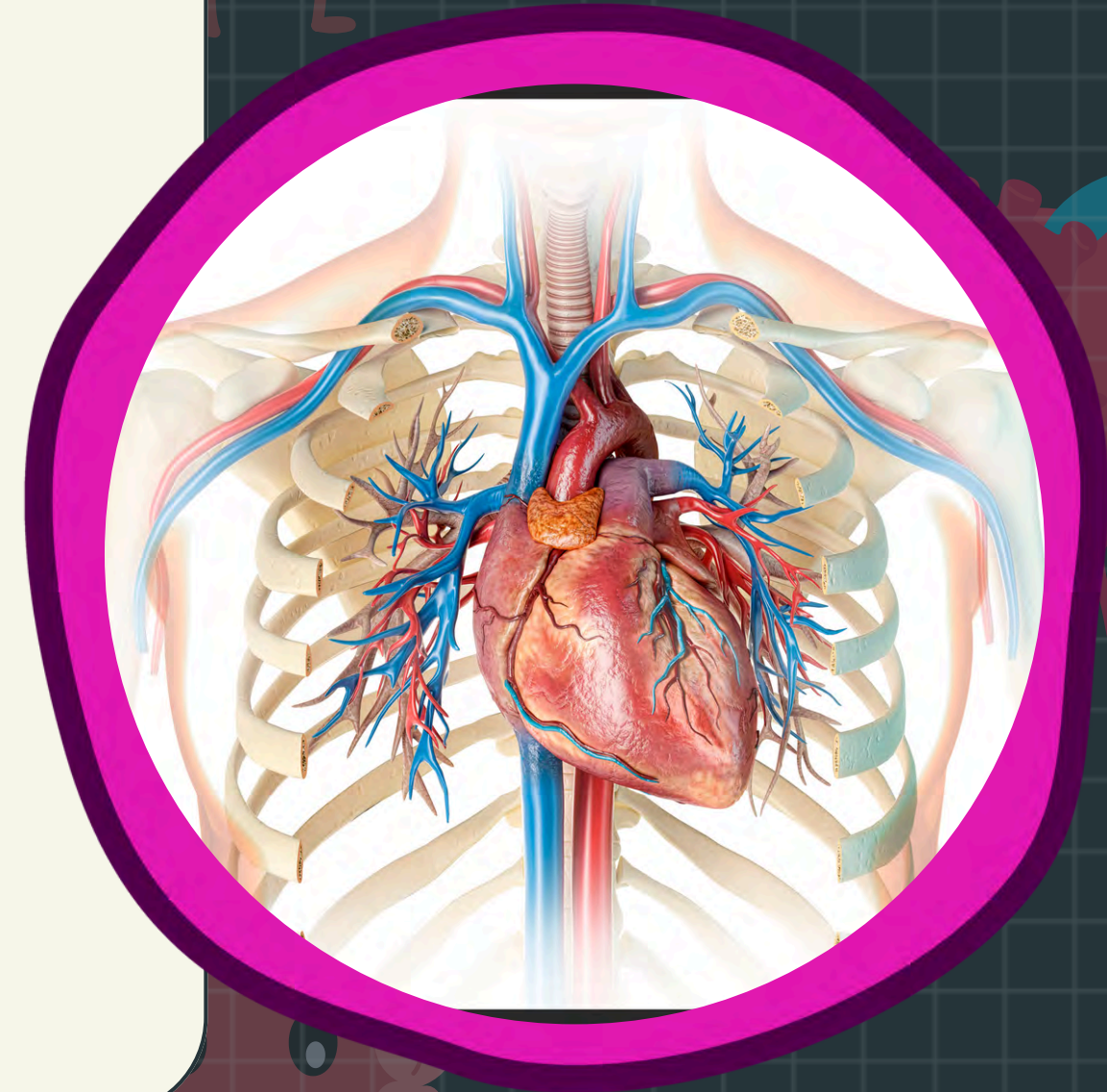
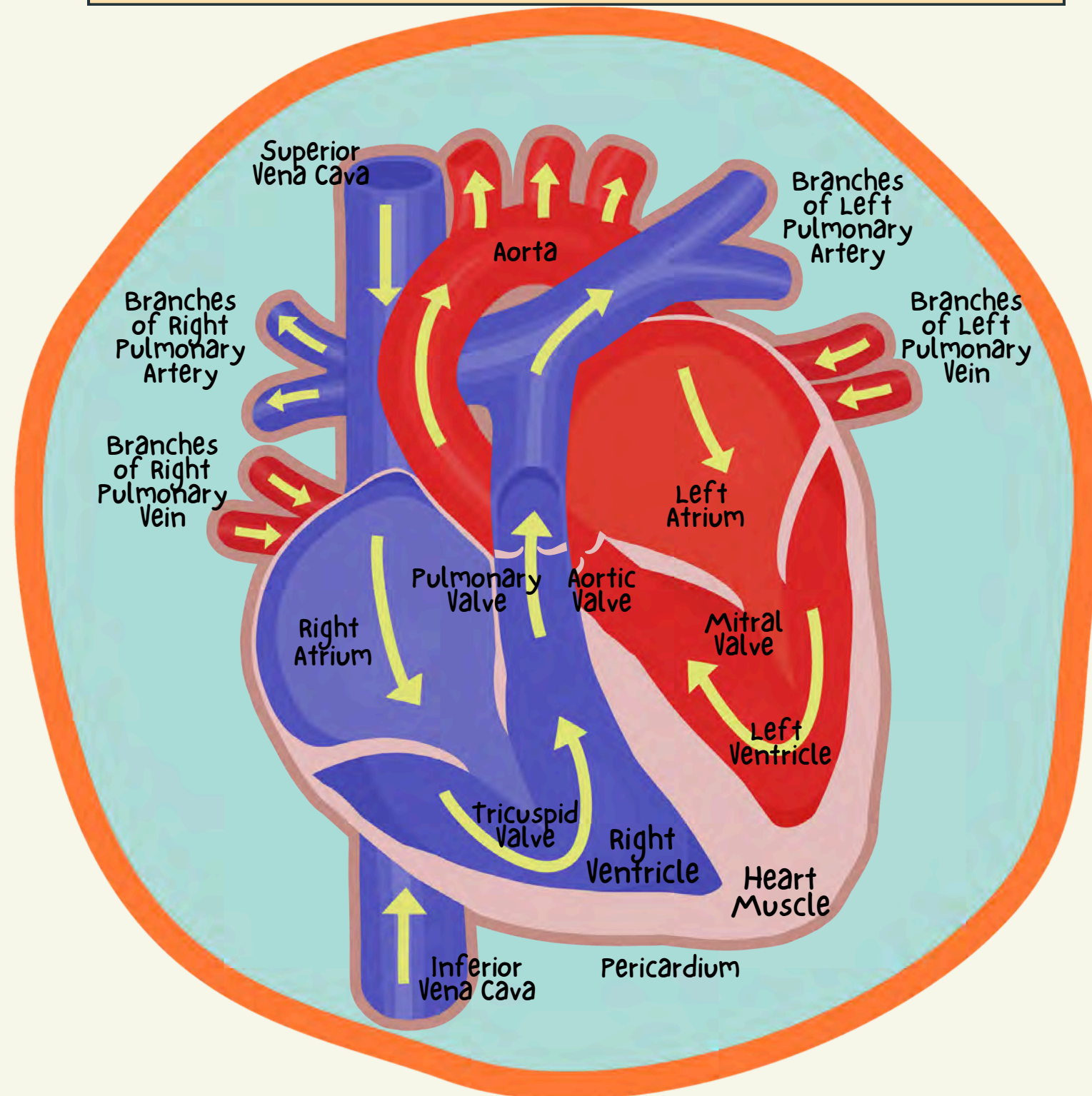
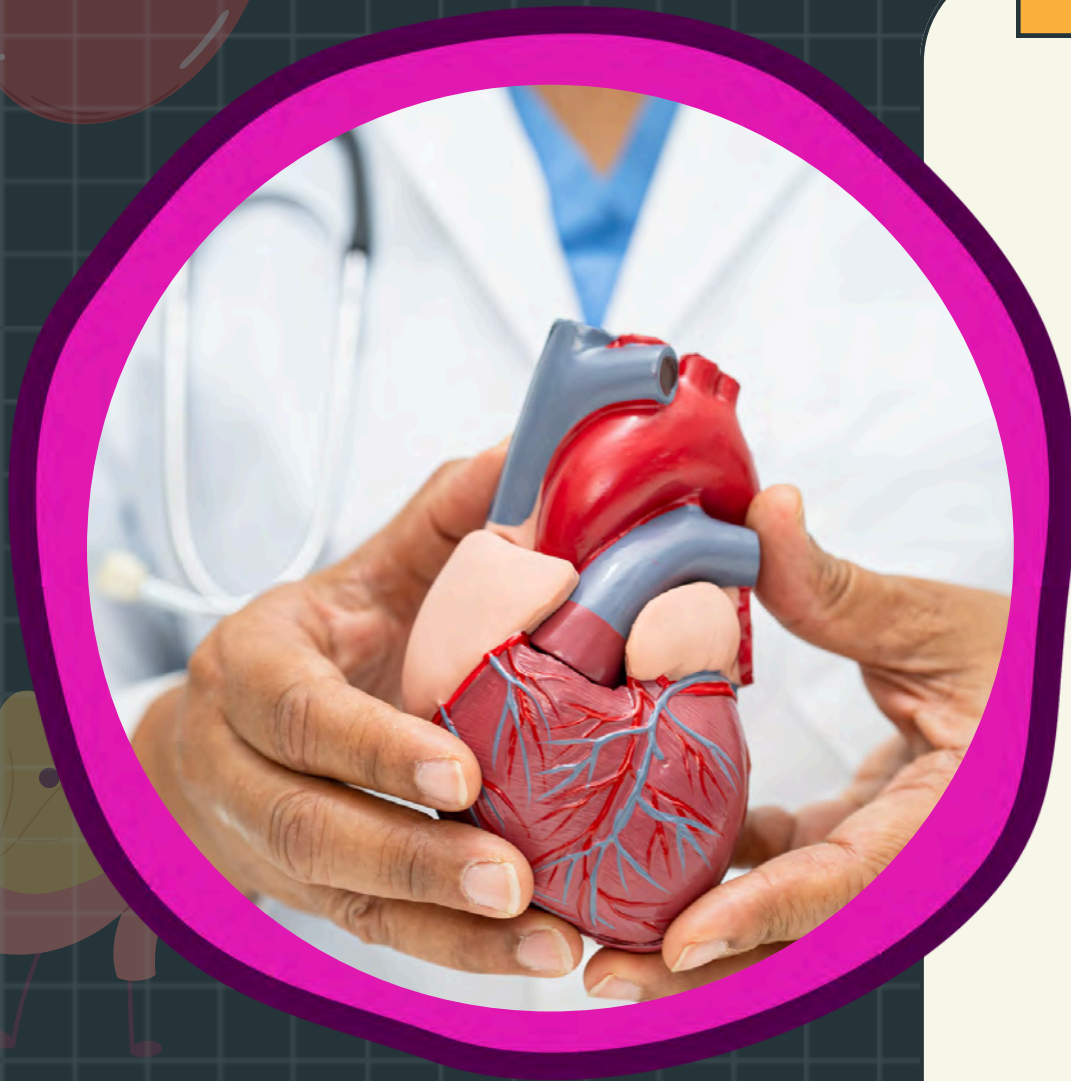
### LUNG & HEART FUNCTION MODELS

Please be respectful and be gentle with the models.



# STATION # 2: PUMP IT UP!

## HUMAN HEART ANATOMY

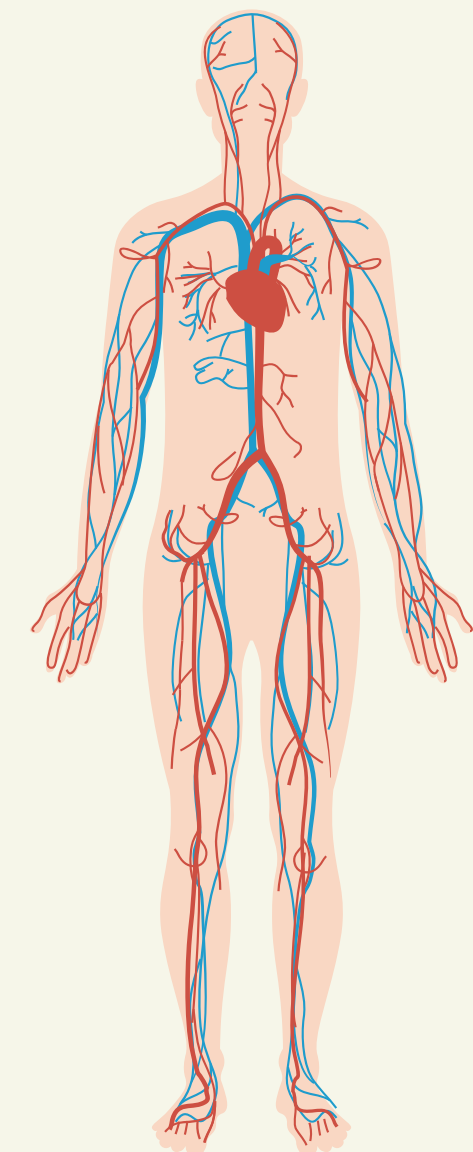
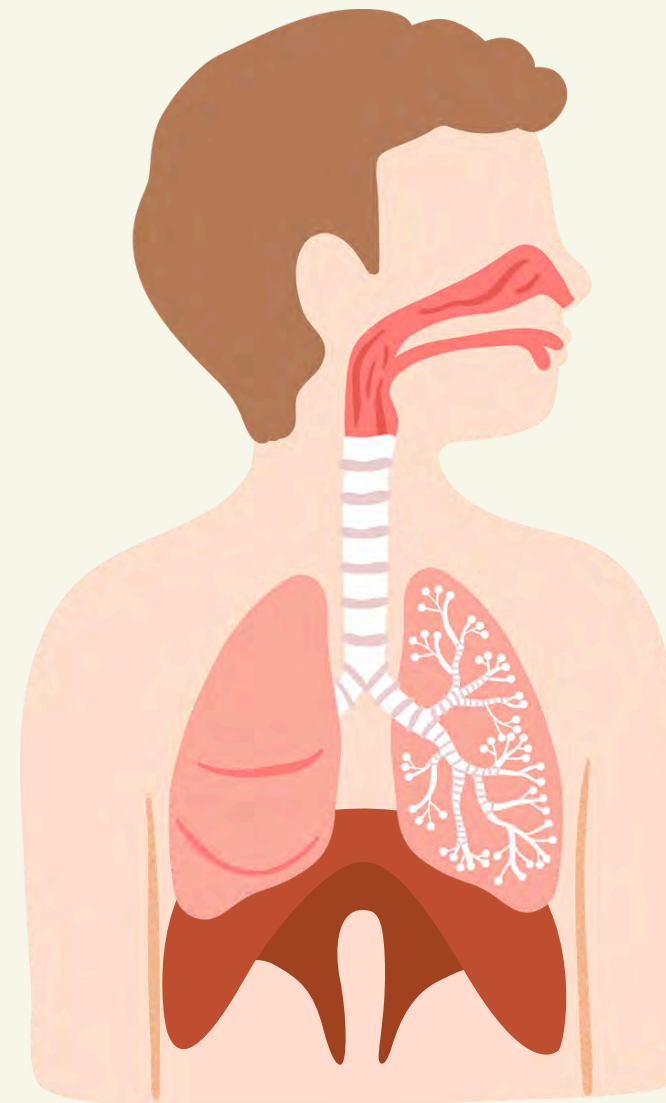


# STATION # 2: PUMP IT UP!

RESPIRATORY SYSTEM

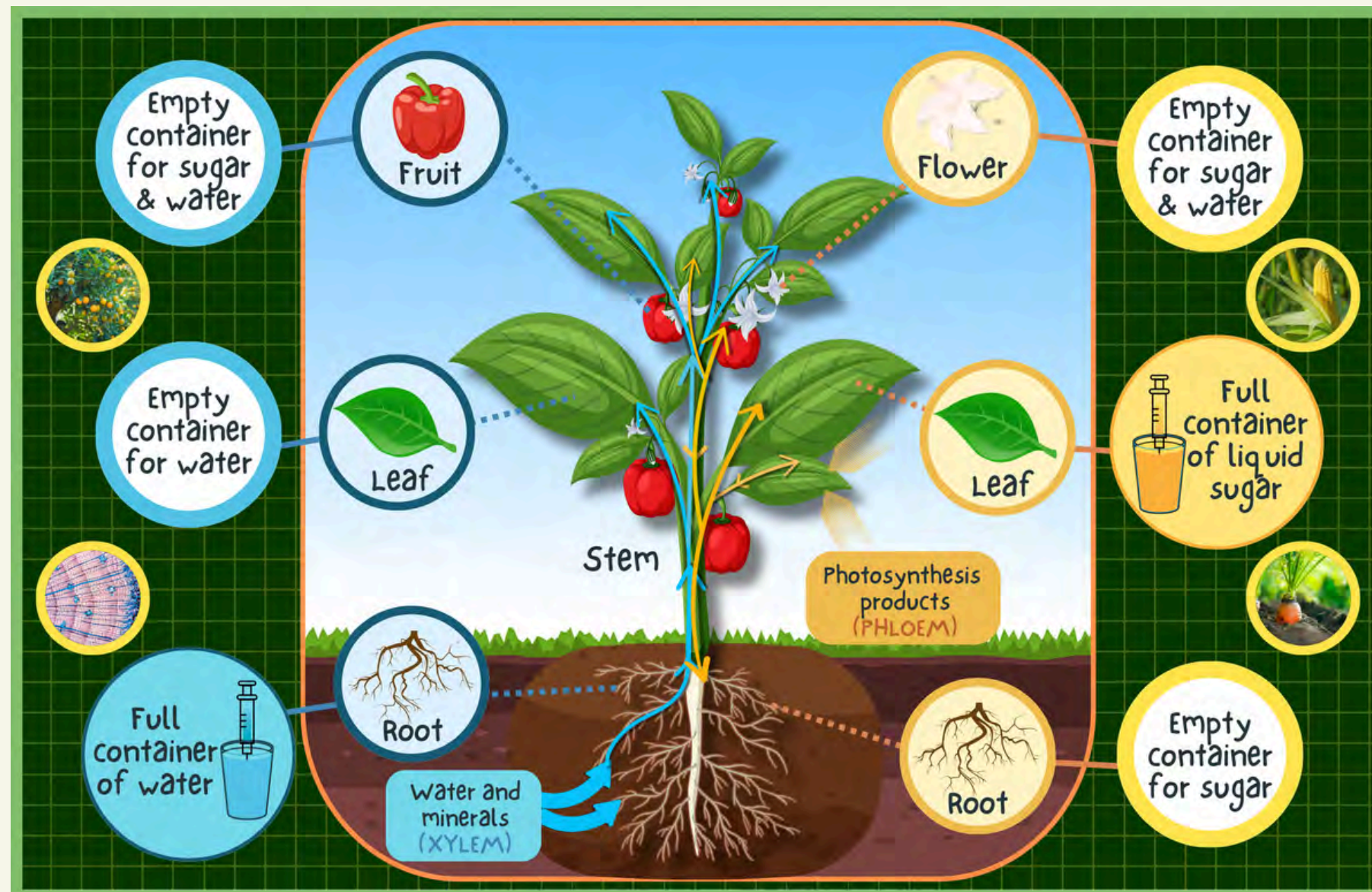
CIRCULATORY SYSTEM

Label the diagrams & match the organ functions in your worksheet.

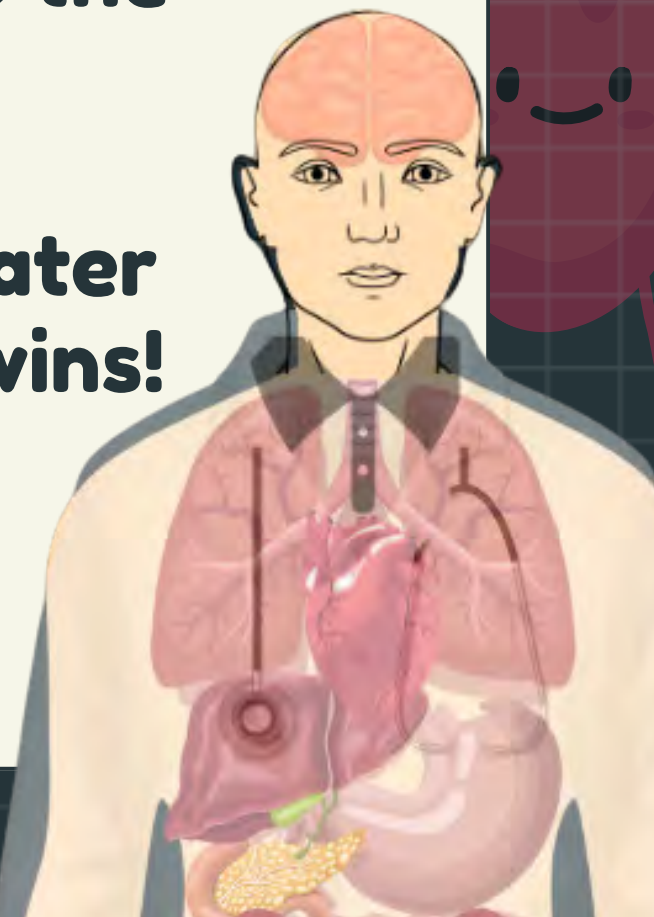


# STATION # 3: SUCK IT UP!

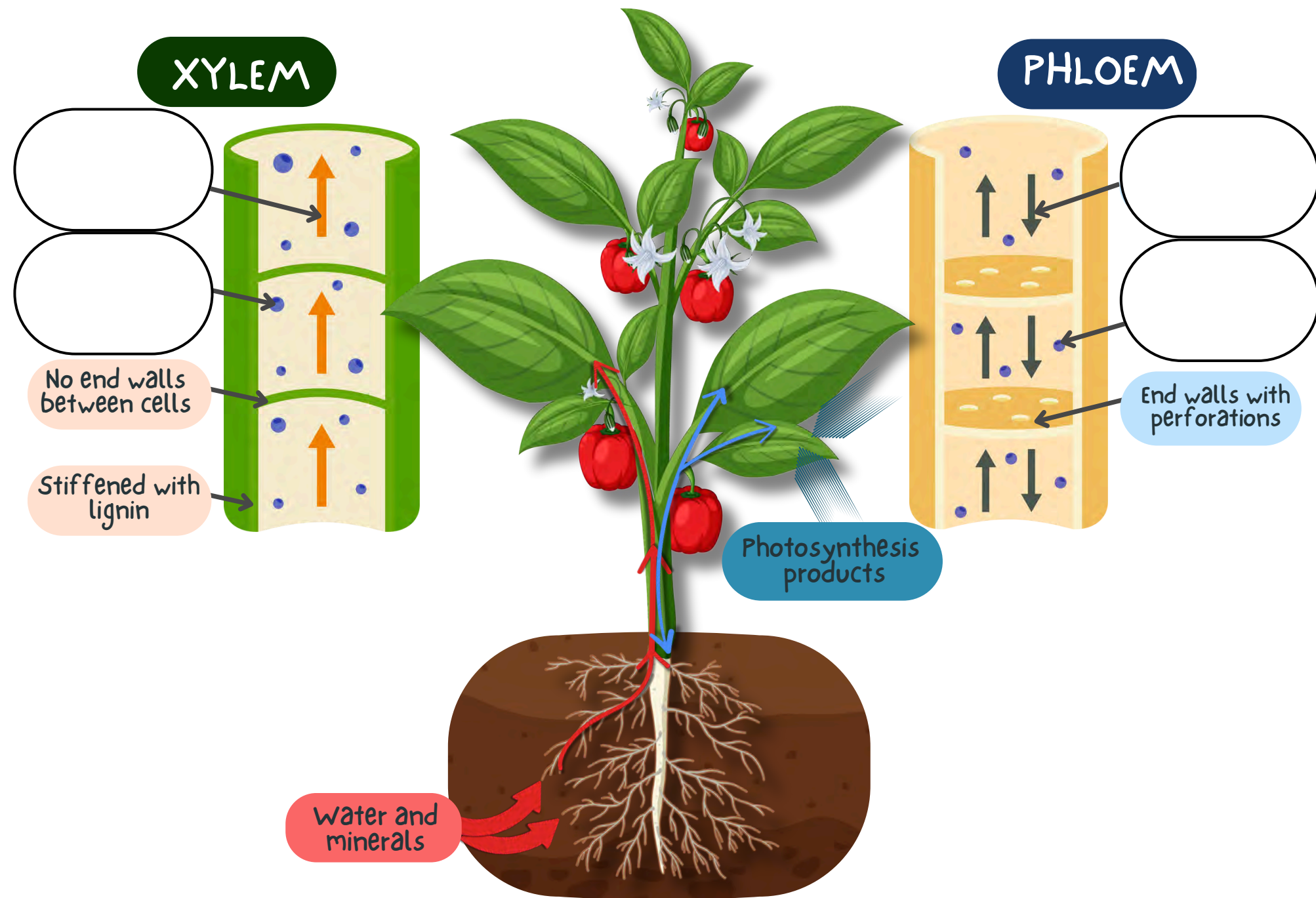
## SUCK IT UP RELAY RACE



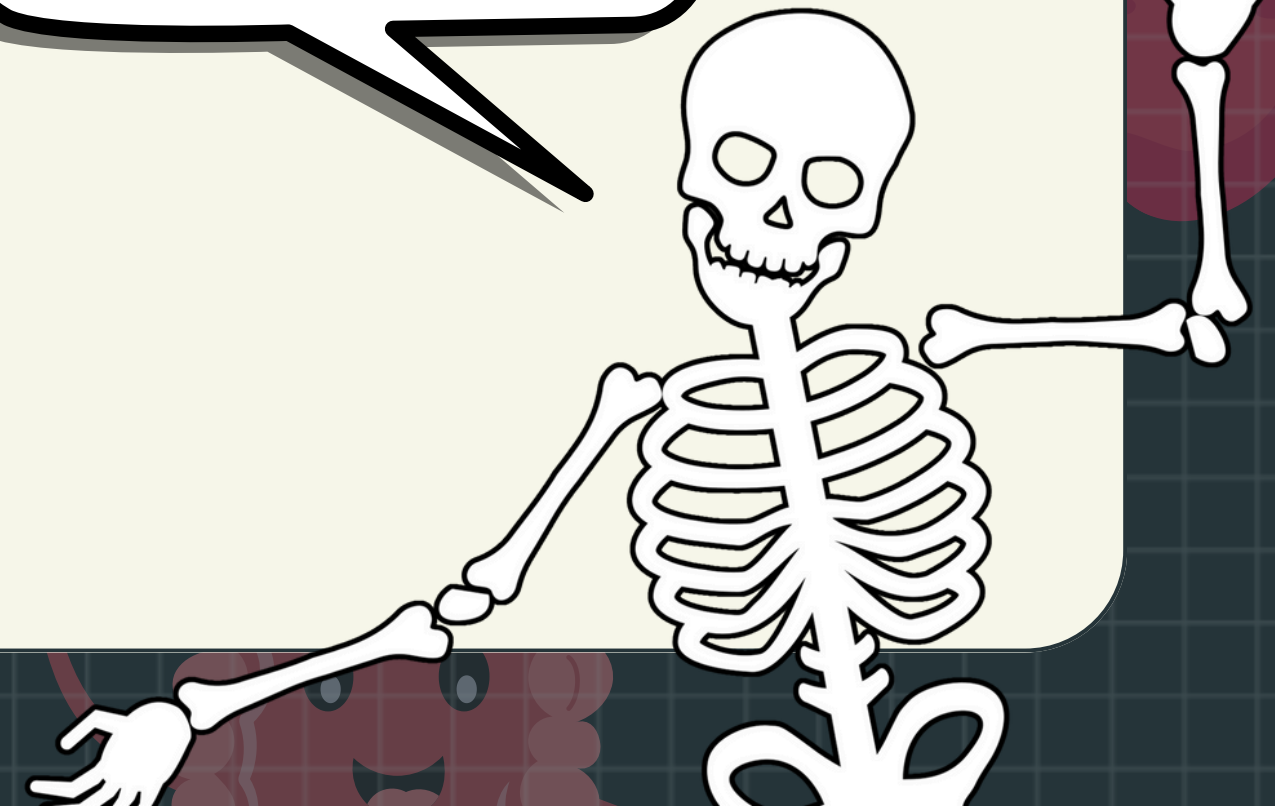
1. Split into 2 teams (2 lines).
2. Pull water from your cup (blue or yellow) with the syringe.
3. Deposit the water into one of the bottles.
4. Pass the syringe to the next student and go to the back of the line.
5. Repeat for 1 minute.
6. Team with the most water moved to the bottles wins!



# STATION # 3: TRANSPORT SYSTEMS IN PLANTS



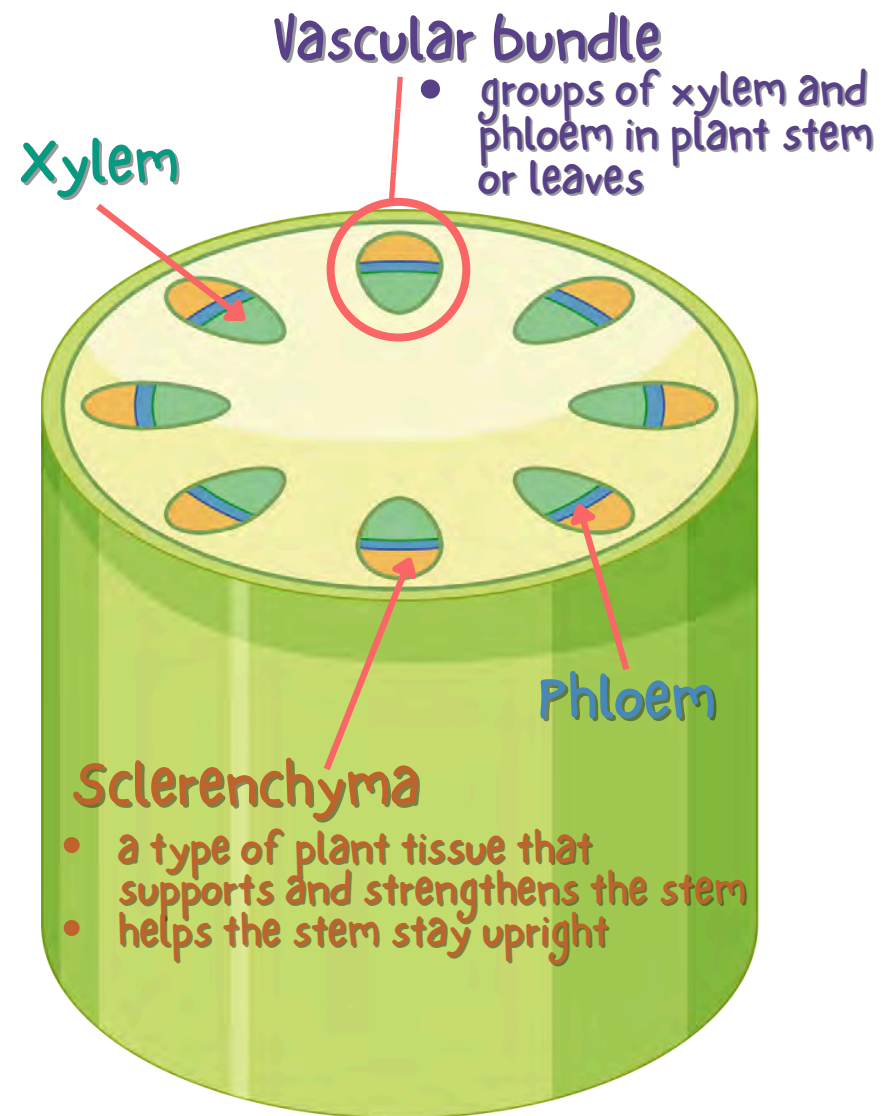
Label the diagram in your worksheet.



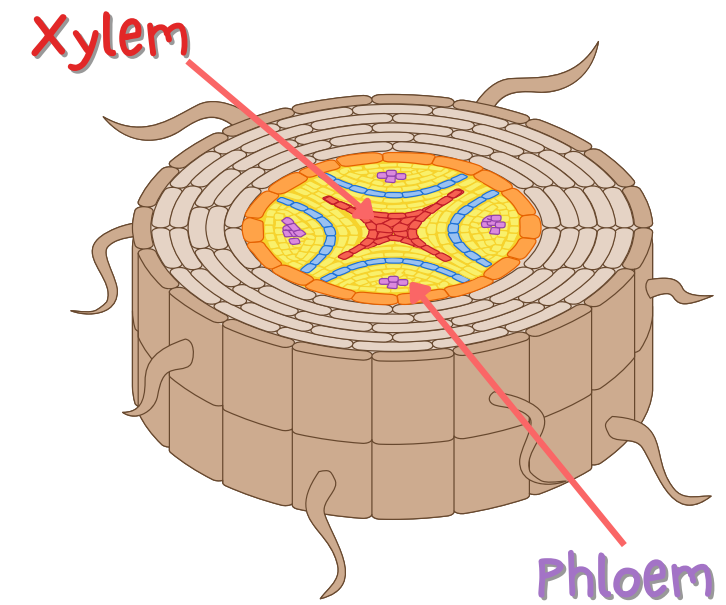
# STATION # 3: TRANSPORT SYSTEMS IN PLANTS

Plant visual of the Xylem and Phloem

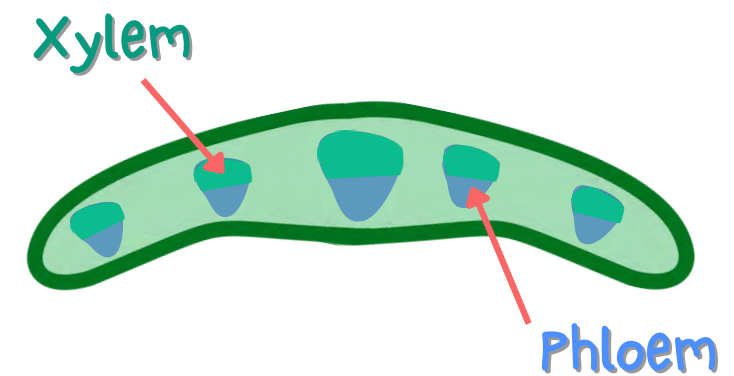
## PLANT STEM CROSS SECTION



## PLANT ROOT CROSS SECTION



## PLANT LEAF CROSS SECTION



# STATION # 4: VIRTUAL REALITY - HUMAN BODY SYSTEMS

