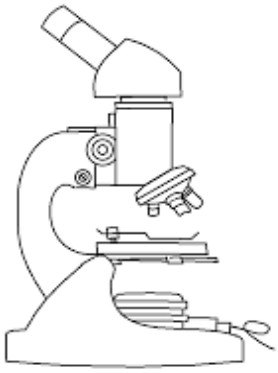
Name_____ Period: ____ Cycle 3 Jan 30 – March 17

# Integrated Science – 7th
# Weeks 1 & 2

*A cell is regarded as the true biological atom.*
**— *George Henry Lewes***



**Overview**

Living things are made of smaller structures whose functions enable the organisms to survive. The basic unit of structure in all living things is the cell. Cells combine to form tissues that combine to form organs. While all cells have common structures, there are differences between plant and animal cells. Cell details are usually visible only through a microscope.

**Essential question:**

- What patterns exist in the structure and function of living organisms and their individual parts?
- How has genetic variation made you, you?

_____ _____ **Advanced Student Work** (***Due March 10***): Research a living organism by doing an in-depth study or analysis of its four needs to stay alive. Complete this by writing a report that covers all of the unique needs of the organism. See the eschooltoday website here for the criteria: http://goo.gl/dsRs8E

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## WEEK 1: Due February 3

_____ _____1. Read the overview with the class and mark it up.

_____ _____2. I have made vocabulary cards or filled out Marzano vocabulary sheets for the following words I do not know: **autotroph, heterotroph, permeable, membrane, photosynthesis, respiration, fermentation, osmosis, diffusion, homeostasis, organ, organelle, organism, unicellular, multicellular, cell wall, and cell**.

_____ _____3. Complete the Lab Activity: The Electromagnet.

_____ _____4. Participate in the lesson and lab debrief: The Electromagnet and Electromagnetism.

_____ _____5. Participate in and take notes on the lesson: Parts and Usage of A Microscope

_____ _____6. In a group of 2 or 3 of your colleagues, read handouts, *Anatomy of a Microscope* and *How to Use the Microscope*, and view the following video on making wet mount slides:
http://www.youtube.com/watch?v=HCQNyjl-iFQ or a better one
https://www.youtube.com/watch?v=ZjQVQ8gT0A8
You may also refer to: https://www.wisc-online.com/learn/natural-science/life-science/bio905/how-to-use-a-microscope for an overview of parts and a self-directed quiz.

_____ _____7. Complete the Parts of a Microscope Graphic Organizer

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## WEEK 2: Due February 10

_____ _____8. In your group of 2 or 3 of your colleagues, complete the Lab: Letter 'e' Lab.

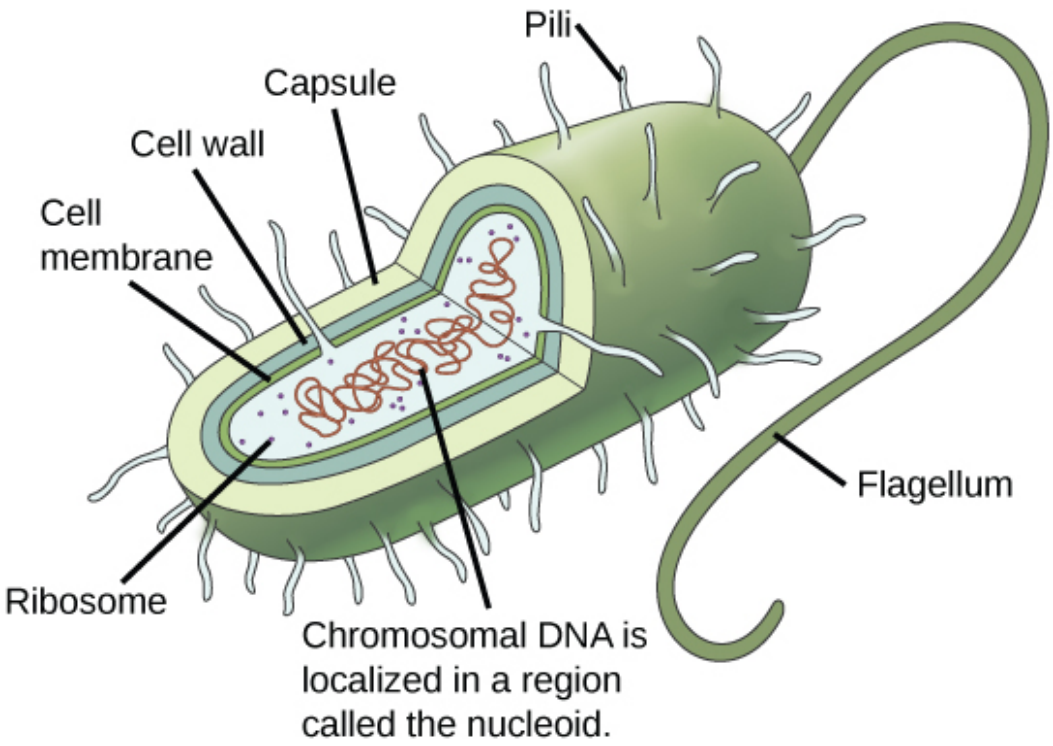
_____ _____9. Read and take notes on pp. 50-57 of the Prentice Hall Life Science textbook.

_____ _____10. Answer all parts of the four Assessment questions on page 57 of the Prentice Hall Life Science textbook.

_____ _____11. Participate in and take notes on the lesson: Prokaryotes vs. Eukaryotes.

_____ _____12. ADVANCED WORK: Microscope Lab: Prokaryote or Eukaryote

_____ _____13. Using the figure of the prokaryotic cell shown below, create a Venn Diagram listing the similarities and differences between a prokaryotic cell and a eukaryotic cell (plant or animal).




** For assignment 13 use your textbook (pp. 47-48, 64-65) or these websites to complete the diagram: http://www.cellsalive.com/cells/cell_model.htm OR http://learn.genetics.utah.edu/content/cells/insideacell/

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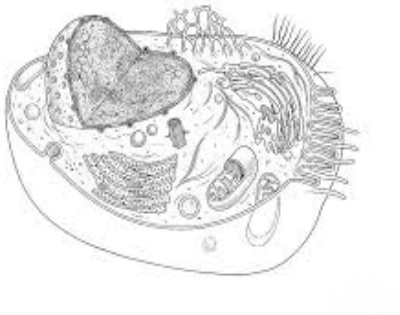
# Integrated Science – 7th
# Weeks 3 & 4

**Essential question:**

- What patterns exist in the structure and function of living organisms and their individual parts?
- How has genetic variation made you, you?



_____ _____ **Advanced Student Work** (***Due March 10***): Research a living organism by doing an in-depth study or analysis of its four needs to stay alive. Complete this by writing a report that covers all of the unique needs of the organism. See the eschooltoday website here for the criteria: http://goo.gl/dsRs8E

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## WEEK 3: Due February 17

** For assignment 14 and 15 use your textbook (pp. 47-48, 64-65) or these websites to complete the G.O.:
http://www.cellsalive.com/cells/cell_model.htm OR
http://learn.genetics.utah.edu/content/cells/insideacell/

_____ _____14. Complete the Graphic Organizer: Plant Cell Anatomy.

_____ _____15. Complete the Graphic Organizer: Animal Cell Anatomy.

_____ _____16. Using the information from the above worksheets on plant and animal cells, create a Venn Diagram listing the similarities and differences between plant and animal cell structures.

_____ _____17. Read and take notes on pp. 60-67 of the Prentice Hall Life Science textbook.

_____ _____18. Answer all parts of the four Assessment questions on page 67 of the Prentice Hall Life Science textbook.

_____ _____19. Begin preparation for the Performance: Cells: The True Story! (receive your role and begin researching your function)

_____ _____20. Make the appropriate nametag for your role in the performance.

## WEEK 4: Due February 24

_____ _____21. Go to the following website and compare the sizes of cells:
http://learn.genetics.utah.edu/content/cells/scale/
Don't forget to notice the metric scale (centimeter, micrometer, Angstrom, etc…!)

_____ _____22. Continue preparation for your role in the performance: research and report.

_____ _____23. Continue preparation for your role in the performance: rehearse in groups.

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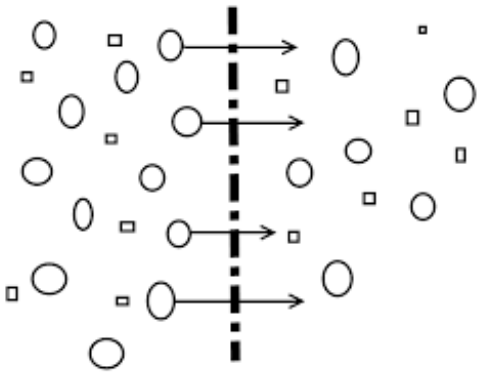
# Integrated Science – 7th
# Weeks 5, 6, & 7

**Essential question:**

- What patterns exist in the structure and function of living organisms and their individual parts?
- How has genetic variation made you, you?



_____ _____ **Advanced Student Work** (Bonus 10 pts) (***Due March 10***): Research a living organism by doing an in-depth study or analysis of its four needs to stay alive. Complete this by writing a report that covers all of the unique needs of the organism. See the eschooltoday website here for the criteria: http://goo.gl/dsRs8E

## WEEK 5: Due March 3

_____ _____24. Performances: Cells: The True Story! (please hand in your research notes!)

_____ _____25. Complete the Concept Map and 10 questions on p. 69 of the Prentice Hall Life Science textbook.

_____ _____26. Participate in and take notes on the lesson: Osmosis and Diffusion.

_____ _____27. Read and take notes on pp. 80-85 of the Prentice Hall Life Science textbook.

_____ _____28. Complete the Assessment questions 1-5 on pg 85 of the Prentice Hall Life Science textbook.

_____ _____29. Complete the practice worksheet: Diffusion Worksheet

## WEEK 6: Due March 10

_____ _____30. Complete the activity: Egg Osmosis Lab.

_____ _____31. Participate and take notes on the lesson: Organ Body Systems and System Functions

_____ _____32. Complete the work: Organ Systems Foldable

## WEEK 7: Due March 17

_____ _____33. Study for your cycle Theme Test and complete any missing work.

_____ _____34. Take the cycle 3 Theme Test.

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_____ _____35. Hand in all cycle work.