DEPARTMENT: SCIENCE	COURSE TITLE: BIOLOGY HONORS COURSE NUMBER: 224
GRADE(S): 10	PRE-REQUISITES (IF ANY):

UNIT	LENGTH	CONTENT	SKILLS	METHODS OF ASSESSMENT	FRAMEWORK STRAND(S) & STANDARD(S)*
Introduction	15 Days	• Definition of life and characteristics of living things • Intro to 5 kingdoms • Scientific method • Intro to Darwinian theory • Microscopy • Measurement and unit analysis	Students will: • Formulate a definition of life and describe characteristics of living organisms. • Compare and contrast the 5 kingdoms. • Describe the Darwinian theory. • Use and care for the microscope. • Convert metric and English units. • Explain and apply the principles of the scientific method.	• Unit exam • Lab: Microscope • Homework • Quizzes • Worksheets	Inquiry LS 1-11 Domain LS – N/A Sci-Tech and Human Affairs LS 1,2
The Cell	15 Days	• Cell theory • Relative size • Cell organelles • Surface area to volume ratio • Prokaryotic vs. eukaryotic • Plant vs. animal cells • Membrane systems • Transport • Cell connections	Students will: • Explain the cell theory. • Compare size in the micro and macro world. • Perform organelle identification and description of function. • Demonstrate correct microscope technique—slide prep and staining. • Use microscope in determining size of cells. • Measure and calculate surface area and volume. • Describe various types of cell connections in plant and animal cells. • Formulate hypothesis, observe, gather data and interpret results.	• Unit exam • Lab on the cell • Lab on diffusion • Lab on surface area to volume ratio • Lab on osmosis • Homework • Quizzes	Inquiry LS 1-8, 10,11 Domain LS 1-3, 8 Sci-Tech and Human Affairs LS 1,2