

3rd Grade

SCIENCE ZONE

FIELD TRIPS

Theme: Physical Science
Topic: Newton's Laws of Motion

DESCRIPTION: Newton's three laws provide a fundamental understanding of forces and motion. In this lesson students will participate in hands-on activities to explore the laws of inertia, mass and acceleration, and equal and opposite reactions.

OBJECTIVES:

- Students will experiment with an "Inertia Tower" to develop an understanding of Newton's first law of motion.
- Students will conduct tests with objects of different sizes to develop an understanding of Newton's second law of motion.
- Students will demonstrate an understanding of Newton's third law by creating a functioning Newton's cradle or Hero's engine.

NGSS & WY Science Standards:
PHYSICAL SCIENCE: 3rd

- 3-PS2-1
- 3-PS2-2

Theme: Physical Science
Topic: Static Electricity

DESCRIPTION: Students will explore the force of static electricity through a variety of hands-on experiments that require the students to apply static to move or pick up objects. Through these activities, students will gain an understanding of the creation of static electricity by the transference of electrons and the importance of positively and negatively charged materials.

OBJECTIVES:

- Students will demonstrate an understanding of static electricity can by charging a balloon to exert force on objects without making contact with them.
- Students will be able to explain electron transference as the source of static electricity by identifying charges on a balloon.

NGSS & WY Science Standards:
PHYSICAL SCIENCE: 3rd

- 3-PS2-1
- 3-PS2-3

Theme: Engineering
Topic: Measurement

DESCRIPTION: This lesson explains the importance of measurement as the students work through the engineering process. Students will apply this knowledge by building mini cars.

OBJECTIVES:

- Students will demonstrate an understanding of measurement by using it to build mini cars.
- Students will work through the engineering process to build mini cars.

NGSS & WY Science Standards:
ENGINEERING: 3rd

- 3-5-ETS1-1
- 3-5-ETS1-2
- 3-5-ETS1-3

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SCIENCE ZONE

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Theme: Physical Science

Topic: Chemical &
Physical Changes

DESCRIPTION: Hands-on experiments guide students in identifying physical and chemical changes. Students will combine mystery ingredients in search of the best example of a chemical change.

OBJECTIVES:

- Students will demonstrate a basic understanding of chemical changes by creating their own chemical combination that results in a chemical reaction.
- Students will demonstrate an understanding of a physical changes by identifying chemical combinations that result in a physical change.

NGSS & WY Science Standards:

ENGINEERING: 3rd

- 3-5-ETS1-2

Connections to Nature of Science:

- Scientific Knowledge is Based on Evidence

Theme: Life Science

Topic: Digestive System

DESCRIPTION: Students take a hands-on walk through the digestive system discovering what it takes to transform our food into the nutrients our body needs. Of course, this lesson wouldn't be complete without learning a few tips to help our body in this amazing process.

OBJECTIVES:

- Students will be able to identify what parts of the body are responsible for each part of the digestive system.

NGSS & WY Science Standards:

LIFE SCIENCE: 3rd

- 3-LS1-1

Theme: Life & Earth Science

Topic: Envirosapes

DESCRIPTION: This lesson uses watersheds to show students how pollution can affect water sources and wildlife. Students will expand their knowledge about where pollution comes from and what is considered pollution.

OBJECTIVES:

- Students will be able to identify non-point and point sources of pollution and brainstorm ways to mitigate pollution.
- Students will identify ways that pollution may affect them.

NGSS & WY Science Standards:

LIFE SCIENCE: 3rd

- 3-LS4-3
- 3-LS4-4

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SCIENCE ZONE

FIELD TRIPS

Theme: Life Science

Topic: Animal Groups &
Heredity

DESCRIPTION: This lesson shows students the benefits of group living for animals and how animals are able to identify and communicate with each other. Students will also be introduced to the world of genetics by exploring how animals inherit traits from their parents.

OBJECTIVES:

- Students will demonstrate an understanding that animals have identifiable traits by matching Sage Grouse photos to scientific drawings.
- Students will demonstrate an understanding of inheritance of traits by creating a hybrid animal with identifiable traits from two different species.

NGSS & WY Science Standards:

LIFE SCIENCE: 3rd

- 3-LS2-1
- 3-LS3-1
- 3-LS4-2