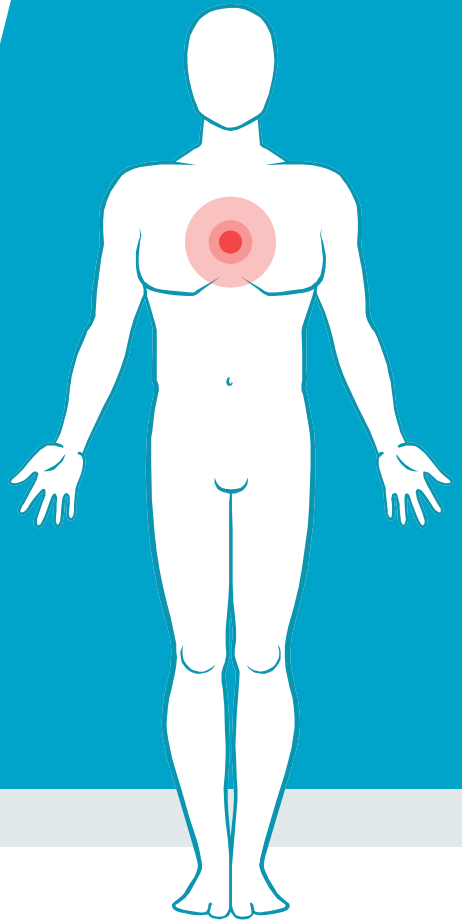
project MED

HEART DISSECTION



AGENDA

1. Introduction
2. Heart Function
3. Heart Anatomy
4. Dissection
5. Conclusion

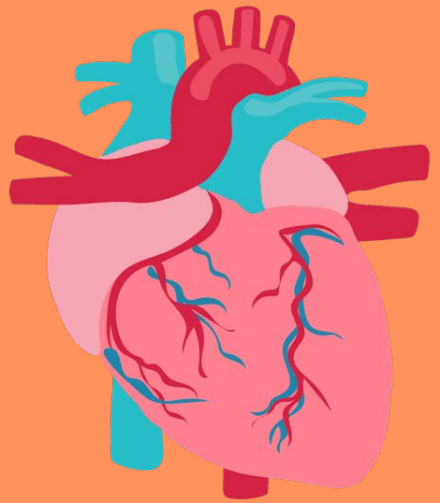
What would your most mediocre superpower be?

”

1. HEART FUNCTION

How many times will your heart beat in a day?

A. 500
B. 115,000
C. 10,000,000



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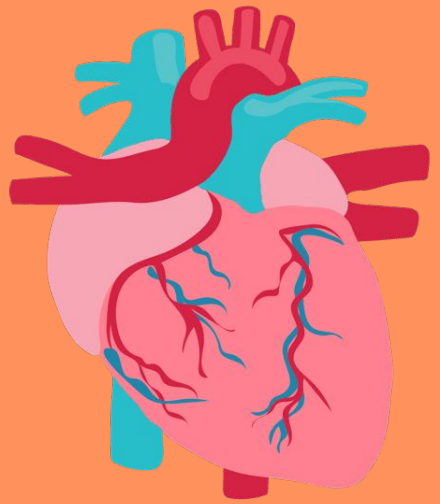


4 MAIN FUNCTIONS

Pumping **oxygenated blood** to parts of the body.

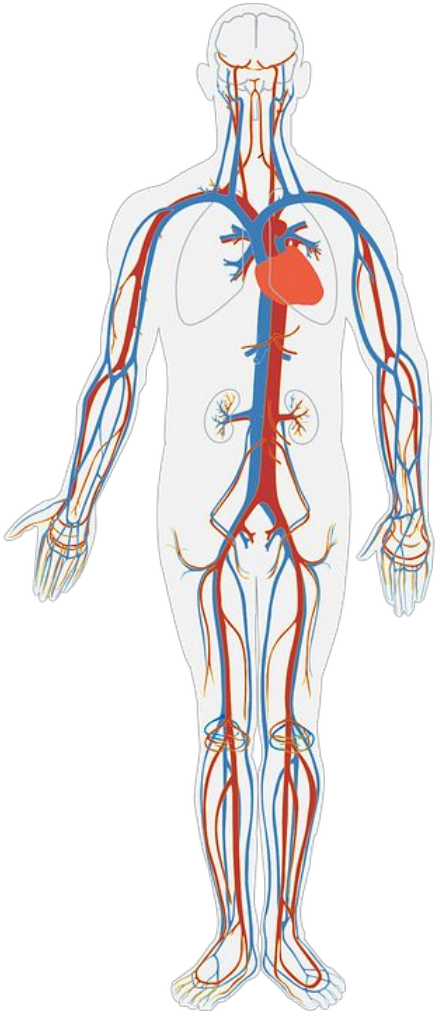
Pumping out **hormones**, nutrients, etc.

Maintaining **blood pressure**.

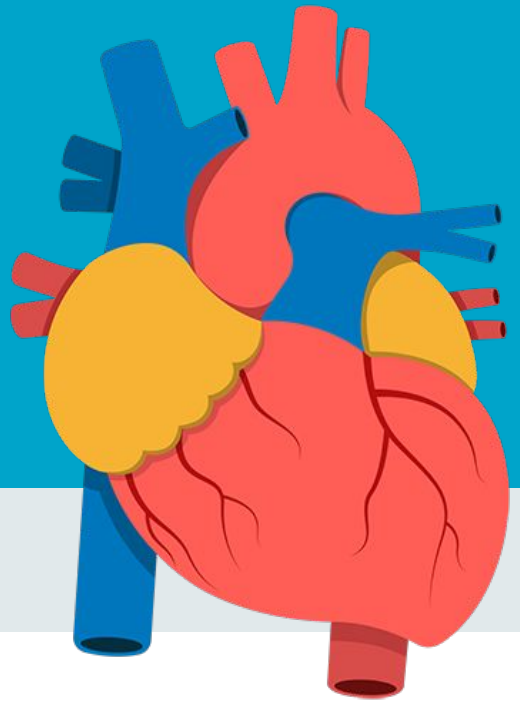
Receiving **deoxygenated blood** and sending to **lungs**.

CENTER OF CIRCULATORY SYSTEM

- Pumps (powered by **electric impulse**) blood throughout body
  - Important for sending oxygen and nutrients
- Heart works with **arteries** and **veins**
- Different chambers of the heart serve different purposes (**oxygenated vs. deoxygenated**)

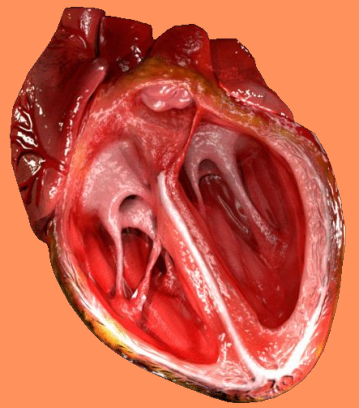


2. HEART ANATOMY



On average, how many gallons of blood does your heart pump per day?

A. 1,000
B. 2,000
C. 3,000



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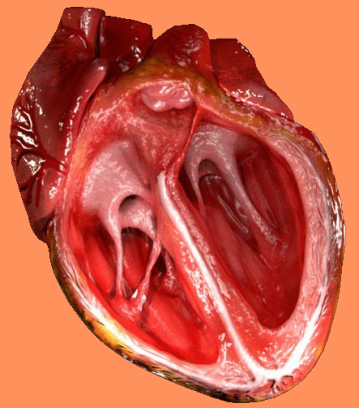
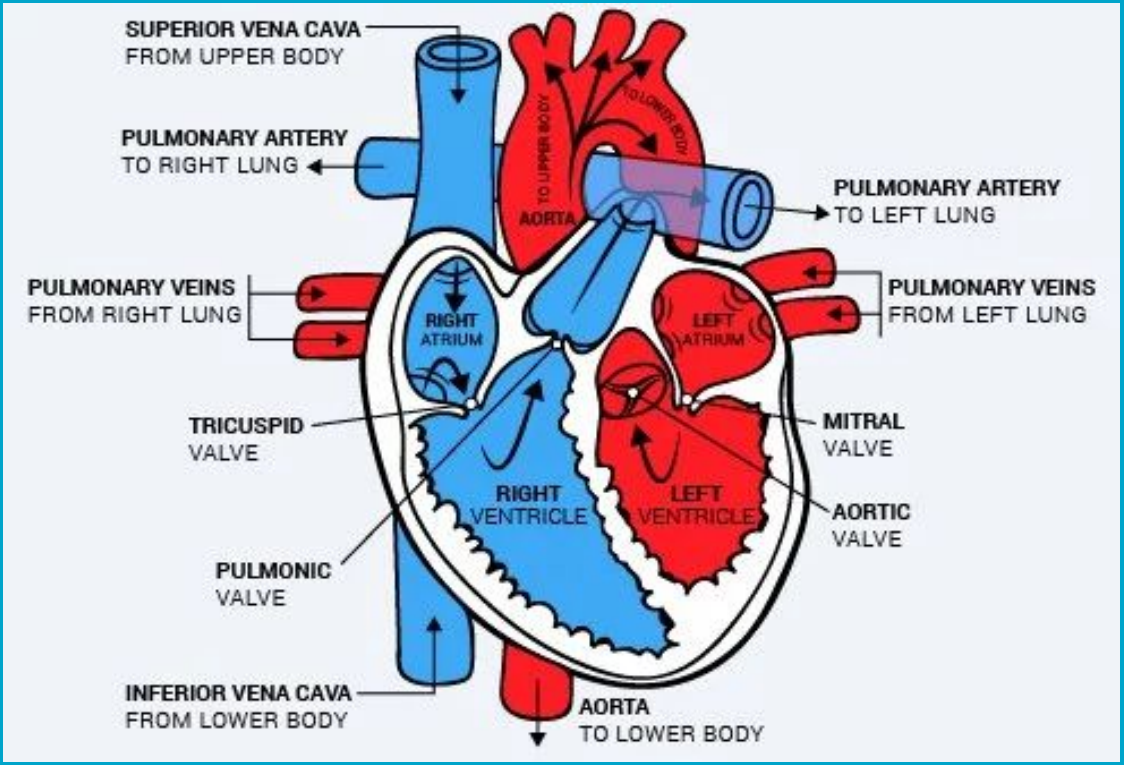
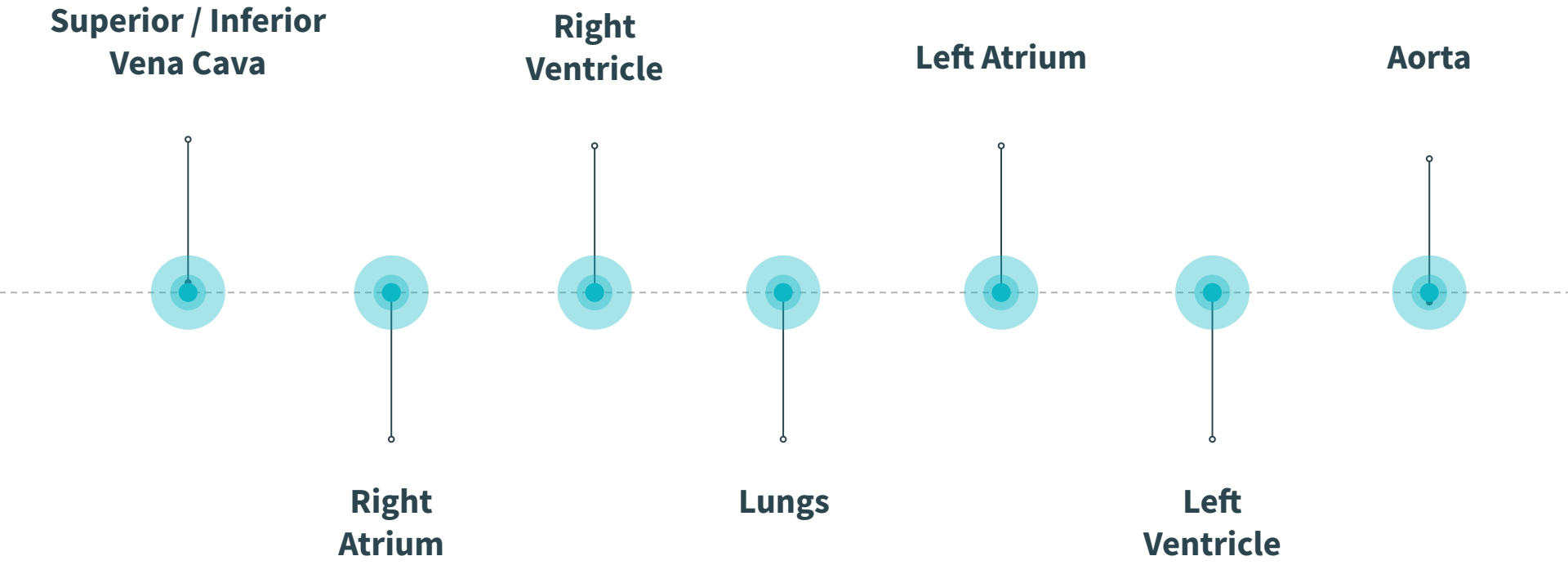


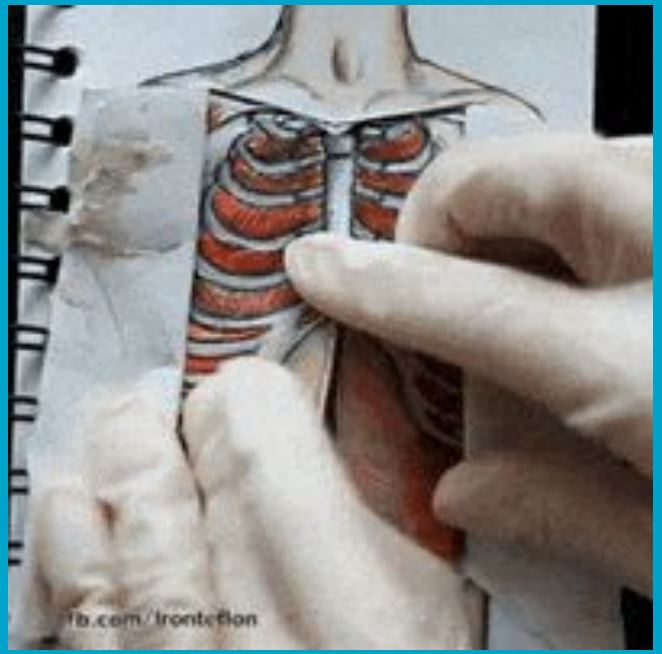


- Arteries: deliver **oxygen-rich** blood from the **heart** to the **tissues** of the body (ex: aorta)
- Veins: carry **deoxygenated** blood from the **tissues** back to the **heart**
- Atria: thin-walled chambers that **receive** blood from **veins**
- Ventricles: chambers that **pump** blood out through **arteries**

PROCESS OF BLOOD FLOW



3. DISSECTION!

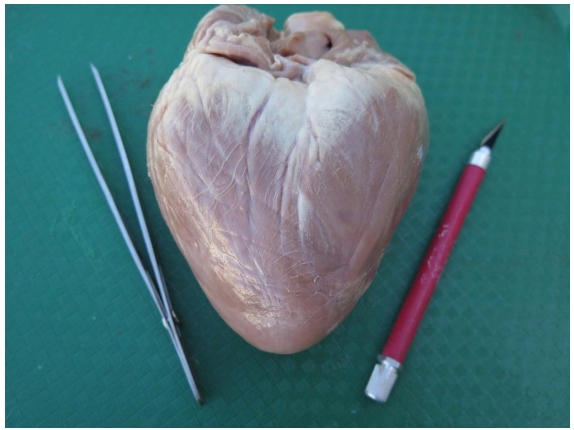


In what year did the first open heart-surgery take place?

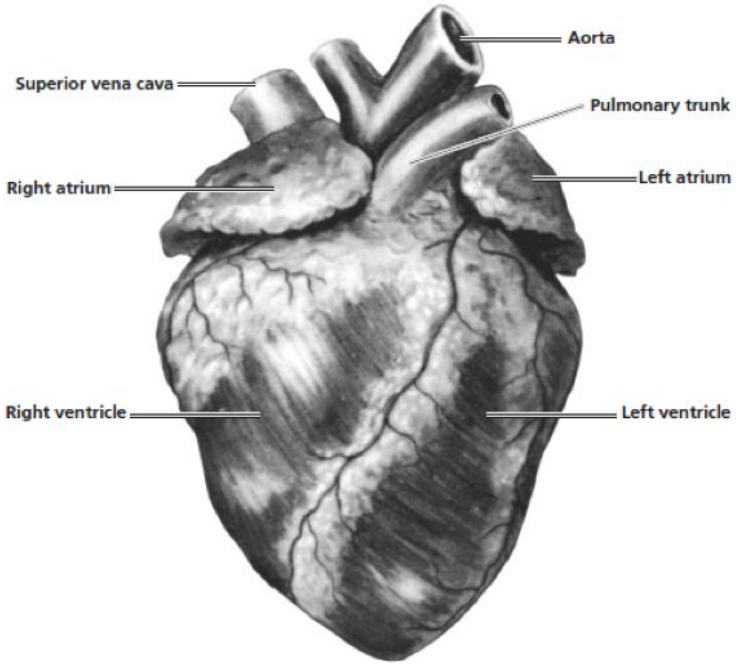
1893! It was performed by Daniel Hale Williams, one of the few black cardiologists in the US at the time.

Before the Dissection

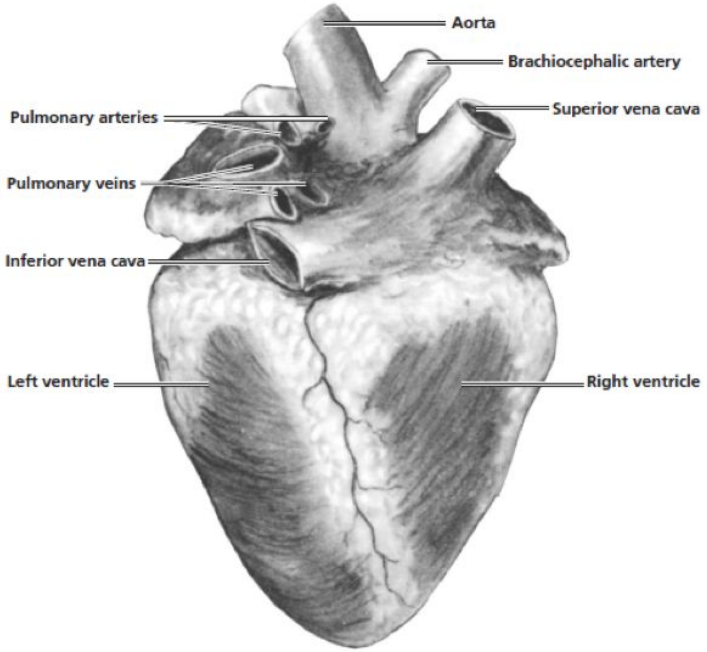
1. Place the preserved sheep heart on your dissecting tray.
2. Using your **forceps**, remove the fat that covers the upper part of the heart and blood vessels. *The fat is light colored, soft, and without structure.*
3. Observe the external anatomy of the heart according to the ***anterior*** (front) and ***posterior*** (back) views on the next slide (Video: 0:10-1:50). Try to label parts of the external heart on your in-lab worksheet!



Observing the External Anatomy



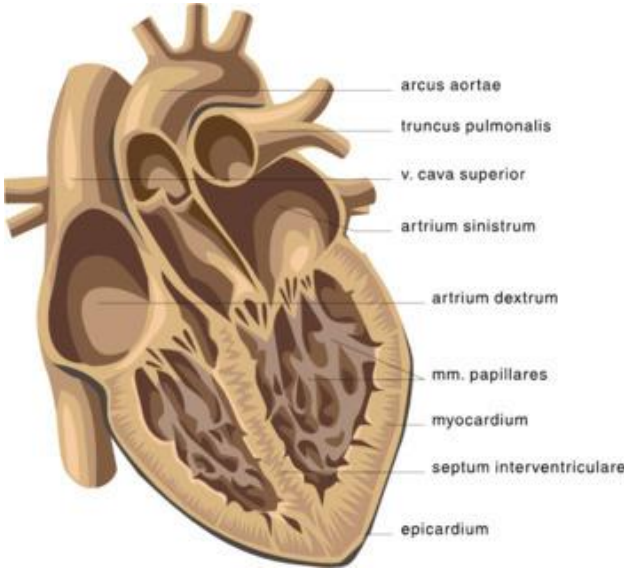
Anterior View



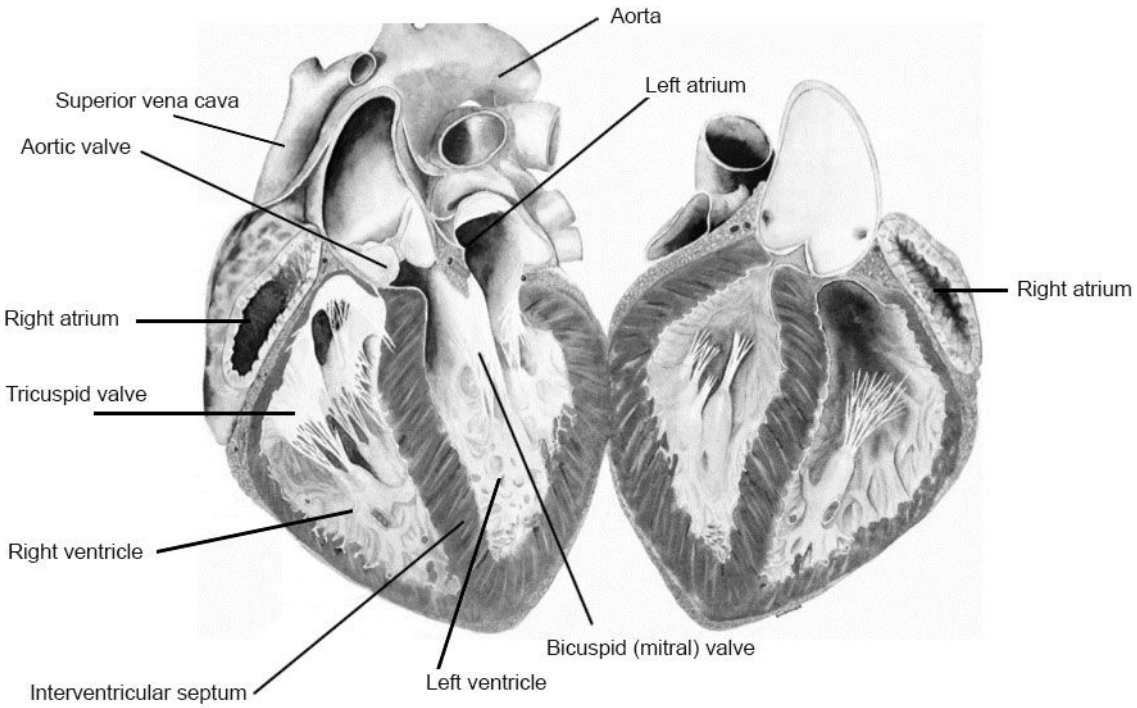
Posterior View

Dissection: Investigating the Internal Anatomy

1. Position the heart **anterior** (front) side up.
2. Use your scalpel to cut the heart in half across both **atria** and **ventricles**. (Video: 2:12-3:00)
3. Identify internal structures and label them in your in-lab worksheet. Use the picture on the next slide to help you!



Observing the Internal Anatomy



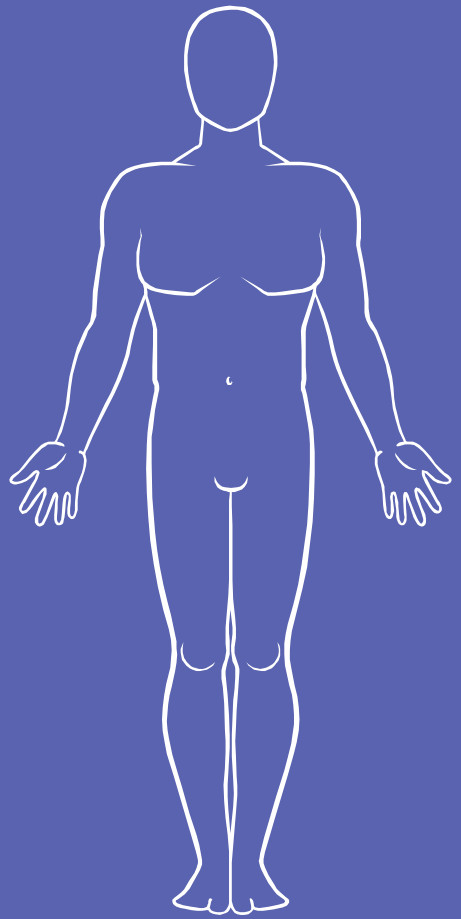
LABELING ACTIVITY!

4. CONCLUSION

A DAY IN THE LIFE

Cardiothoracic Surgeon

- Specializes in surgical procedures of the heart, lungs, esophagus, and other organs in the chest
- Treats blockages in arteries and valves, heart failure, atrial fibrillation, etc.



KAHOOT!

THANK YOU!

Any questions?