

POGIL™ Activities for High School Biology

Table of Contents

Preface	v
Acknowledgments	vi
High School POGIL™ Initiative	vii–viii
Nature of Science	
Safety First	1
Scientific Inquiry	7
Experimental Variables	15
Analyzing and Interpreting Scientific Data	23
Biochemistry	
Properties of Water	31
Biological Molecules	39
Cells and Cellular Processes	
Prokaryotic and Eukaryotic Cells	45
Organelles in Eukaryotic Cells	53
Cell Size	63
Membrane Structure and Function	71
Transport in Cells	81
Photosynthesis: What's in a Leaf?	89
Cellular Respiration	97
Photosynthesis and Respiration	105
The Cell Cycle	113
Mitosis	121
Genetics	
Meiosis	129
DNA Structure and Replication	139

Evolution

Evidence for Evolution	145
Biological Classification	153
Evolution and Selection	163

Ecology

Nutrient Cycles	171
Ecological Relationships.....	179
Biomes of North America.....	189
Energy Transfer in Living Organisms	197
Ecological Pyramids	205
Succession	213
Population Distribution.....	221
Population Growth.....	227

Body Systems

The Spread of Pathogens	235
Human Blood Cell Typing.....	243
The Circulatory System	249