

Wilson Area School District Planned Course Guide

Title of planned course: Science Grade 1

Subject Area: Science

Grade Level: 1

Course Description: Provide all students with science experiences appropriate to their cognitive development that will serve as a solid foundation for more advanced ideas in the future. Students through guided inquiry experiences will gain an understanding of patterns, differences, similarities, and systems

Time/Credit for this Course: One Academic Year

Curriculum Writing Committee: Becky Dickson, Megan Seip

Curriculum Map

Balance & Motion: 1 semester

Pebbles, Sand & Silt: 1 Semester

Wilson Area School District Planned Course Materials

Course Title: Science Grade 1

Textbook: Foss Science Stories:

- Balance & Motion
- Pebbles, Sand & Silt

Delta Education

Supplemental Books:

Teacher Resources:

- Foss Teaching Kit
- Foss Supplemental Books
- Foss Teaching Module Notes
- Foss Teaching Preparation Videos
- www.Fossweb.com

Curriculum Scope & Sequence

Planned Course: Science

Unit: Balance and Motion

Time frame: 16 weeks

State Standards: The Nature of Science and Physical Science

Anchor(s) or adopted anchor: S4.A.1, S4.A.2, S4.C.1, S4.A.3.2, S4.C.3

Essential content/objectives: At end of the unit, students will be able to:

- Develop a growing curiosity and interest in the motion of objects
- Investigate materials constructively
- Solve problems through trial and error
- Explore concepts of balance, counterweight and stability
- Observe systems that are unstable and modify them to reach equilibrium.
- Discover different ways to produce rotational motion
- Construct and observe objects that spin
- Explore and describe some of the variables that influence the spinning of objects
- Observe and compare rolling systems with different sized wheels
- Explore and describe the motion of rolling spheres
- Acquire the vocabulary associated with balance and motion

Core Activities: Students will complete/participate in the following investigations:

- **Balance**
 - How many ways can a shape be balanced?
 - How can counterweights help us balance other shapes?
 - How can a pencil be balanced on its point?
 - How do the parts of a mobile stay in stable position?
- **Spinners**
 - How can spinning tops be changed?
 - How can a spinning object be kept in motion?
 - How can air start an object spinning?
- **Rollers**
 - How can a wheel –and- axle system be changed?
 - Can we predict the behavior of a rolling cup? What happens if weight is added to a rolling cup system?
 - Can we make a runway system that will keep a marble rolling?

Extensions:

- Use of literature selections
- Appropriate art activities
- Math problem solving opportunities
- Written follow up extensions: including poems, journals, stories

Remediation:

- During investigations
- Informal discussions
- Guidance as needed

Instructional Methods:

- Inquiry
- Hands-on Active Learning
- Multisensory Methods
- Student –to-Student Interaction
- Discourse and Reflective Thinking
- Reading and Research

Materials & Resources:

- Teacher Manual – Balance & Motion
- Kits
- Student Books,
- Science Stories
- Foss website

Assessments:

- **Formative Assessment:**
 - Teacher observation- anecdotal notes record keeping form
 - Student Investigation Sheets
 - Assessment Checklists
- **Summative Assessment:**
 - End of Module Assessment

Curriculum Scope & Sequence

Planned Course: Science Grade 1

Unit: Pebbles, Sand, and Silt

Time frame: 16 weeks

State Standards: The Nature of Science, Physical Science, and Earth and Space Sciences

Anchor(s) or adopted anchor: S4.A.1, S4.A.2, S4.C.1.1, S4.D.1

Essential content/objectives: At end of the unit, students will be able to:

- Develop a growing curiosity and interest in the physical world around them
- Observe, describe, and sort earth materials based on properties
- Separate earth materials by size using different techniques
- Observe the similarities and differences in the materials in a river rock mixture
- Explore places where earth materials are found and the ways they are used
- Compare the ingredients in different soils
- Organize and communicate observations through drawing and writing
- Acquire the vocabulary associated with earth materials

Core Activities: Students will complete/participate in the following investigations:

- **First Rocks**
 - How are rocks different?
 - What happens when rocks rub together?
 - What happens when rocks are washed?
 - How are some rocks the same?
 - How many ways can rocks be sorted?
 - What rocks can we find around us?
- **River Rocks**
 - How can rocks be sorted by size?
 - How else can rocks be sorted by size?
 - Is there an earth material smaller than sand?
 - Is there an earth material smaller than clay?
- **Using Rocks**
 - How do people use earth materials?
 - What does sand do for sand paper?
 - How else can sand be used?
 - What can be made with clay?
 - How are bricks made?

- **Soil Explorations**
 - What's in dirt?
 - Are all soils the same?
 - How do soils differ?

Extensions:

- Use of literature selections
- Appropriate art activities
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Remediation:

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Instructional Methods:

- Inquiry
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- Multisensory Methods
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Materials & Resources:

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