Livingston Public Schools 7th Grade Life Science Scope and Sequence

Month	Major Topics	Phenomenon-Based Questions	Science & Engineering Practices	Crosscutting Concepts
September	**Lab Safety** **Microscope** **Characteristics of Life**	Is it alive?	• Asking questions/Defining Problem • Planning and carrying out investigations • Analyzing and interpreting data • Constructing explanations/designing solutions • Engaging in argument from evidence • Obtaining, Evaluating, Communicating	• Patterns • Cause and effect • Systems and System models • Scale, Proportion and Quantity • Energy and Matter • Structure and Function • Stability and Change
October	**Cell Structure and Function**	How do organisms survive?	• Developing and using models • Planning and carrying out investigations • Engaging in argument from evidence	• Systems and System models • Scale, Proportion and Quantity • Structure and Function
November	**Cell Processes:** Photosynthesis Respiration Osmosis Diffusion Cell Division	Does your energy come from Starbucks?	• Developing and using models • Constructing explanations/designing solutions • Engaging in argument from evidence • Obtaining, Evaluating, Communicating	• Cause and effect • Systems and System models • Energy and Matter

December	**Body Systems** Bones, Muscles, Nervous	What is happening in someone who has ALS?	• Developing and using models • Constructing explanations/designing solutions • Engaging in argument from evidence • Obtaining, Evaluating, Communicating	• Cause and effect • Systems and System models • Energy and Matter
January	**Body Systems** Digestive, Respiratory, Circulatory	How healthy are you?	• Developing and using models • Constructing explanations/designing solutions • Engaging in argument from evidence • Obtaining, Evaluating, Communicating	• Cause and effect • Systems and System models • Energy and Matter
February	**DNA** **Genetics** **Genetic Technology**	Are werewolves real? Why don't kids always look like their parents? How do humans influence genetic outcomes?	• Developing and using models • Obtaining, Evaluating, Communicating	• Cause and effect • Structure and Function
March	**Evolution**	How do we know organisms have changed over time?	• Analyzing and interpreting data • Using math and computational thinking • Constructing explanations/designing solutions • Engaging in argument from evidence	• Patterns • Cause and effect

April	**Evolution (con't)** **Ecology** Ecosystems	How does a species survive over time?	• Developing and using models • Analyzing and interpreting data • Using math/computational thinking • Constructing explanations/designing solutions • Engaging in argument from evidence	• Patterns • Cause and effect • Energy and Matter • Stability and Change
May June	**Ecology** Human Impact Biosphere	Are humans parasites on the Earth? How do we fix this mess we have created?	• Developing and using models • Analyzing and interpreting data • Constructing explanations/designing solutions • Engaging in argument from evidence	• Patterns • Cause and effect • Energy and Matter • Stability and Change