



# 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 27, 2010**

The information presented here is also available online at:

[http://www.virtualfieldwork.org/PDPrep\\_MI.html](http://www.virtualfieldwork.org/PDPrep_MI.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](http://virtualfieldwork.org/Your_Own_Powers_of_Ten.html) Or, go straight to the tutorials: [http://virtualfieldwork.org/How\\_tos/How\\_tos.html](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](mailto: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](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](mailto:TFG.VFE@gmail.com)

\* ReaL = “Regional and Local”

# ReaL\* Earth Inquiry Tentative Workshop Agenda

## July 28 – 30, 2010

### Knabusch Mathematics & Science Center, Monroe, Michigan

**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 28, 2010	
7:00 - 8:45 am	Breakfast at hotel (complementary); available beginning 6:00 am.
8:45 am	Leave hotel (meet in hotel lobby)
9:00 am	Meet at Knabusch Mathematics & Science Center.
9:00 am	Welcome and introductions – you and your rock. <i>All</i>
9:30 am	What does good teaching look like? 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? Introducing the big ideas framework. <i>Don</i>
10:15 am	<b>Break</b>
10:30 am	The “ReaL Earth Inquiry Project” and Workshop Goals. <i>Richard</i>
11:00 am	Virtual Field Experiences and modeling a virtual fieldtrip (Taughannock Falls). <i>Sara</i>
11:30 am	Past participants sharing VFEs (via Skype)
noon	<b>Lunch</b>
1:00 pm	Fieldwork at Knabusch.
5:00 pm	Return to hotel.
5:30 pm	Dinner (on your own)
After dinner.	Reflect on the day. Upload photos from the day to the web. What did you capture well? Short reading, to be determined.

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Thursday, July 29, 2010	
7:00 - 8:45 am	Breakfast at hotel (complementary); available beginning 6:00 am.
8:45 am	Leave hotel (meet in hotel lobby)
8:55 am	Meet at Knabusch Mathematics & Science Center.
9:00 am	Geoscience Recap & Today's Goals. <i>Richard</i>
9:30 am	Fieldwork at Knabusch.
Noon	<b>Lunch</b>
1:00 pm	Arrive back to Knabusch Mathematics & Science Center
1:15 pm	Talking Technology: Working with Picasa, Google, and Skype products. <i>Don &amp; Sara</i>
2:00 pm	Computer time.
5:00 pm	Dinner (on your own)
After dinner	Continued VFE work on your own.

Friday, July 30, 2010	
7:00 – 8:45 am	Breakfast at hotel (complementary); available beginning 6:00 am.
8:45 am	Leave hotel (meet in hotel lobby)
8:55 am	Meet at Knabusch Mathematics & Science Center.
9:00 am	Final face-to-face work session
10:15 am	<b>Break</b>
10:30 am	<p><b>Planning for the year ahead:</b>            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>All.</i></p>
12:15 pm	Complete evaluation.
12:30 pm	Adjourn the institute.



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