



ReaL* Earth Inquiry Workshop: Information Packet & Tentative Agenda

What to bring to the workshop:

- Digital camera and download cable.
- Laptop computer (if you're unable to bring your own, please let us know)
- Comfortable shoes & clothes
- Water bottle, sunscreen and insect repellent
- A rock that's local to your school (from exposed bedrock, if convenient)
- Notebook
- Your calendar/planner

Workshop Preparation

To be completed and emailed by 5:00 pm, Tuesday, July 13, 2010

The information presented here is also available online at:

http://www.virtualfieldwork.org/PDPrep_OR.html

- **Powers of Ten Google Earth Tour of your school:** We first ask that you create a Google Earth Tour centered on your school based on the Eames film *Powers of Ten*. For an introduction, see: http://virtualfieldwork.org/Your_Own_Powers_of_Ten.html Or, go straight to the tutorials: http://virtualfieldwork.org/How_tos/How_tos.html If you're comfortable with Google Earth, this will probably take about two hours. If you need help, don't hesitate to contact Don at dugganhaas@museumoftheearth.org or via Skype at dugganhaas. The two key purposes of this task are to create a useful teaching resource and to provide some familiarity with a key piece of software we'll be using in our work together.
- **Read the executive summary of *How Students Learn: History, Mathematics, and Science in the Classroom*.** We'll discuss this the first morning of the workshop. Here are some things to consider as you read:
 - How does how you learn compare to what the authors claim?
 - How should research on learning inform how we teach?
 - Note that the reading is not about whether people are visual or auditory learners. It's more about how you put information together in your head. How do you figure things out?

If possible, write a response to the reading and email it to us, but give the tasks above and the reading itself first priority. If you email it to us by July 13, we will provide some feedback on what you have written (and we will know you a little better from the start of the workshop). This task is intended to both bring this research to your attention and to bring the research to bear on our own teaching. As the reading describes, we are asking you to be metacognitive. We are emailing you the chapter and it can be downloaded from the National Academy Press website: http://www.nap.edu/catalog.php?record_id=10126 Scroll down to the link for the free executive summary.

Email Google Earth and reading response files to us at: TFG.VFE@gmail.com

* ReaL = "Regional and Local"

Real* Earth Inquiry Tentative Workshop Agenda

July 14 – 16, 2010

Southern Oregon University and Crater Lake National Park

Introduction to the agenda: Note that throughout the agenda we will be focused on a few big ideas and essential questions. The overarching question is: **Why does this place look like the way it does?** The *place* of the question will change as we move from site to site and as we make virtual visits to other sites. We will also give due attention to the follow up question: How do we know (or, why do we think so)? And we will ask many *what if* questions along the way (e.g., What if there was no convection?)

All of the questions raised in the agenda are topics for discussions, not lectures. Give them consideration at the beginning of each day and consider how they relate to the short readings we'll be doing along the way.

Wednesday, July 14, 2010	
7:00 - 8:45 am	Breakfast (on your own)
8:55 am	Meet at Hannon Library, Southern Oregon University, Ashland, OR
9:00 am	Welcome and introductions – you and your rock <i>All</i>
9:30 am	What does good teaching look like? <i>Don via Skype</i> What does research say about how people learn? How should research on how people learn inform how we teach? What are the most important things for students to learn in Earth science? Considering technological and pedagogical content knowledge (TPACK) Introducing the big ideas framework.
10:30 am	Break
10:45 am	A brief introduction to the <i>Teacher-Friendly Guides to the Geology of the United States</i> with an introduction to the geology of Crater Lake <i>Sara</i>
11:30 am	Virtual Field Experiences and how to model of a virtual fieldtrip (Taughannock Falls). <i>Chris</i>
12:00 pm	Past participants' sharing VFEs (via Skype)
12:15 pm	Lunch (on your own)
1:45 pm	Return to Library
2:00 pm	Talking Technology: Working with Picasa, Google, and Skype products.
3:30 pm	Planning for the Field: Who, What, How?
5:00 pm	Dinner (on your own)
After dinner.	Reflect on the day. Please read "Geologic Overview of Mount Mazama and the Crater Lake Caldera" by William Hirt, College of the Siskiyou. It can be found at: http://www.siskiyou.edu/class/geol66/mazamaguide.pdf

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Thursday, July 15, 2010	
6:00 - 7:45 am	Breakfast (on your own)
7:45 am	Please meet at Hannon Library, Southern Oregon University. Depart for Crater Lake National Park.
8:00 am	Travel time
10:15 am	Arrive at Crater Lake National Park
10:45 am	Arrive at Cleetwood Cove, Crater Lake National Park
11:00 am	Hike to boat launch for Crater Lake Boat Tour
11:30 pm	Lunch (in the field) Please bring a lunch to eat along the shore or on the boat.
12:00 pm	Boat Trip Leaves
1:45 pm	Boat Tour Returns
2:00 pm	Hike back up the trail.
3:00 pm	Visit Sinnott Memorial Overlook and Exhibits
4:00 pm	Free exploration at Rim Village.
5:00 pm	Meet at vehicles to return to Ashland
5:30pm	Dinner at Beckie's Café or return to Ashland for dinner on your own.
After dinner	VFE work on your own: Download photos from field work.

Friday, July 16, 2010	
7:00 - 8:45 am	Breakfast (on your own)
8:55 am	Meet at Hannon Library, Southern Oregon University, Ashland, OR.
9:00 am	Geology Recap (What did we see yesterday?) <i>Sara</i>
9:30 am	Final face-to-face work session
10:45 am	Break
11:00 am	Planning for the year ahead: Setting goals and planning for how to meet them. What we hope will happen over the coming year. What does inquiry-based teaching look like? How will you convince skeptics that you teach through inquiry? Establishing working groups and planning times to "meet." What are the two most important things for you to work on in your classroom this year? How will you do it? What evidence will you need to know you've done it? Will that evidence convince someone else? What kind of help do you think you will need to get there? Can we build teacher networks, and how can you take best advantage of the network of peers? <i>Don via Skype.</i>
12:15 pm	Complete evaluation.
12:30 pm	Adjourn the institute!



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