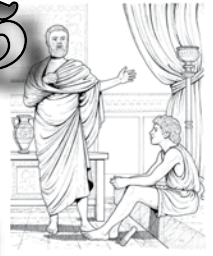


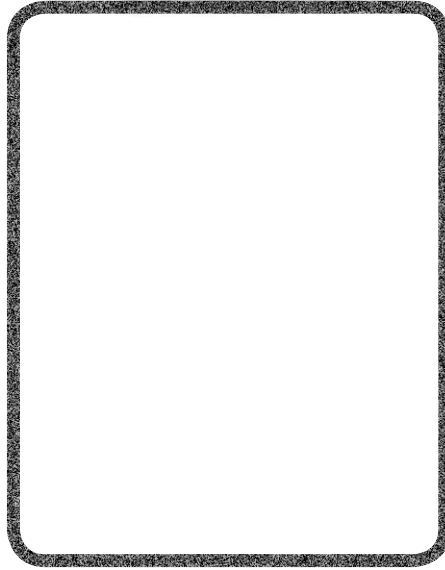
# Fascinating Facts

about



# Anatomy and Physiology

Lesson 1



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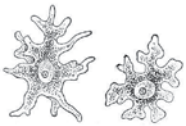
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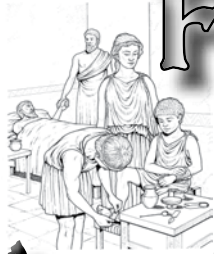
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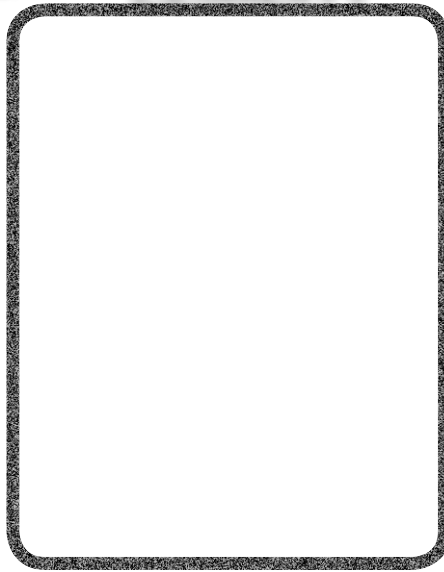
# Fascinating Facts

about



# Anatomy and Physiology

Lesson 1



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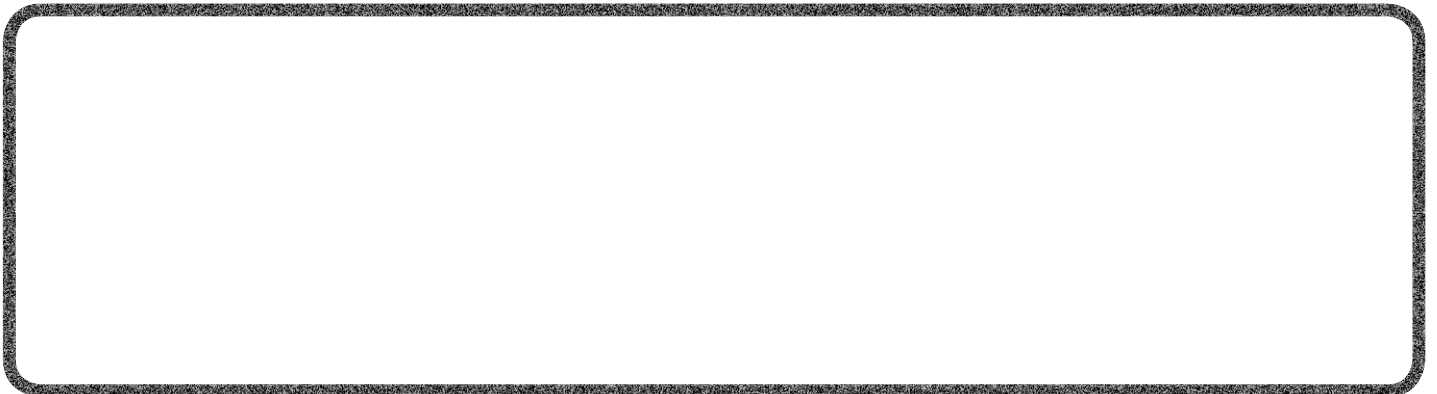
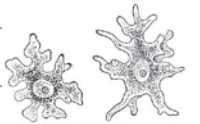
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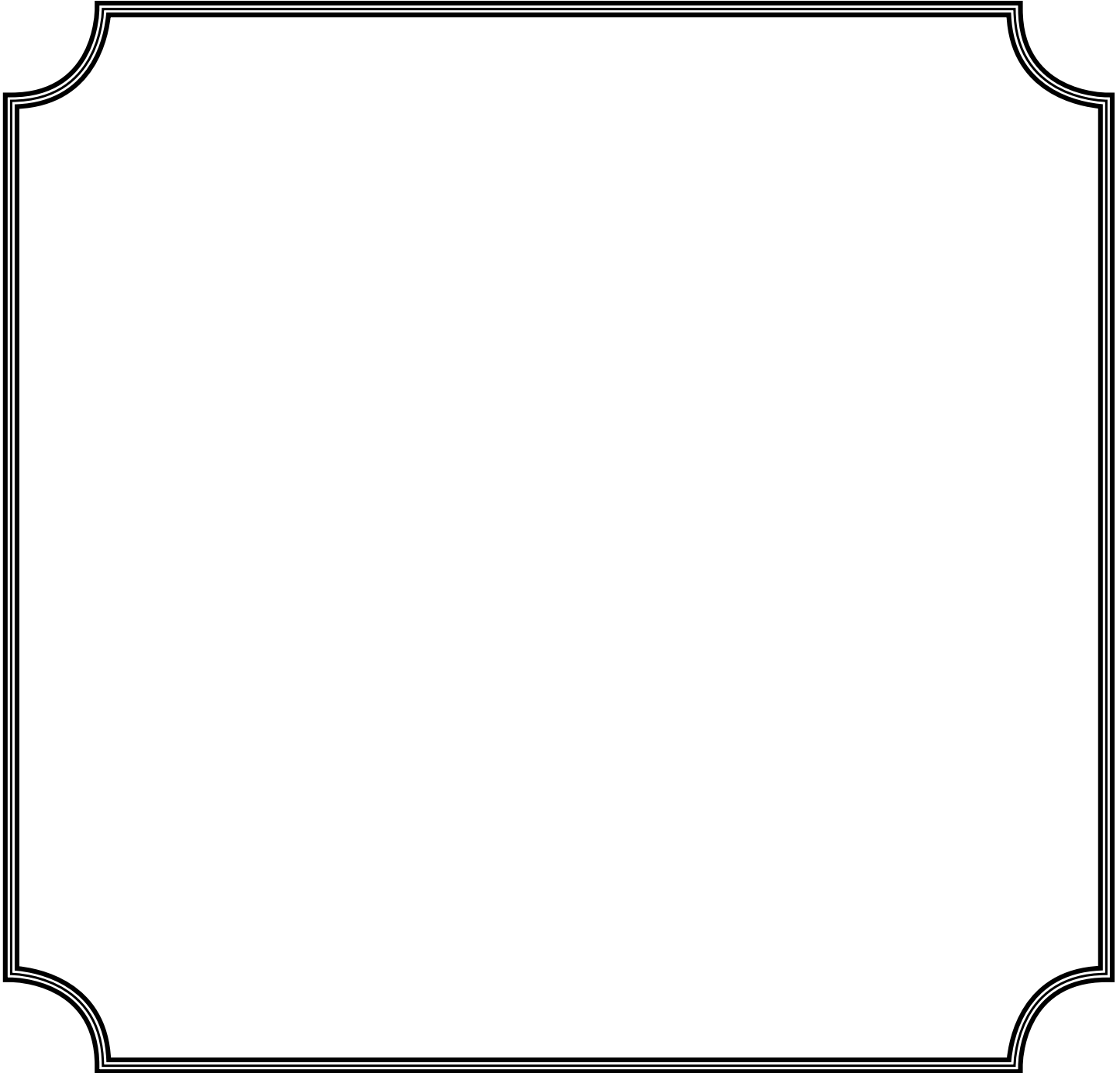
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# Cell Anatomy

## Lesson 1



**Cell Membrane**

**Mitochondria**

**Golgi Body**

**ER**

**Ribosomes**

**Centrioles**

**Lysosomes**

**Nucleus**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

# WHAT DO YOU REMEMBER? LESSON 1

1. What tells us that the Egyptians understood a lot about anatomy?
2. How do the laws that God gave to the Hebrews show us that God cares about our health?
3. What was wrong with the way the Greeks decided on their scientific beliefs?
4. What did Galen use to treat gladiators' wounds?
5. What did Hooke call the tiny rectangles he saw in the cork he examined under a microscope?
6. Name the different cell parts about which you've learned.

# Egyptians



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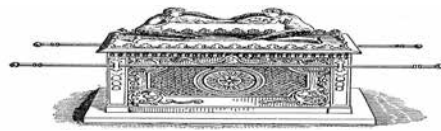
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# Hebrews



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# Greeks



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# Romans

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A black and white line drawing of a man in a Roman toga, standing and gesturing with his right hand.

# Europeans



A black and white line drawing of a large, multi-towered stone building, likely a castle or a church, with a prominent tower on the left.

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# Microscope

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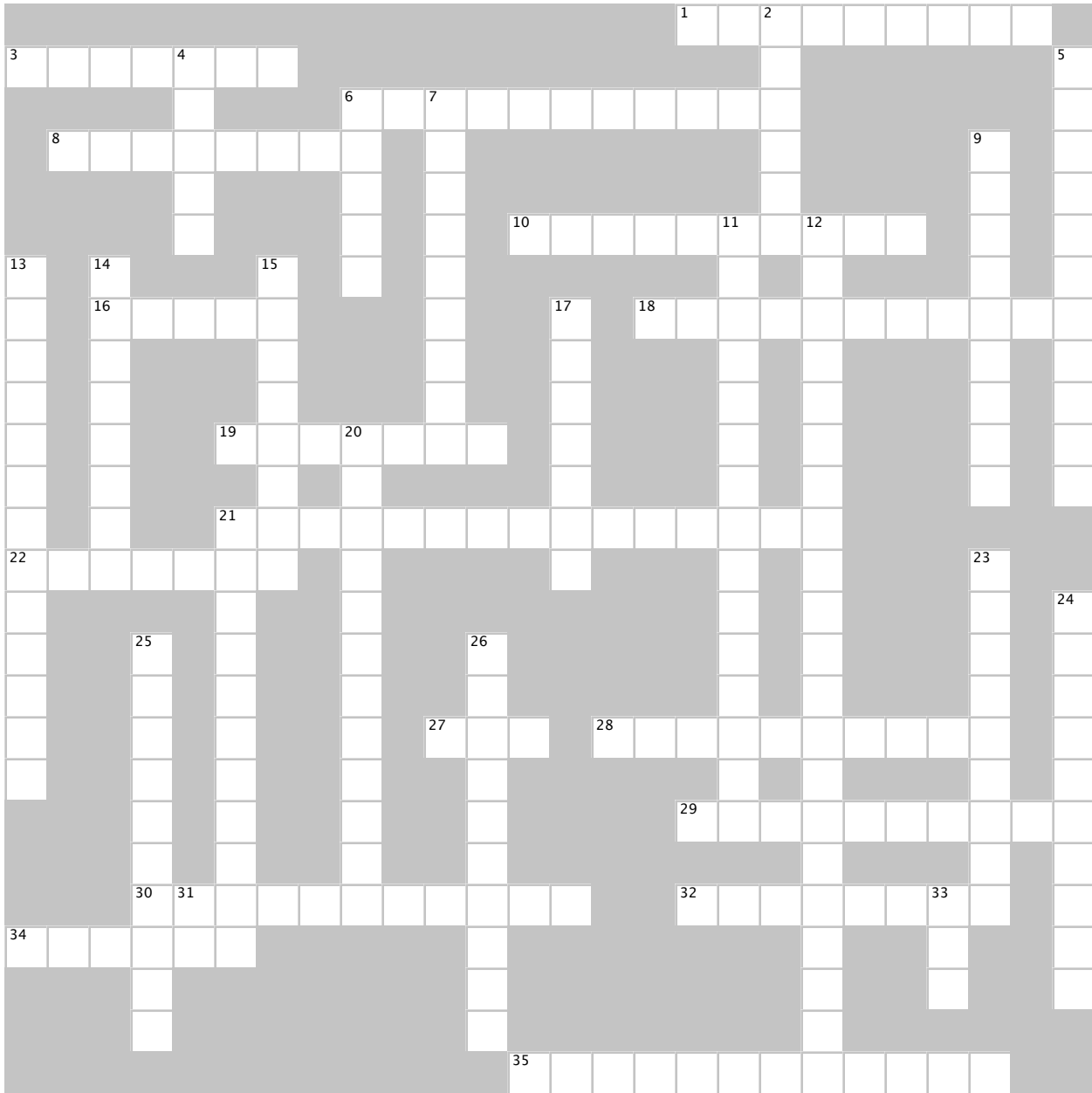
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A black and white line drawing of a classic compound microscope with a circular base, objective lenses, and a eyepiece.

# VOCABULARY CROSSWORD

## ANATOMY AND PHYSIOLOGY



**ANATOMY**  
**PHYSIOLOGY**  
**MUMMIES**  
**GERMS**  
**PARASITES**  
**HYPOTHESIS**  
**HIPPOCRATES**  
**HOOKE**  
**RNA**  
**SPONTANEOUS GENERATION**

**HUMORS**  
**PHLEGMATIC**  
**SANGUINE**  
**CHOLERIC**  
**MELANCHOLY**  
**ARISTOTLE**  
**VESALIUS**  
**CADAVERS**  
**DIFFERENTIATE**

**CELL MEMBRANE**  
**ORGANELLES**  
**CYTOPLASM**  
**MITOCHONDRIA**  
**GLUCOSE**  
**LYSOSOMES**  
**GOLGI BODIES**  
**TISSUE**  
**ORGAN**

**HIPPOCRATIC OATH**  
**ER**  
**CENTRIOLES**  
**NUCLEUS**  
**NUCLEAR MEMBRANE**  
**DNA**  
**NUCLEOTIDES**  
**CHROMOSOMES**  
**LEEUEWENHOEK**





# VOCABULARY CROSSWORD

## ANATOMY AND PHYSIOLOGY



### Across

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1. The jelly-like substance inside a cell, in which all the organelles float.
3. The study of the human body, all its parts, and how it's put together.
6. The organelles that look like stacked pancakes and store proteins and fats. TWO WORDS
8. A personality that is excitable and fully of energy.
10. An educated guess.
16. The scientist who used a microscope to examine cork, naming the little boxes he saw "cells."
18. A famous Greek philosopher that believed the body has four liquids that need to be balanced in order to be healthy.
19. A kind of sugar the cell uses.
21. The membrane that surrounds the nucleus. TWO WORDS
22. The control center of the cell.
27. Letters we use to refer to deoxyribonucleic acid, which is the molecule inside every living thing that contains all the information about that thing.
28. Small structures within a cell. The word means "little organs."
29. A personality that is easy to get along with and usually happy.
30. A Dutch scientist who discovered how to magnify things with glass lenses.
32. Dead bodies.
34. The name of the four liquids that Hippocrates believed would bring health to the body, if a person had equal amounts of the liquids.
35. The organelles inside a cell that give the cell power.

### Down

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2. A group of cells of the same type.
4. A group of tissues that work together to form a special body function.
5. DNA is packaged into units called\_\_\_\_\_. Your body has 46 of these units.
6. Tiny organisms that can cause diseases.
7. Organelles that protect the cell from foreign invaders and break down chemicals.
9. A Greek philosopher after Hippocrates, considered one of the greatest thinkers of all time.
11. The oath doctors take which states that they will always do good and never harm people. TWO WORDS
12. The wrong idea that life can come into existence from nonliving things. TWO WORDS.
13. What we call it when cells begin to become different from the original cell.
14. A personality that likes to be in control.
15. A French scientist who questioned Galen's ideas and dissected human cadavers.
17. Dead bodies that have been preserved using salt and chemicals to keep them from rotting and decaying.
20. The wall around a cell. TWO WORDS
21. These are strung together to make genes.
23. Tiny organisms (such as those sometimes found in pigs) that can infect humans and steal nutrients from the person they infect, as well as make the person sick.
24. A personality that is artistic and thoughtful.
25. The study of how all the parts of the body function.
26. Special organelles that help cells reproduce.
31. Two letters that we use to refer to the endoplasmic reticulum, which transports chemicals and gets rid of waste in a cell.
33. The DNA's messenger, which copies part of the information that is in the DNA and then leaves the nucleus.







# Copywork

I will give thanks to You,  
for I am fearfully and wonderfully made;  
Wonderful are Your works,  
And my soul knows it very well.

Psalm 139:14

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# Copywork

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# Cell Minibook

## Lesson 1

Paste your Cell Wheel  
onto this page.





# MORE TO EXPLORE



## LESSON 1

### Be a Modern Vesalius

Vesalius drew the human body quite accurately. Using images found on page 32 of your textbook, try to draw the internal organs of a human body to scale. Also, Vesalius built prosthetics that are still used as models today. Using different materials attempt to build a prosthetic leg or arm that bends with the use of a pulley and strings. You can use materials such as: funnels, cardboard tubes, strings, metal fasteners, plastic rings, cardboard, tape and glue.

### Experiment with a Magnifying Glass or Microscope

It's fascinating to view things up close. Use a magnifying glass or microscope to get a better look at your anatomy! Try looking at your skin, hair, fingernails, teeth, eyes, or nose. It would also be interesting to see a scab or open wound up close. Are you surprised by what you see?

### Choosy Cell

The cell membrane is selectively permeable and very choosy about what it lets in and out of the cell. Let's see how it works! Put a few tablespoons of corn starch in a plastic sandwich bag and tie or zip the top. Next, immerse the bag in a glass of water with enough iodine to make the water dark golden brown. Now, let the bag sit for a couple of days. What do you think will happen? The corn starch will turn brown from the iodine seeping into the bag, but there will be no water inside the bag. Why? The "pores" of the bag are too small to allow water molecules through but are large enough to let the smaller iodine molecules through. The bag acts like a cell membrane, allowing some things in but keeping other things out.

### Book and DVD Suggestions

***The History of Medicine*** by John Hudson Tiner. This is a wonderful, well written book on the history of anatomy. It's a must read for everyone and is sure to become a family favorite!

***Enjoy Your Cells*** by Fran Balkwill & Mic Rolph. This book does a great job of teaching about cells, though it does not cover the specific functions of the organelles within the cells. That will be covered well in the first lesson of *Exploring Creation with Human Anatomy and Physiology*.

***Galen and the Gateway to Medicine*** by Jeanne Bendick. This fascinating biography brings Galen's Roman world alive! It helps the reader understand the medical knowledge and practices of that time period. The maps, diagrams and charts are helpful additions to the text. Recommended for ages 10 and up.

***Magic School Bus: The Human Body***. This DVD explores the human body. You may need to remind your children that lying is wrong as one child continually lies in the video.

***Cell-a-bration Cytology***: Newton's Workshop. Learn about cells with this live action DVD as Grandpa Newton and the kids explore God's creation with an old microscope. (Ages 7-12) 60 minutes.

***DNA Decoders***: Newton's Workshop. Learn about DNA with this live action DVD. (Ages 7-12) 60 minutes.

# My Anatomy Projects

## Lesson 1

What I did:

What I did:

What I learned:

What I learned: