

1440 Course Objectives	A	B	C	D	F
General Expectations	“A” students should be able to apply critical & integrated thinking skills.	“B” students can interpret facts, understand information, & communicate concepts effectively.	“C” students have mastered the subject matter by recalling & memorizing the information presented.	“D” students can identify the concepts & understand the basics of biology.	“F” students can list some of the basics of biology.
The Scientific Method	Students can design experiments, complete with appropriate controls, to test hypotheses. They can analyze their data to determine support/ rejection of hypotheses. They will use scientific data to predict outcomes of future experiments, while recognizing the limits & subjectivity of those predictions. Students can use scientific writing to effectively communicate experimental designs & conclusions.	Students form testable hypotheses based on observations & can distinguish between variables & controls in designing an experiment. Students can analyze their data, draw conclusions in support or rejection of their hypotheses, & predict outcomes in new situations. Students can compose a scientific document examining their experimental designs & conclusions.	Students can create hypotheses based on observations & can apply the steps of the scientific method in order to test the hypothesis. Students understand the difference between experimental variables & controls & can identify trends & patterns in their data. Students can also explain & illustrate their experiments & conclusions in written form.	Students can identify appropriate researchable questions when given an observation. From those questions, students can frame testable hypotheses & follow the scientific method to collect data. Students can list the steps of their experimental design in written form & use their data to show support or rejection of their hypotheses.	Students can list the steps of the scientific method, but may not be able to use the scientific method to frame testable hypotheses or design appropriate experiments to test those hypotheses. Students can gather data, but have difficulty examining the data to draw scientific conclusions. Students can outline their experiments, but have difficulty communicating their findings in written form.
Biology of the Cell	Students can integrate information regarding specific cellular processes (i.e. cellular organization, membrane transport, cell signaling, cellular energy requirements & utilization, cell reproduction) & use that information to predict future behaviors, interactions, & cellular responses.	Students can compare & contrast cellular processes & discuss similarities and differences between cell types. Students can analyze that information to make predictions about cell behaviors in new contexts.	Students can model different cell types & processes. Students can recall & order major events within specific cellular processes.	Students can distinguish the relationship between structure, function & organization within different cell types.	Students can define cellular processes, but may not understand the unity & organization inherent in multi-step systems. Additionally, students can recognize cellular components, but may not understand the interactions of the components required to carry out cellular processes & responses.
Genetics & Molecular Biology	Students can integrate information pertaining to genetics & molecular biology (replication, transcription, translation, inheritance) & critically apply that information to real world situations such as disease states, forensic science, & genetic engineering.	Students can compare & contrast processes within genetics & molecular biology. Students can also discuss how genetics & molecular biology impacts real world situations such as disease states, forensic science & genetic engineering.	Students can outline processes within genetics & molecular biology and understand how these processes affect real world situations.	Students recognize patterns common to different processes within genetics & molecular biology and can make basic connections between these processes & real world situations.	Students can define processes & components associated with genetics & molecular biology, but may not recognize the connections & controls that exist between the processes.

