

Science 10
Unit 2 - Biology
Unit Outline

Topic	Activity	Description
The Cell—Parts and Functions	Power Point on Cell Organelles Activity on Observing Plant and Animal Cells Flashcards on Cell Organelles Worksheet on Cell Structure and Organelles	A Power Point Presentation describing the organelles in plant and animal cells and their functions Students will observe prepared slides of plant and animal cells Students will be given flashcards to help them learn cell organelles and their functions
Moving Material In and Out of Cells	Power Point on Cell Membranes, Diffusion and Osmosis Lab on Osmosis	A Power Point Presentation describing Cell Membranes, Diffusion & Osmosis Students will observe osmosis taking place in red onion cells.
Factors Limiting Cell Size	Class Notes on Surface Area, Cell Volume and Limits on Cell Size	Students will learn how Surface Area and Volume increase as cells get larger and how this limits the ability of cells to exchange materials.
The Nucleus and DNA	Worksheet on the Nucleus and DNA & Video on DNA	Students will use material from pages 344-346 of the Text and from various internet sites to learn about the nucleus, DNA and genes.
Single-Celled Organisms (Protists, Bacteria and Viruses)	Worksheet on Protists, Bacteria and Viruses & Video on Bacteria Review and Test on The Cell	Students will use material from pages 347-351 and various internet sites to learn about protists, bacteria and viruses and some of the diseases they cause.

Topic	Activity	Description
Cell Reproduction. The Cell Cycle, Mitosis and Cytokinesis	Power Point on the Cell Cycle, Mitosis and Cytokinesis Worksheet on Cell Reproduction Flashcards on the Cell Cycle Lab on Observing Cell Division	Students will work through material on pages 356-362 learning about the cell cycle, the stages of mitosis and cancer. Students will observe prepared slides showing mitosis in onion root tips and whitefish cells. Sketches will be made and the lab is done.
Asexual Reproduction	Worksheet on Asexual Reproduction	Students will complete a worksheet with sketches showing the five major modes of asexual reproduction. Material can be found on pages 364-366 of Text.
Sexual Reproduction	Power Point on Meiosis and Sexual Reproduction Worksheet on Sexual Reproduction	Students will complete a worksheet based on materials on pages 367-373 of the Text.
Human Reproduction	Worksheet on the Factors Which Affect Fetal Development Review/Test on Reproduction	Students will complete a worksheet based on materials on pages 379-380 in the Text.
Basic Genetics	Worksheet on Basis Genetics Video on Mendel	Students will work through material covered on pages 392-396 of the Text. Some examples will be explained by the teacher.
More Complex Genetics	Worksheet on More Complicated Patterns of Inheritance and Sex Linkage Power Point on Mutations Video on Genetics Review and Test on Genetics	Students will work through material covered on pages 398-404 of the Text. Students will learn about the positive, neutral and negative effects of various mutations