2. Earth’s Surface Systems: Processes that shape the Earth

Students who demonstrate understanding can:

2-ESS2-1 Compare multiple solutions designed to slow or prevent wind and water from changing the shape of the land.

2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.

The performance expectations above were developed using the following elements from *A Framework for K–12 Science Education* (NRC 2012):

<table>
<thead>
<tr>
<th>Science and Engineering Practices</th>
<th>Disciplinary Core Ideas</th>
<th>Crosscutting Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing and Using Models</td>
<td>ESS2.A: Earth Materials and Systems</td>
<td></td>
</tr>
<tr>
<td>Modeling in K–2 builds on prior experiences and progresses to include using, and developing models that represent concrete objects or design solutions.</td>
<td>• Wind and water can change the shape of the land.</td>
<td></td>
</tr>
<tr>
<td>Constructing Explanations and designing Solutions.</td>
<td>ESS2.B: Plate Tectonics and Large-Scale System Interactions</td>
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</tr>
<tr>
<td>Constructing explanations and designing solutions in K–2</td>
<td>• Maps show where things are located. One can map the shapes and kinds of land and water in any area.</td>
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<tr>
<td></td>
<td>ETS1.C Optimizing the Design Solution</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Because there is always</td>
<td></td>
</tr>
</tbody>
</table>

Patterns

• Patterns in the natural world can be observed.

Stability and Change

• Some things stay the same while other things change.
builds on prior experiences and progresses to the use of evidence or ideas in constructing explanations and designing solutions.

- Compare multiple solutions to a problem.

more than one solution to a problem, it is useful to compare designs, test them, and discuss their strengths and weaknesses.

<table>
<thead>
<tr>
<th>CCSS Connections for English Language Arts and Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SL.2.1 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and large groups.</td>
</tr>
<tr>
<td>2MD.1 Measure and estimate lengths in standard units: Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</td>
</tr>
</tbody>
</table>

Additional Resources by Group

**Economically Disadvantaged Students**


**Major Racial and Ethnic Groups**

**Students With Disabilities**
English Language Learners


Gender


Students in Alternative Education


Gifted and Talented Students