

# PLTW Principles of Biomedical Science

**Lesson 2:** April 7th

## **Learning Target / Daily Objective:**

Students will draw, identify, locate, and explain the pericardium of the heart along with the sections of the heart wall.

*(Reference: PLTW® 4.1.1 Path of the Blood in the Heart)*

## **Let's Get Started / Bell Ringer:**

Watch Video: [Pericardium - Definition, Function & Layers - Human Anatomy](#)

(focus on the beginning to 1:50 sec, feel free to watch it all)

Read Quick Article: [healthline](#) Pericardium

# Lesson/Activity:

1. Introduction: Our goal is to understand the outside of the heart, it is important to examine what makes up the outside of the heart and how it functions to make the heart function.
  - a. In this lesson you will investigate the basic features of the pericardium and cardiac muscle which surrounds and makes up the human heart.
  - b. Use the resource links below or find your own to complete the following activities and to answer the following questions about the concepts above.

Use these websites as references, or find you own:

[American College of Cardiology](#)

[TeachMe Anatomy The Pericardium](#)

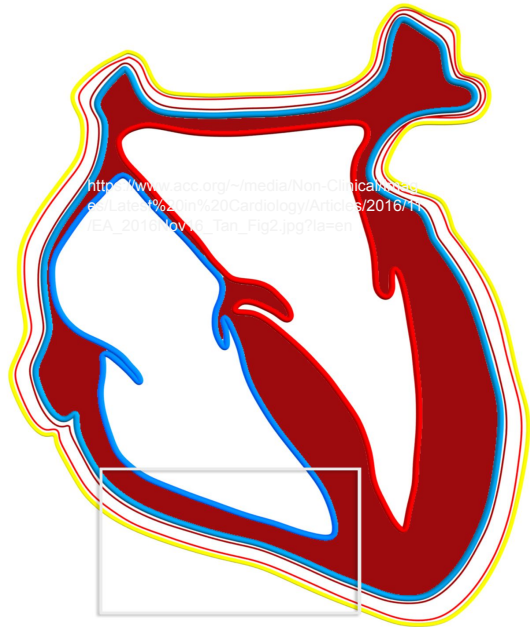
[Pericardium](#)

[An Online Examination of Human Anatomy and Physiology](#)

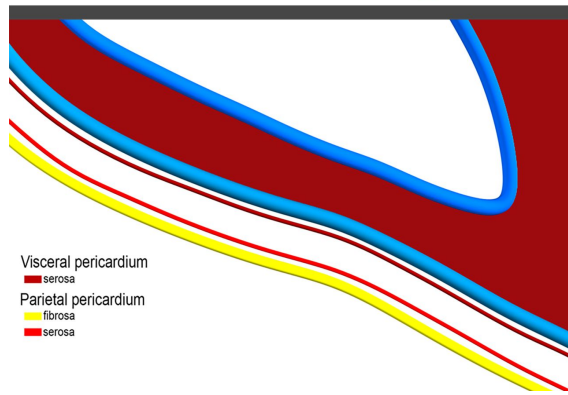
## Lesson/Activity continued:

1. Activity: In your notebook or on a separate sheet of paper draw a coronal section of the pericardium. Locate and label the following parts of the Pericardium:
  - a. Parietal pericardium (fibrosa)
  - b. Parietal pericardium (serosa)
  - c. Visceral pericardium (serosa)

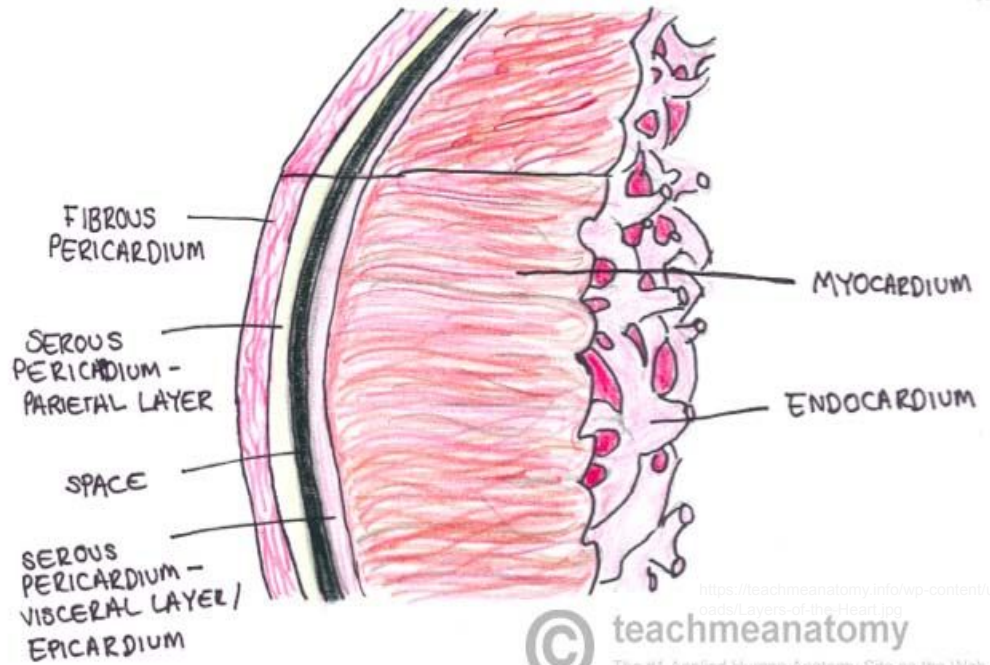
Answer:



[http://www.aac.org/~media/Non-Clinical/6%20Late%20in%20Cardiology/Articles/2016/11/EA\\_2016Nov\\_6\\_Tan\\_Fig2.jpg?ia=en](http://www.aac.org/~media/Non-Clinical/6%20Late%20in%20Cardiology/Articles/2016/11/EA_2016Nov_6_Tan_Fig2.jpg?ia=en)

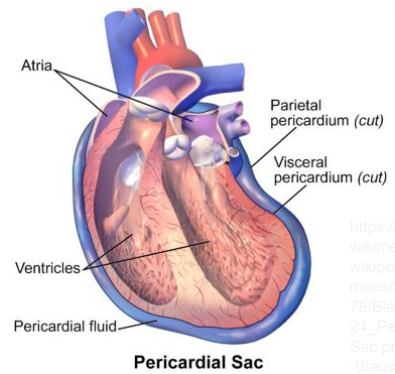


Visceral pericardium  
■ serosa  
Parietal pericardium  
■ fibrosa  
■ serosa



<https://teachmeanatomy.info/wp-content/uploads/2015/07/04-Layers-of-the-Heart.jpg>

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The #1 Applied Human Anatomy Site on the Web.



[https://upload.wikimedia.org/wikipedia/commons/thumb/7/78/Blausen\\_0724\\_Pericardial\\_Sac.png/375px-Blausen\\_0724\\_Pericardial\\_Sac.png](https://upload.wikimedia.org/wikipedia/commons/thumb/7/78/Blausen_0724_Pericardial_Sac.png/375px-Blausen_0724_Pericardial_Sac.png)

# Lesson/Activity continued:

Questions: Answer the following questions in your notebook or piece of paper:

1. The external layer of pericardium is formed by dense irregular connective tissue and is referred to as what?
2. The pericardium is made up of how many layers?
3. What are 2 function of the Pericardium?

# Answers:

## Question Answers:

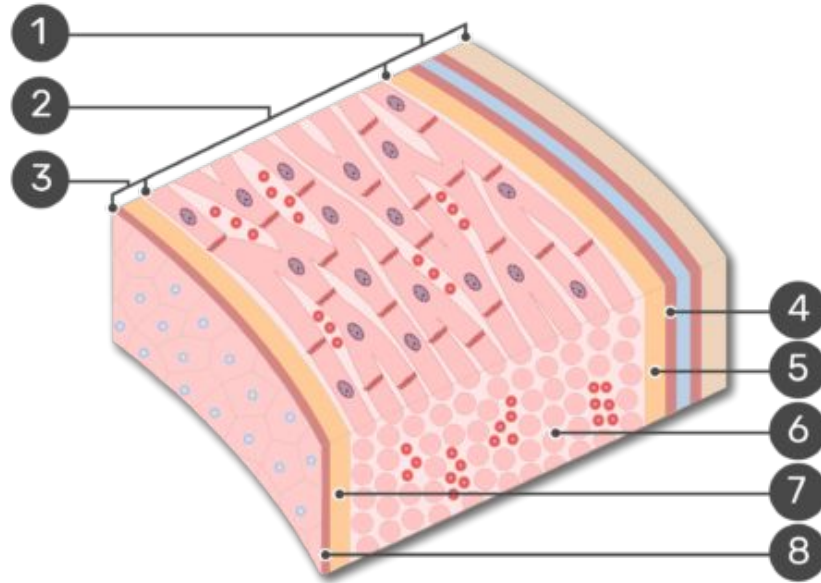
1. The external layer of pericardium is formed by dense irregular connective tissue and is referred to as what? **Fibrous**
2. The pericardium is made up of how many layers? **Two**
3. What are 2 function of the Pericardium? **Fixes the heart, Prevents overfilling, Lubrication, and Protection from infection.**

## Lesson/Activity continued:

Practice Activity: In your notebook or on a blank piece of paper draw a section of the heart wall, and label the following features:

1. Epicardium
2. Myocardium
3. Endocardium
4. Squamous Cell Layer
5. Areolar tissue layer
6. Cardiac muscle fibers
7. Areolar tissue layer
8. Squamous cell layer

# Answer:



1. Epicardium

2. Myocardium

3. Endocardium

4. Squamous cell layer

5. Areolar tissue layer

6. Cardiac muscle fibers

7. Areolar tissue layer

8. Squamous cell layer



# Additional Practice and/or Resources:

Test your knowledge create flash cards over the following vocabulary and test yourself.

- Parietal pericardium
- Visceral pericardium
- Epicardium
- Myocardium
- Endocardium
- Squamous Cell
- Areolar tissue layer
- Cardiac muscle
- Areolar tissue layer