<table>
<thead>
<tr>
<th>UNIT</th>
<th>FOURTH GRADE</th>
<th>Discovery Techbook Resource Alignment</th>
</tr>
</thead>
</table>
| **Unit 1: Quarter 1** | Unit 1 Teaching Window: August 20 - September 7  
Unit 1 AND 2 Assessment Window: October 1 - 5 | *THESE STANDARDS SHOULD SPIRAL THROUGH EVERY UNIT. THE FOLLOWING LABS ARE A GOOD PLACE TO START, BUT NOTE THAT THERE ARE MANY TO CHOOSE FROM (ALL WITH TEACHER AND STUDENT GUIDES)* |

**Topics/Genre:**  
Real World Engineers  

**Essential Question:**  
How can the engineering design process help us solve problems in our daily lives?

<table>
<thead>
<tr>
<th>I Can Statements</th>
<th>*PLEASE NOTE THAT THE TEACHER’S GUIDES TO ALL LABS CAN BE FOUND UNDERNEATH THE LAB</th>
<th></th>
</tr>
</thead>
</table>
| I can define a design problem (question) that includes criteria for successes and constraints. *(4.ETS1.A)* | Virtual Lab 1 Erosion—Here Today, Gone Tomorrow:  
Teacher’s Virtual Lab Guide: Lab Link: Student Guide: | |
| I can generate and compare multiple solutions (ex: experiment) to a problem that include criteria for successes and constraints. *(4.ETS1.B)* | Virtual Lab 2 Pond—er This:  
Teacher’s Virtual Lab Guide: Lab Link: Student Guide: | |
| I can plan and conduct a fair test (ex: experiment). *(4.ETS1.C)* | Virtual Lab 3 How Does Your Garden Grow:  
Teacher’s Virtual Lab Guide: Lab Link: Student Guide: | |
| I can identify controlled variables. *(4.ETS1.C)* | Virtual Lab 4—How Big is Your Footprint?:  
Teacher’s Virtual Lab Guide  
Lab Link: Student Guide: | |
| I can identify ways a prototype or model can be improved. *(4.ETS1.C)* | * |
| Unit 2: Quarter 1 | Unit 2 Teaching Window:  
September 10 - September 28  
Unit 1 AND 2 Assessment Window:  
October 1 - 5 | Discovery Techbook Resource Alignment |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I Can Statements</strong></td>
<td></td>
<td>4th Grade Science TechBook Unit (Life Science)</td>
</tr>
</tbody>
</table>
| **Topic/Genre:** Life Science | **Unit - Systems for Survival**  
**Concept - Physical Features**  
**TechBook** - [https://goo.gl/LbKE3S](https://goo.gl/LbKE3S)  
**Model Lesson:**  
5 E's in Techbook:  
Videos - [https://goo.gl/1ngDAC](https://goo.gl/1ngDAC)  
[https://goo.gl/wyMGzs](https://goo.gl/wyMGzs)  
**Exploration**  
**Virtual Lab** | |
| **Essential Question:** What makes objects move the way they do? | **Unit - Systems for Survival**  
**Concept - Retrieving and Using Information**  
**Reading Passages** - [https://goo.gl/cBBwg6](https://goo.gl/cBBwg6)  
[https://goo.gl/Xqq9kX](https://goo.gl/Xqq9kX)  
**Hands On Lab** | |
| I can construct an argument identifying ways that plant and animal structures help them survive (ex: thorns, claws, stems, roots, heart, stomach).  
(4.LS1.A) | I can use a model to demonstrate how animals receive, process and respond to information (Clarification Statement: emphasis on systems of information transfer).  
(4.LS1.D) | |
| Topic/Genre: Force and Motion | Unit 3 Teaching Window:  
October 8 - November 30  
Unit Assessment Window:  
December 3 - 7 | Discovery Techbook Resource Alignment |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Question: What makes objects move the way they do?</td>
<td><strong>I Can Statements</strong></td>
<td>4th Grade Science TechBook (Physical Science)</td>
</tr>
</tbody>
</table>
| | I can make observations about an object’s motion.  **(4.PS2.A.1)** | **Unit - Properties and Interactions of Matter**  
**Concept - Changing Direction**  
TechBook - https://goo.gl/5szXyV  
Hands On Labs - https://goo.gl/FmkXGP  
https://goo.gl/NmxvBg  
Video - https://goo.gl/xFbCjr  
https://goo.gl/35LyAD  
Reading Passages - https://goo.gl/QMczMY  
https://goo.gl/SnnXKW  
Exploration - https://goo.gl/M3Qhwz  
Assessment - https://goo.gl/hgEACD  
Same as standard 4.PS2.A.1  
Same as standard 4.PS2.A.1 | |
| | I can measure an object’s motion.  **(4.PS2.A.1)** | |
| | I can identify a pattern and predict future motion with evidence.  **(4.PS2.A.1)** | |
| | I can plan and conduct an investigation (ex: experiment) on the effects of balanced and unbalanced force on an object.  **(4.PS2.A.2)** | **Unit - Properties and Interactions of Matter**  
**Concept - About Force**  
TechBook - https://goo.gl/KV961y  
Hands On Lab - https://goo.gl/EQU38N  
Hands On Activities - https://goo.gl/tvXACS  
Video Field Trip - https://goo.gl/m1eCBB  
Exploration - https://goo.gl/atzs3q  
Videos - https://goo.gl/dzvL2m |
<table>
<thead>
<tr>
<th>Unit 3: Quarter 2 (CONTINUED)</th>
<th>I can plan and conduct a fair test (ex: experiment) to compare and contrast the forces required to move objects over different surfaces. <em>(4.PS2.B.1)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I can describe the amount of force needed to overcome friction. <em>(4.PS2.B.1)</em></td>
</tr>
<tr>
<td></td>
<td>I can predict how changes in either the amount of force applied to an object or the mass of an object affects the motion. <em>(4.PS2.B.2)</em></td>
</tr>
<tr>
<td></td>
<td>I can use models to explain how simple machines change the amount or direction in the force of an object. <em>(4.PS3.C)</em></td>
</tr>
<tr>
<td></td>
<td>I can develop a model of waves to describe patterns and how waves can cause objects to move. <em>(4.PS4.A)</em></td>
</tr>
<tr>
<td></td>
<td>Unit - Energy Transfer in Waves&lt;br&gt;Concept - Waves&lt;br&gt;TechBook - <a href="https://goo.gl/QQ57WX">https://goo.gl/QQ57WX</a>&lt;br&gt;More Resources - <a href="https://goo.gl/jTqiJM">https://goo.gl/jTqiJM</a></td>
</tr>
</tbody>
</table>
# Science Scope & Sequence for 2018-2019 School Year

<table>
<thead>
<tr>
<th>Unit 4: Quarter 3</th>
<th>Unit 4 Teaching Window: January 8 - March 1</th>
<th>Unit Assessment Window: March 4-8</th>
<th>Discovery Techbook Resource Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic/Genre:</strong> Energy</td>
<td><strong>I Can Statements</strong></td>
<td><strong>4th Grade Science TechBook</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Essential Question:** How is energy conserved as it transforms from one form to another/one object to another? | - I can explain with evidence the relationship between speed and energy of an object. *(4.PS3.A)* | Unit - About Energy  
Concept - Forms of Energy  
TechBook - [https://goo.gl/gFR7fH](https://goo.gl/gFR7fH)  
Videos - [https://goo.gl/b5EiJV](https://goo.gl/b5EiJV)  
[https://goo.gl/UcjdNY](https://goo.gl/UcjdNY)  
[https://goo.gl/bHyCrD](https://goo.gl/bHyCrD)  
[https://goo.gl/P6sa2C](https://goo.gl/P6sa2C)  
Reading Passages - [https://goo.gl/9Yh7um](https://goo.gl/9Yh7um)  
Explorations - [https://goo.gl/d5MhLu](https://goo.gl/d5MhLu)  
[https://goo.gl/roQ1fj](https://goo.gl/roQ1fj) |
| | - I can explain with evidence the transformation of energy (e.g. temperature change, light, sound, motion, and magnetic effects). *(4.PS3.B.1)* | Unit - About Energy  
Concept - Changing the Form of Energy  
TechBook - [https://goo.gl/JQ2pCk](https://goo.gl/JQ2pCk)  
Additional Resources - [https://goo.gl/mGz8zj](https://goo.gl/mGz8zj)  
Hands On Lab - [https://goo.gl/KzYg41](https://goo.gl/KzYg41)  
Virtual Lab - [https://goo.gl/tA7T9R](https://goo.gl/tA7T9R) |
| | - I can design, test, and refine a device that converts energy from one form to another (ex: circuit to light a bulb). *(4.PS3.B.2)* | Unit - Electrical and Thermal Energy Transfer  
Concept - Electric Circuits  
TechBook - [https://goo.gl/JQ2pCk](https://goo.gl/JQ2pCk)  
More Resources - [https://goo.gl/y82mhb](https://goo.gl/y82mhb)  
Scrimmage Board: [https://goo.gl/4av8Rs](https://goo.gl/4av8Rs) |
## Topic/Genre: Our Earth

### Essential Questions: Why is it important to understand Earth’s Systems?

| Unit 5: Quarter 4 | Unit 5 Teaching Window:  
March 25 - May 3  
Unit Assessment Window:  
May 6 - 10 | Discovery Techbook Resource Alignment |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I Can Statements</strong></td>
<td>4th Grade Science TechBook</td>
<td></td>
</tr>
</tbody>
</table>
| I can identify evidence from patterns that explains changes in landscape over time. *(4.ESS1.A)* | Unit - Changing Earth  
Concept - Fossils  
TechBook - [https://goo.gl/iWAcWx](https://goo.gl/iWAcWx)  
Videos - [https://goo.gl/3QrZxo](https://goo.gl/3QrZxo)  
[https://goo.gl/bBmT16](https://goo.gl/bBmT16)  
[https://goo.gl/kzRrpJ](https://goo.gl/kzRrpJ)  
Virtual Lab - [https://goo.gl/4hF65U](https://goo.gl/4hF65U)  
Reading Passages - [https://goo.gl/Musrvy](https://goo.gl/Musrvy)  
[https://goo.gl/NkDG6D](https://goo.gl/NkDG6D)  
Exploration - [https://goo.gl/sfoHC8](https://goo.gl/sfoHC8) |
| I can plan and conduct a scientific investigation to show how weathering and erosion shape Earth’s surfaces. *(4.ESS2.A)* | Unit - Changing Earth  
Concept - Erosion and Deposition  
TechBook - [https://goo.gl/Q1gnxX](https://goo.gl/Q1gnxX)  
Exploration - [https://goo.gl/XLRBJN](https://goo.gl/XLRBJN)  
Video - [https://goo.gl/mfvzEG](https://goo.gl/mfvzEG)  
[https://goo.gl/JGRWvF](https://goo.gl/JGRWvF)  
Virtual Lab - [https://goo.gl/Mp853Z](https://goo.gl/Mp853Z)  
Hands on Activity - [https://goo.gl/eAayqJ](https://goo.gl/eAayqJ)  
Fun-Da-Mental - [https://goo.gl/CiH298](https://goo.gl/CiH298) |
| I can analyze and interpret data from maps to describe patterns in Earth's features (landforms, volcanoes, bodies of water, etc). *(4.ESS2.B)* | Unit - Changing Earth  
Concept - Landforms  
TechBook - [https://goo.gl/Y2dwoF](https://goo.gl/Y2dwoF)  
Videos - [https://goo.gl/Nyglys](https://goo.gl/Nyglys)  
[https://goo.gl/4854fy](https://goo.gl/4854fy)  
[https://goo.gl/rt51KY](https://goo.gl/rt51KY) |
| I can generate and compare solutions to natural occurrences to help reduce the impact on humans (ex: tsunami warnings, earthquake resistant buildings, hurricane glass). (4.ESS3.A) | Unit - Changing Earth  
Concept - Earthquakes  
TechBook - [https://goo.gl/ofBmcA](https://goo.gl/ofBmcA)  
More Resources - [https://goo.gl/Q7KG3r](https://goo.gl/Q7KG3r)  
Unit - Changing Earth  
Concept - Volcanoes  
TechBook - [https://goo.gl/atiJf7](https://goo.gl/atiJf7)  
Hands On Activity - [https://goo.gl/WwVm2h](https://goo.gl/WwVm2h)  
Videos - [https://goo.gl/MNpq8g](https://goo.gl/MNpq8g)  
[https://goo.gl/NQb9i](https://goo.gl/NQb9i)  
[https://goo.gl/U2KXtS](https://goo.gl/U2KXtS)  
Reading Passages - [https://goo.gl/CK9dLf](https://goo.gl/CK9dLf)  
[https://goo.gl/z2hHmh](https://goo.gl/z2hHmh) |
| --- | --- |