

Wonders of Flight Wild Workshop

Curriculum Standards and Concept Focus

Physical Science

High School:

- ✓ SCHS-S5C2-02: Analyze the relationships among position, velocity, acceleration and time graphically and mathematically.
- ✓ SCHS-S5C2-03: Explain how Newton's 1st Law applies to objects at rest or moving at a constant velocity.
- ✓ SCHS-S5C2-04: Using Newton's 2nd Law of Motion, analyze the relationships among the net force acting on a body, the mass of the body, and the resulting acceleration graphically and mathematically.
- ✓ SCHS-S5C2-05: Use Newton's 3rd Law to explain forces as interactions between bodies.
- ✓ SCHS-S5C2-07: Give an example that shows the independence of the horizontal and vertical components of projectile motion.
- ✓ SCHS-S5C2-09: Represent the force condition required to maintain static equilibrium.
- ✓ SCHS-S5C2-10: Describe the nature and magnitude of frictional forces.

Science

High School:

- ✓ SCHS-S1C1-01: Evaluate scientific information for relevance to a given problem.
- ✓ SCHS-S1C1-02: Develop questions from observations that transition into testable hypothesis.
- ✓ SCHS-S1C1-03: Formulate testable hypothesis.
- ✓ SCHS-S1C1-04: Predict the outcome of an investigation based on prior evidence, probability, and/or modeling (not guessing or inferring).
- ✓ SCHS-S1C2-01: Demonstrate safe and ethical procedures (e.g., use and care of technology, materials, organisms) and behavior in all science inquiry.
- ✓ SCHS-S1C2-02: Identify the resources needed to conduct an investigation.
- ✓ SCHS-S1C2-03: Design an appropriate protocol (written plan of action) for testing a hypothesis:
 - Identify dependent and independent variables in a controlled investigation
 - Determine an appropriate method for data collection (e.g., using balances, thermometers, microscopes, spectrophotometer, using qualitative changes).
 - Determine an appropriate method for recording data (e.g., notes, sketches, photographs, videos, journals (logs), charts, computers/calculators).
- ✓ SCHS-S1C2-04: Conduct a scientific investigation that is based on a research design.
- ✓ SCHS-S1C2-05: Record observations, notes, sketches, questions, and ideas using tools such as journals, charts, graphs, and computers.
- ✓ SCHS-S1C3-01: Interpret data that show a variety of possible relationships between variables including:
 - positive relationship
 - negative relationship
 - no relationship
- ✓ SCHS-S1C3-02: Evaluate whether investigational data support or do not support the proposed hypothesis.
- ✓ SCHS-S1C3-03: Critique reports of scientific studies (e.g., published papers, student reports).
- ✓ SCHS-S1C3-07: Propose further investigation based on the findings of a conducted investigation.
- ✓ SCHS-S1C4-01: For a specific investigation, choose an appropriate method for communicating the results.
- ✓ SCHS-S1C4-03: Communicate results clearly and logically.

- ✓ SCHS-S1C4-04: Support conclusions with logical scientific arguments.
- ✓ SCHS-S2C1-01: Describe how human curiosity and needs have influenced science, impacting the quality of life worldwide.
- ✓ SCHS-S2C1-02: Describe how diverse people and/or cultures, past and present, have made important contributions to scientific innovations.
- ✓ SCHS-S2C2-02: Explain the process by which accepted ideas are challenged or extended by scientific innovation.
- ✓ SCHS-S3C2-02: Recognize the importance of basing arguments on a thorough understanding of the core concepts and principles of science and technology.