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
• Math problem solving opportunities
• Written follow up extensions: including poems, journals, stories

Remediation:
• During investigations
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Instructional Methods:
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