



Real* Earth Inquiry Workshop: Information Packet & Tentative Agenda

What to bring to the workshop:

- Digital camera
- 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 noon, Monday July 27, 2009

The information presented here is also available online at: <http://virtualfieldwork.org/PDPrep.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 technology, this will probably take about two hours. If you need help, don't hesitate to contact Don at dugganhaas@museumoftheearth.org. 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.
- **Complete a pre-assessment.** This will help us tailor the program to your needs. The pre-assessment consists mostly of items that ask you to rate the importance of statements and then rate the quality of evidence you have to support the statement as it relates to your classroom. Part 1 of the pre-assessment is online here: http://virtualfieldwork.org/PD_Pre-assessment_Profiler_Part_1.html You can click through from there to parts 2 and 3. Each part has about 20 items. This should take about 30 minutes to complete.
- **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?

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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 27, 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* Earth Inquiry Tentative Workshop Agenda

July 29 – 31, 2009

Sam Noble Oklahoma Museum of Natural History

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 29, 2009	
7:00 - 8:45 am	Breakfast at hotel (complementary); available beginning 7:00 am.
8:45 am	Depart for Sam Noble Oklahoma Museum of Natural History. Please meet in hotel lobby.
9:00 am	Welcome and introductions <i>All</i> What does research say about how people learn? How should research on how people learn inform how we teach? Why are we here? What does good professional development look like? What does good teaching look like? Can we build teacher networks? <i>Don</i>
10:00 am	A brief introduction to the <i>Teacher-Friendly Guide to the Geology of The South Central United States</i> Richard
10:40 am	Break
10:50 am	What are the most important things for students to learn in Earth science? Introducing the big ideas framework. <i>Don</i>
11:20 am	A model of a virtual fieldtrip (Taughannock Falls). <i>Chris and Don</i> What might and might not be “virtualized” from a fieldtrip? <i>Richard</i>
Noon	Working Lunch: Planning for the collaborative creation of a virtual fieldtrip. How can the findings from <i>How People Learn</i> inform our instructional design? Can we connect our classrooms one to another? Form work pairs & trios. <i>All</i>
12:45 pm	Leave for the field.
6:00 pm	Return to hotel.
6:45 pm	Dinner on own.
After dinner.	Reflect on the day. Upload photos from the day to the web. Begin assembling VFE module. What do you need to revisit tomorrow? What did you capture well?

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Thursday, July 30, 2009	
7:00 - 8:45 am	Breakfast at hotel (complementary); available beginning 7:00 am.
8:45 am	Depart for Sam Noble Oklahoma Museum of Natural History. Please meet in hotel lobby.
9:00 am	What kinds of stories can rocks, fossils, and landscapes tell? How can we engage our students in unearthing the mysteries? <i>All</i>
10:00 am	Break
10:15 am	Computer work session.
11:30 am	Leave for field site.
Noon	Picnic lunch in the field.
1:00 pm	Work in the field.
4:30 pm	Talking geology (in the field) – How does what we’ve seen tell a story? How does it compare to what you see at home? Bring your rock from home. What does it have to do with the bigger story?
6:00 pm	Dinner on own.
7:30 pm	Return to hotel. Read AAAS’s Project 2061 Curriculum Materials Evaluation Criteria.

Friday, July 31, 2009	
7:00 - 8:45 am	Breakfast at hotel (complementary); available beginning 7:00 am.
8:45 am	Depart for Sam Noble Oklahoma Museum of Natural History. Please meet in hotel lobby.
9:00 am	Final face-to-face work session
10:15 am	Break
10:30 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? How can you take best advantage of the network of peers? <i>All</i> .
12:15 pm	Complete evaluation.
12:30 pm	Adjourn the institute.



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