Prokaryotes
Viruses
Bacteria, Virus, or both???
Diseases
Prokaryotic or Eukaryotic
Misc.
The three shapes of bacteria with a simple drawing
What is cocci, bacillus, and spirilla
The two domains of prokaryotes
Bacteria and Archea
Bacteria that stain purple
What are gram positive
How does a photoautotroph obtain food?
Light-self-feeder
Makes food (organic compounds from inorganic compounds) using energy from sunlight
The three ways bacteria exchange genetic material
Two components of all viruses
Nucleic acid (genetic material) and protein coat
3 characteristics viruses share with living cells
3 characteristics of living cells that viruses don’t have
- Grow and develop
- Viruses require a cell's machinery to reproduce
- No cell membrane (organelles)
The type of virus that infects bacteria
Bacteriophage
• Draw a Bacteriophage
• Label the head, DNA, tail, and tail fibers
Structure of a Bacteriophage

- Capsid head
- DNA
- Tail sheath
- Baseplate
- Tail fibers
- Pins
HIV
Virus
Has DNA
Both can – some viruses have RNA only
Strep throat
Bacteria
Can be pathogens
Both
Mad Cow Disease
Neither
The term for a disease causing agent
What is a pathogen?
The name of the cycle when a virus causes the host cell to burst.
lytic
Daily Double!!
An infectious particle of just RNA (not a virus)
Viroid
A protein that causes disease
prion
Draw and explain the lytic and lysogenic cycles
The phage attaches to a host cell and injects its DNA, circularizing the bacterial chromosome. Occasionally, a prophage exits the bacterial chromosome, initiating a lytic cycle. Certain factors determine whether the lytic cycle is induced or the lysogenic cycle is entered. Phage DNA integrates into the bacterial chromosome, becoming a prophage.

The bacterium reproduces normally, copying the prophage and transmitting it to daughter cells. Many cell divisions produce a large population of bacteria infected with the prophage.

The cell lyses, releasing phages. New phage DNA and proteins are synthesized and assembled into phages.
Contains a nucleus
Bacteria
Prokaryotic
Plant and animal cells
Eukaryotic
Contains nucleiod
Prokaryotic
Daily Double!!
Prokaryotic
2 main molecules that make up the plasma membrane
Lipids and proteins
How many medals did the US win in Sochi?
The type of bacteria
Gram positive cocci
Gram negative bacillus
The closest relative of primates on the cladogram
Rodents and rabbits

**Sharks**
- Ray-finned fish
- Amphibians
- Primates
- Rodents & rabbits
- Crocodiles
- Birds

- Hair
- Eggs with shells
- Amniotic egg
- Four limbs
- Bony skeleton
- Vertebrae
The common ancestor of birds
None!
Double Jeopardy!!
Diffusion Lab
Cell Lab
Pictures
Organelles
Name that cell
Misc.
The image is a screenshot of a game board with categories including 'Diffusion Lab', 'Cell Lab', 'Pictures', 'Organelles', and 'Name that cell', with corresponding dollar amounts from $200 to $1000 at each category.
If the side length of a cube is 3 cm, what is the volume?
27 cm$^3$
As a cell gets larger, what happens to its surface area?
It increases.
As a cell gets larger, what happens to its surface area to volume ratio?
It decreases.
Find the surface area of a cube with side length of 1 cm
$6 \text{ cm}^2$
Find the volume of a cube with a side length of 0.1 mm
0.001 mm$^3$
There was no nucleus in the cork cells because....
Cork cells were non-living.
Nucleolus was seen in this cell.
Onion
Small green circles in Elodea cells.
Chloroplasts
Outside boundary of Elodea and onion cells
Cell wall
Epithelial cells observed.
Cheek cells
Mitochondria
Orange area
Rough ER
Plant or animal?
Plant
Golgi
Prokaryote or Eukaryote?
Prokaryote
Identify cell part
Mitochondria
Identify cell part
Nucleolus
Identify cell part
Rough ER
Identify cell part
Plasma/Cell Membrane
Identify cell part
Chloroplast
Onion cells
Daily Double!!
Paramecium
Cheek Cells
Elodea
Daily Double!!
What happened to these cells?
Placed in a salt solution.
Flagella and cilia are composed of these.
Microtubules
Prokaryotes or Eukaryotes?
Eukaryotes
What molecules?
lipids
What is it?
Rough ER
What is it?
Chloroplast
Final Jeopardy

What are the 4 parts of the cell theory?
1. All living things are made up of cells.
2. Cells are the basic units of structure and function.
3. All cells come from pre-existing cells.
4. Cells contain hereditary material ....