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Grades 6-8
AAAS Science Benchmarks

- **The Dynamic Nature of the Sun**
  - Features of the Sun
  - The Earth as a Magnet: Exploring Interactions in Geospace
  - Iron Filings and (2-3D) Magnetic Field Lines
  - A Soda Bottle Magnetometer

- **The Nature of Science**
  - The Scientific World View
  - The Nature of Mathematics
  - The Nature of Technology
  - Scientific Inquiry

- **The Physical Setting**
  - The Universe
  - Energy Transformations

- **Pre/Post Assessment**
### NRC National Science Education Standards

#### Grades 5-8

**Pre/Post Assessment**

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<thead>
<tr>
<th>Content Standard A: Science as Inquiry</th>
<th>Abilities Necessary to do</th>
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<th>Content Standard E: Science and Technology</th>
<th>Understandings about Science and Technology</th>
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#### The Dynamic Nature of the Sun

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#### Features of the Sun

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#### The Earth as a Magnet: Exploring Interactions in Geospace

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#### Iron Filings and (2-3D) Magnetic Field Lines

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#### A Soda Bottle Magnetometer

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#### Learning about Space Weather

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#### Measuring the Interplanetary Magnetic Field

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#### Science and Engineering Conference

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#### Where to See an Aurora

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#### CME Plotting

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#### Radiation Hazards in Space

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#### AM Radio Ionosphere Station

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**NCTM Principals and Standards for School Mathematics**

1. **Pre/Post Assessment**
2. **The Dynamic Nature of the Sun**
3. **Features of the Sun**
4. **The Earth as a Magnet**
5. **Exploring Interactions in Geospace**
6. **Iron Filings and Magnetic Field Lines**
7. **A Soda Bottle Magnetometer**
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11. **CME Plotting**
12. **Where to See an Aurora**
13. **Radiation Hazards in Space**
14. **AM Radio Ionosphere Station**

**Subjects:**
- Computation & Estimation
- Numbers & Operations
- Statistics & Probability
- Measurement
- Probability
- Data Analysis & Measurement
- Geometry

**Mathematical Practices:**
- Problem Solving
- Reasoning & Proof
- Communication
- Connections
- Representation
- Tool Use

**Mathematics Content:**
- Geometry
- Measurement
- Data Analysis & Probability
- Problem Solving
- Statistics & Probability
- Numbers & Operations
- Computation & Estimation