



## Elementary GLOBE: Clouds & Aerosols Workshop

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May 3 & 4, 2017; 8:00 am – 3:00 pm

The 577 Foundation, 577 E. Front Street, Perrysburg, OH

### Agenda:

**Pre E-Modules: Please complete PRIOR to the first day of the workshop.**

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| <p>Total anticipated e-module time is roughly 1 hour</p> <p><i>Goal: Awareness of GLOBE Program goals and Cloud protocol</i></p> | <ol style="list-style-type: none"> <li>1. GLOBE Overview: Go to <a href="https://www.globe.gov/get-trained/protocol-ettraining">https://www.globe.gov/get-trained/protocol-ettraining</a></li> <li>2. Download &amp; Complete the <b>Introduction to GLOBE Module</b> found there.</li> <li>3. Click on ATMOSPHERE. Download and complete the <b>Clouds</b> E-Module:</li> </ol> <p><b>Other Modules... OPTIONAL, but good resource if you want to go FURTHER with GLOBE!</b></p> |
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### Day 1: Aerosols

| Time                             | Activities   |
|----------------------------------|--|
| 8:30 am<br>[30 minutes]          | <p><b>Welcome Reception</b> [tea, coffee, etc]</p> <ul style="list-style-type: none"> <li>• Material pickup,</li> <li>• Payments &amp; receipts, etc.</li> <li>• Join GLOBE <a href="http://www.globe.gov/join/become-a-globe-teacher">http://www.globe.gov/join/become-a-globe-teacher</a></li> <li>• Download APPS:               <ul style="list-style-type: none"> <li>○ GLOBE Data Entry, GLOBE Observer</li> <li>○ Free or Easy GPS Coordinates (Apple) or SIMPLE GPS Coordinates (Android)</li> <li>○ Coton (Apple and Android) - optional</li> </ul> </li> </ul>   |
| 9:00 - 10:00 am<br>[60 minutes]  | <p><b>Welcome and Introduction to GLOBE</b></p> <ul style="list-style-type: none"> <li>• Welcome &amp; Ice Breaker (<a href="#">This or That</a> via Inside/outside circle or speed dating)</li> <li>• North Point ESC welcome and MHJ Grant Overview. Student Conference: Tu-May9; 5-7:30 pm</li> <li>• <a href="#">What is GLOBE?</a> JOIN GLOBE? Record log in information. G.L.O.B.E.</li> <li>• <a href="http://www.globe.gov/web/elementary-globe/overview">Elementary GLOBE: http://www.globe.gov/web/elementary-globe/overview</a></li> <li>• Workshop objectives, structure &amp; logistics... OUR MODEL ;-)</li> <li>• Introduction to GLOBE educational materials (website, teacher's guide, GLOBE science field/lab notebook, etc.)</li> <li>• Ashland Credit? \$195 for 1 graduate credit               <ul style="list-style-type: none"> <li>○ <a href="https://www.ashland.edu">https://www.ashland.edu</a></li> </ul> </li> <li>• Signatures for Poster at break &amp; before leaving today!</li> </ul> |
| 10:00 - 10:45 am<br>[45 minutes] | <p><b>Elementary GLOBE Aerosols Learning Activities and Storybook</b></p> <ul style="list-style-type: none"> <li>• Activity 1: Sky Observers</li> <li>• Activity 2: Why (Not) So Blue</li> </ul>   |
| 10:45 am - 11:00 am              | <b>BREAK</b>   |
| 11:00 - 12:00 am                 | <b>Elementary GLOBE Aerosols Learning Activities and Storybook</b>   |

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| [60 minutes]                    | <ul style="list-style-type: none"> <li>Activity 3: See the Light [<a href="https://www.youtube.com/watch?v=fk6ulPBdivk">https://www.youtube.com/watch?v=fk6ulPBdivk</a>]</li> <li>SET UP for Activity 4 before lunch</li> </ul>  |
| 12:00 - 12:45 pm                | <b>Lunch &amp; Conversation</b>  |
| 12:45 - 2:15 pm<br>[90 minutes] | <b>Elementary GLOBE Aerosols ... Continued</b> <ul style="list-style-type: none"> <li>Activity 4: Up in the Air</li> <li>Finish Book &amp; Content Overview</li> <li>Cloud Observations (Field/Online Game) as time allows:<br/><a href="http://scied.ucar.edu/webweather/clouds/cloud-matching-game">http://scied.ucar.edu/webweather/clouds/cloud-matching-game</a></li> </ul> |
| 2:15 - 2:30 pm                  | <b>BREAK</b>   |
| 2:30 - 3:30 pm<br>[60 minutes]  | <b>GLOBE Implementation &amp; Student Inquiry</b> <ul style="list-style-type: none"> <li>Elementary GLOBE Meets the Standards: <a href="#">Ohio</a>, <a href="#">National</a></li> <li>Implementation Issues &amp; Strategies</li> <li>GLOBE for Students: Student Reports, Expeditions, Virtual Competitions</li> <li>Exit Ticket</li> <li><b>POSTER Signing</b></li> </ul>     |

## Day 2: Clouds, Contrails & CloudSat

| Time                              | Activities  |
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| 8:30 am                           | <b>Welcome Back Reception. Kit Inventory</b>  |
| 9:00 - 10:00 am<br>[60 minutes]   | <b>All Things GLOBE</b> <ul style="list-style-type: none"> <li>Grad Credit: <a href="https://www.ashland.edu">https://www.ashland.edu</a></li> <li>Recap of Exit Ticket &amp; Google Folder</li> <li>Aerosols Book Reading &amp; Content &amp; Standards discussion.</li> <li>GLOBE Website: <a href="http://www.globe.gov/get-trained/using-the-globe-website">http://www.globe.gov/get-trained/using-the-globe-website</a> <ul style="list-style-type: none"> <li><a href="#">Website Scavenger Hunt</a></li> </ul> </li> <li>Other E. GLOBE Modules?</li> <li>Homework</li> <li>Student Inquiry... Brainstorm Research Qs</li> <li>Q &amp; A</li> </ul>  |
| 10:00 am                          | <b>BREAK</b>  |
| 10:15 - 12:00 pm<br>[105 minutes] | <b>GLOBE Cloud and Contrail Measurements</b> <ul style="list-style-type: none"> <li>Learning Activity: Estimating Cloud Cover</li> <li>Outdoor Measurements - Rotation <ul style="list-style-type: none"> <li>Site Definition, Clouds &amp; Contrails</li> <li>ATM: Air Temperature, Soil Temperature, Humidity, Precipitation, pH</li> </ul> </li> <li>Clouds, Contrails - 101 (triangle, ppt, dichotomous key)</li> </ul> <b>Whole Group [partners]</b> <ul style="list-style-type: none"> <li>Data Entry (Website &amp; App). Site Definition, Cloud Data Entry</li> <li>Data Visualization Online Tutorial (Clouds &amp; Contrails):</li> <li><a href="#">GLOBE Inquiry</a>: Practice</li> <li>Worldview</li> </ul> |
| 12:00 - 12:45 pm                  | <b>Lunch &amp; Conversation</b>   |
| 12:45 - 2:30 pm<br>[105 minutes]  | <b>NASA Satellite Mission &amp; S'COOL (Cloud Observation Tool)</b> <ul style="list-style-type: none"> <li>The Hook, How to Participate: <a href="#">S'COOL</a> &amp; GLOBE, Q &amp; A</li> </ul>   |
| 2:30 - 3:00 pm<br>[30 minutes]    | <ul style="list-style-type: none"> <li><b>"ZOOM" with NASA Langley Research Center @ 2:30 PM!!!!</b> <ul style="list-style-type: none"> <li>Jessica Taylor; (757) 864-6358; <a href="mailto:jessica.e.taylor@nasa.gov">jessica.e.taylor@nasa.gov</a></li> </ul> </li> </ul>   |

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| 3:00 - 3:30 pm<br>[30 minutes] | <b>GLOBE Graduation Ceremony</b> (Handshakes, Certificates, and Posters) <ul style="list-style-type: none"><li>● <a href="#">Xcite Learning</a></li><li>● Wrap up Q &amp; A</li><li>● Online <a href="#">Evaluation</a></li></ul> |
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**Resources:**

<http://www.GLOBE.gov>

<https://www.cultofpedagogy.com/classroom-icebreakers/>

<https://www.cultofpedagogy.com/speaking-listening-techniques/>

**Video:** [OurWorld: Sunsets and Atmospheres.](#)

[Why Wavelength Goes with a Color](#)

[Tour of Electromagnetic Spectrum](#)

Forestry Supplier: GLOBE Equipment and Supplies (Ben Meadows is another source)

<http://www.forestry-suppliers.com/search.asp?stext=GLOBE>