

iLabs Network Visioning Workshop Community Working Group

National Laboratory Moderator Talking Points

TUESDAY NOVEMBER 11, 2008

The Community Working Group session will be three hours long, beginning at 12:45 PM and ending at 3:45 PM. Your group will meet and discuss for the first hour and forty-five minutes, then have a 15-minute break, and then reconvene for an another hour. We are currently expecting about 13 people in your group. You will also have a scribe from the iLabs team to help document the discussion, Kirky DeLong. Here are some guidelines for what you may want to discuss in each of the two segments of the session.

In the first hour and forty-five minutes, here are some questions you may want to pose to your group.

National Labs Community Working Groups	Topics of Discussion
<p style="text-align: center;">Room 107</p> <p><u>Moderators:</u> Jeff Dilks, DOE & Wayne Stevenson, Vice President, Oak Ridge Associated Universities</p> <p><u>Scribe:</u> Kirky DeLong</p>	<ul style="list-style-type: none"> • How can remote labs be used in the national lab setting? <ul style="list-style-type: none"> ○ Which educational programs do we already have in place that could benefit from iLab technology? ○ What new strategies and practices would be enabled in informal science education by using iLab technology? ○ How would iLabs expand the reach of your existing education outreach efforts? • How could our community assist in enhancing the iLab Network? <ul style="list-style-type: none"> ○ Which types of equipment do we think will be especially relevant and practically useful in informal science education? • Which types of collaborations and partnerships would be necessary to facilitate the use of our equipment? • How might we address concerns around access and security? • What are some major barriers in utilizing and contributing to iLab technology in our community?

In the last hour of the session, after the break, the goal will be to summarize your discussion and create a presentation to report out to the rest of the iLabs Workshop community about your conclusions. We have created a PowerPoint template for you to use to organize your ideas about the role of iLabs in your community and future directions in building partnerships, etc. Your iLabs scribe will have an electronic version of this presentation, and will assist you in filling in the text of the slides. The scribe's computer will be projected onto an LCD screen so that the whole group can contribute to the development of the slides.

Then after the session ends at 3:45 PM, one of the moderators from your group will present this PowerPoint presentation to the rest of the iLabs Workshop community, to share your conclusions with the larger group. The scribe will assist you in setting up the presentation in the plenary area.

How can remote labs be used in the national lab setting?

What is the broad role – what trying to accomplish with remote access?

Is it about building excitement?

Developing skills and knowledge, relationship, process building?

Education value, social value, community building value, STEM, workforce, corporate citizenship

iLabs and remote labs – animations and videos

eLabs is a template to plug in other eLabs – wrapped in pedagogy about research process

What is the payoff? Cognitive apprentice – students and teacher learn to think by interactive with experiment and scientists

What organizes iLabs into higher level thinking?

No structure on how to use it – architecture is for user management – no pedagogical implication built it – with one exception – active manipulation of a device

Is it an attractive alternative without the pedagogy structure?

For this to be useful for a high school teacher – needs to be curriculum driven to meet standards – needs to be developed by high school teachers for high school teachers

Motivation provided for how these fit together – why necessary to know this?

How can these help me accomplish the things I already need to accomplish – I don't recognize how these could help me – find how they match standards – intellectual hurdle in the way – they need help

Some school systems don't have physics teachers – they may have a bio teachers or science teachers – lack of qualified teachers

Sustainability in the curriculum refresh model

National labs interested in mentored research for students and teachers – no curriculum development – can't scale to bring thousands of students to labs – a way to scale up – expose research practice – give teachers the opportunity to develop curriculum while doing research

**Rough Notes from Conversation
Tuesday Nov. 11, 2008
National Labs Community Group**

For workshop getting teachers to come is hard – those that teach physics don't consider themselves physics teacher and other don't have the background.

Conservation of energy – looking at quark events

Why are we doing this? Have cool tools – what is the pay of from an educational stand point – how engage students and teachers from a pedagogical view point

Random acts of coolness

Which educational programs do we already have in place that could benefit from iLab technology?

I2u2

**Example -- cosmic ray is a participant of i2u2
Not all schools can have their own detector
limited number of detectors**

Concern and worry – plug-in feel – need overall vision

******* Role national labs in iLab – iLabs might be useful for scaling up and serving a larger population for teachers with authentic research activities – one caveat would be the need for mentors**

Virtual schooling trend – might be a good subset to work with since they know technology already

What new strategies and practices would be enabled in informal science education by using iLab technology?

How would iLabs expand the reach of your existing education outreach efforts?

How could our community assist in enhancing the iLab Network?

Which types of equipment do we think will be especially relevant and practically useful in informal science education?

Which types of collaborations and partnerships would be necessary to facilitate the use of our equipment?

What is the entity that we would have to partner with to tap into the virtual schooling community?

NACOL – keeping pace - John Watson, evergreen consulting

VHS – virtual high schools

IMSA – curriculum for online schools in Illinois

How might we address concerns around access and security?

What are some major barriers in utilizing and contributing to iLab technology in our community?

Network access issues – esp countries not allowed to work with Resources – if its equipment that is idle – not an issue – scientists devote time off task is a big issue – a lot of the big experiments have an outreach charge

Not a lot of down time per say – have to blend into a schedule and charge for time

If the projects can see that they can benefit – addition data generation, etc – it can open doors

Needed Policy & Funding Supports

Who gets charged – scientists need to bill their time

Big projects have educational component attached – could a percentage be made available online to the community for educational use?

Encourage small percentage of research fund to educational use

Partnership opportunity with industry

Summer internship build a gui interfaces to some equipment (teachers and students)

Real world design challenge – add remote lab access as a track

Teaches come together to create a list of potential needs that meet their usability criteria

Challenge in research community being more distributed – do you have to bring your whole team – can some part of it be remote and still have the experience

Issues: funds come from different pools (travel vs development vs equipment)

Gap what science looks like on leading edge and what it look like in the schools – dry boring stuff, why would students get excited about science – relevant to society

Relevance of experiments to every day life – to help students get excited

Mariachi

Project – look for meteor showers

Teams of students coming to the national labs to build interfaces – bid for the students – labs eval projects – or students bid for the lab