



# Our Blue Marble

*Implementation Guide*





## Our Blue Marble Implementation Guide

**Overview.** Our Blue Marble takes students through seven stations focusing on what makes Earth a unique and viable planet. Every station contains 1-2 activities. Although students should be encouraged to try all activities, participants do not need to complete stations in a specific order and do not need to complete all stations.

### Stations:

1. Energy & Temperature Mapping
  - Energy & Heat
  - Temperature Mapping
2. Maps & Mountains
  - Create a Topographic Map
  - Maps & Mountains
3. Microscope Exploration
4. Sundials & Magnetism
  - DIY Sundial
  - Earth's Magnetism
5. Renewable Energy
  - Solar Energy
  - Wind Energy
6. Seeds
  - Seed Dissection
  - Seed Planting in Soil
  - Seed Planting in Plastic
7. Earth's Atmosphere

### Setup and Staffing:

It is recommended that each station have its own table (possibly two) and is staffed by 1-2 people. If space permits, set up each station in a different room. Directions are written so participants can work through the activities independently; however, to maximize engagement, it is best to have someone available at each station to answer questions.

### Timing:

Each station takes 10-20 minutes to complete. Some stations have activities that can take longer, so it may be beneficial to create time limits to allow for better flow. In total, it takes about two hours to complete all activities.



## Our Blue Marble Implementation Guide Materials

A list of needed materials for all 7 stations is included below. All paper materials can be printed on standard printer paper and all other materials are available for purchase online (links included). Quantities listed are for 150 participants.

<b>Station 1: Energy &amp; Temperature Mapping</b>		
Item	Quantity	Link
Liquid Crystal Sheets	3	<a href="http://bit.ly/32X3IW1">http://bit.ly/32X3IW1</a>
Infrared Thermometer	4	<a href="https://amzn.to/2NlbXPG">https://amzn.to/2NlbXPG</a>
White Tiles (Set of 9)	1	<a href="https://amzn.to/2Pr7GfY">https://amzn.to/2Pr7GfY</a>
Black Tiles (Set of 9)	1	<a href="https://amzn.to/2Pr7GfY">https://amzn.to/2Pr7GfY</a>
Heat Lamp	2	<a href="https://amzn.to/2BPNKeO">https://amzn.to/2BPNKeO</a>
Heat Lamp Bulb	2	<a href="https://amzn.to/2os6FcX">https://amzn.to/2os6FcX</a>

<b>Station 2: Maps &amp; Mountains</b>		
Item	Quantity	Link
Markers (5-8 Packs)	16	<a href="https://amzn.to/2PtJV77">https://amzn.to/2PtJV77</a>
Sheets of Paper (this activity uses 2 reams)	100	<a href="https://amzn.to/2BRRblf">https://amzn.to/2BRRblf</a>
Squirt Bottles	3	<a href="https://amzn.to/2BTtucj">https://amzn.to/2BTtucj</a>
Plastic Trays (pack 12)	1	<a href="https://amzn.to/31YacNv">https://amzn.to/31YacNv</a>
Ruler	3	<a href="https://amzn.to/2WonX6P">https://amzn.to/2WonX6P</a>
Playdoh (case of 24)	1	<a href="https://amzn.to/36hBm5t">https://amzn.to/36hBm5t</a>
Dental Floss (pack of 5)	1	<a href="https://amzn.to/2pewnBW">https://amzn.to/2pewnBW</a>
Toothpicks (container of 250)	2	<a href="https://amzn.to/2pmEsEo">https://amzn.to/2pmEsEo</a>
Long Pencil (container of 20)	1	<a href="https://amzn.to/2Wn6KuC">https://amzn.to/2Wn6KuC</a>

<b>Station 3: Microscopy Exploration</b>		
Item	Quantity	Link
Tablet	2	<a href="https://amzn.to/2XfBmxh">https://amzn.to/2XfBmxh</a>
Digital Microscope	2	<a href="https://amzn.to/36izyJa">https://amzn.to/36izyJa</a>
Compound Light Microscope	2	<a href="https://amzn.to/2MVk1r6">https://amzn.to/2MVk1r6</a>
Animal and Plant Cell Slides	2	<a href="https://amzn.to/2pYDD4T">https://amzn.to/2pYDD4T</a>
Additional Slides	2	<a href="https://amzn.to/34bwYmA">https://amzn.to/34bwYmA</a>



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<b>Station 4: Sundials &amp; Magnetism</b>		
Item	Quantity	Link
Paper Plates (case of 50)	3	<a href="https://amzn.to/2Nn5BPD">https://amzn.to/2Nn5BPD</a>
Pencils (case of 150)	2	<a href="https://amzn.to/2Wn6KuC">https://amzn.to/2Wn6KuC</a>
Sheets of Paper (this activity uses 1 ream)	1	<a href="https://amzn.to/2BRRblf">https://amzn.to/2BRRblf</a>
Scissors (case of 12)	1	<a href="https://amzn.to/2WIXcA8">https://amzn.to/2WIXcA8</a>
Markers (case of 5 boxes)	1	<a href="https://amzn.to/2PtJV77">https://amzn.to/2PtJV77</a>
Iron Filings (bottle of Iron filling)	1	<a href="https://amzn.to/2orM2x5">https://amzn.to/2orM2x5</a>
Petri Dishes (sleeve of 20)	1	<a href="https://amzn.to/32XNsyx">https://amzn.to/32XNsyx</a>
Packing Tape (container of 2)	1	<a href="https://amzn.to/31Yfxo6">https://amzn.to/31Yfxo6</a>
Bar Magnets (container of 2)	2	<a href="https://amzn.to/2BTM58g">https://amzn.to/2BTM58g</a>
Compass	3	<a href="https://amzn.to/2NlaEjH">https://amzn.to/2NlaEjH</a>
Paper Clips (box of 1000)	1	<a href="https://amzn.to/2q4sFKU">https://amzn.to/2q4sFKU</a>

<b>Station 5: Renewable Energy</b>		
Item	Quantity	Link
Green Energy Snap Circuit Kit	3	<a href="https://amzn.to/2NtwLEK">https://amzn.to/2NtwLEK</a>

<b>Station 6: Seeds</b>		
Item	Quantity	Link
Bag of Lima Beans	3	<a href="https://amzn.to/2pnIT1R">https://amzn.to/2pnIT1R</a>
Paper Trays (container of 100)	1	<a href="https://amzn.to/31VnFWu">https://amzn.to/31VnFWu</a>
Tweezers (package of 12)	1	<a href="https://amzn.to/2Nof21m">https://amzn.to/2Nof21m</a>
Squirt Bottle	3	<a href="https://amzn.to/2BTtucj">https://amzn.to/2BTtucj</a>
Plastic Bags (container of 300)	1	<a href="https://amzn.to/36itsIK">https://amzn.to/36itsIK</a>
Rolls of Paper Towels (contains 6 rolls)	1	<a href="https://amzn.to/31YJCJ5q">https://amzn.to/31YJCJ5q</a>
Seed Cups (sets of 100)	2	<a href="https://amzn.to/2BPAGzT">https://amzn.to/2BPAGzT</a>
Bag of Potting Soil	2	<a href="https://amzn.to/2PuvTIS">https://amzn.to/2PuvTIS</a>

<b>Station 7: Earth's Atmosphere</b>		
Item	Quantity	Link
Oxygen Sensor	1	<a href="http://bit.ly/2prZXDZ">http://bit.ly/2prZXDZ</a>
Carbon Dioxide Sensor	1	<a href="https://amzn.to/3232aDe">https://amzn.to/3232aDe</a>
Tablet	2	<a href="https://amzn.to/2XfBmxh">https://amzn.to/2XfBmxh</a>



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\*Our Blue Marble activities are based upon work supported by the National Aeronautics and Space Administration under award No. NNX16AD70A. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Aeronautics and Space Administration (NASA). This information was accurate at the time of publication.