

**EarthScope Midwest Native Science Educators Workshop**  
**1-3 August 2015**

Facilitators:

Diana Dalbotten (Geoscience Alliance)  
Lisa Lone Fight (MSU)  
Bob de Groot (SCEC)  
John Taber (IRIS)  
Shelley Olds (UNAVCO)

Howard Mooers (UMN)  
Lowana Greensky (Hamline University)  
Holly Pellerin (Geoscience Alliance)  
Sarah Robinson (EarthScope National Office)  
Steve Semken (EarthScope National Office)  
Cindy Dick (EarthScope National Office)

All lodging and workshop classroom activities will be held at:

**Palace Casino Hotel**  
165999 69th Ave NW  
Cass Lake, MN 56633

All talks and group work in room **Birch B**

Snacks will be held within room **Birch B**

Note that all meals will be on your own, unless otherwise indicated. There is a restaurant within the Palace Casino Hotel. Your *per-diem* reimbursement will be issued after the workshop.

**Workshop Agenda**

**Saturday 1 August**

- 7:00 am Breakfast (on your own)
- 7:45 Meet at room **Birch B** in the Palace Casino Hotel for registration
- 8:00 Welcome/announcements/workshop overview (Steve Semken, Sarah Robinson)
- 8:10 Facilitator introductions (all facilitators, 5 min each, no powerpoint)
- 8:30 What is EarthScope? (Sarah Robinson)
- 8:40 Place-Based Education (Steve Semken)
- 9:10 Re-centering the Teaching and Learning of Earth Science Within an Indigenous Context (Lisa Lone Fight)
- 10:10 Break /snacks
- 10:25 The Geoscience Alliance--Working together to support Native American students in the geosciences. (Diana Dalbotten)
- 10:55 SCEC, UNAVCO, IRIS: Show & tell of resources you can use (Bob de Groot, Shelley Olds, and John Taber)
- 11:25 What ARE tectonic plates, where are they moving, and how do we pinpoint a location using satellites? (Bob de Groot, Lisa Lone Fight, Shelley Olds)
  - Activities & demos
  - Oreo Cookies and Tectonic Plates - Using Models to Learn about Earth's Interior, Forces, and Motions (Bob and Lisa)
  - Building a Global Model of the Dynamic Earth (Bob and Lisa)
  - Pinpoint a location demo (Shelley)
- 12:25 pm Break for lunch
- 1:30 Share Fair (all participants will present)
- 3:00 Break/snacks
- 3:15 Group activity/brainstorming/discussion (Sarah Robinson)
- 4:15 Are the tectonic plates really moving? What else is moving? (Shelley Olds and John Taber)
  - Activities & demos
  - Evidence from GPS data (Shelley)
  - How to identify type of plate motion by seismic and GPS data (John and Shelley)
- 5:45 Ending announcements/discussion
- 6:00 Dinner

## Sunday 2 August

- 7:00 am Breakfast (on your own)
- 7:45 Meet in front of hotel for field trip. *Please do not be late!*
- 8:00 Bus departs promptly at 8:00 for field trip
- 12:00 pm Lunch in field (boxed lunches will be provided)
- 1:00 Return from field trip, meet at **Birch B**
- 1:30 Field trip discussion (Howard Mooers)
- 2:30 Gidakiimanaaniwigamig: Our earth lodge (Lowana Greensky)
- 3:30 Break
- 3:45 What happens when the Earth moves suddenly? (John Taber)  
Activities & demos  
Seismic waves  
Exploring natural and induced earthquakes  
Mid-Continent deep structure
- 4:45 What can you and your community do to be ready for when the Earth shakes next? (Bob de Groot and Lisa Lone Fight)  
Activities & demos  
What Happens When the Earth Shakes? - Using A Quake Catcher Network Sensor to Measure How the Earth Moves During a Quake  
Become a Citizen Scientist - Join the Quake Catcher Network!  
How to Stay Safe When the Earth Shakes - The Great ShakeOut and You
- 5:15 Discussion and group work/activity development (Sarah Robinson)
- 6:00 Dinner

## Monday 3 August

- 7:00 am Breakfast
- 8:00 Meet in room **Birch B** - Group work/activity development (Sarah Robinson)
- 10:00 Break/Snacks
- 10:15 Presentation of activities and group work
- 12:30 pm Lunch
- 1:00 Break, workshop ends