

Nanoscience Learning Goals Workshop

AGENDA

SRI International, International (I) Building

Wednesday, June 14, 2006: Nanoscience — What are the Fundamental Big Ideas?

8:30 am	Continental Breakfast at SRI
9:00 am	Welcome and Overview Welcome, participant introductions, workshop overview. <i>Moderator: Patricia Schank</i>
9:45 am	Big Ideas Discussion What big ideas should every 12 th grader who graduates from high school understand about basic science at the nanoscale? Participants (beginning with the scientists) present big ideas to the group. Ideas are posted, clustered, and tallied as they are presented. <i>Moderator: Joe Krajcik</i>
10:30 am	Break
10:45 am	Big Ideas Discussion (Cont.) Continue submitting, posting, clustering, and tallying of big ideas.
11:45 am	Selecting the Big Ideas for Afternoon Work Participants prioritize the big ideas for our afternoon work by writing their names on colored dots for 1st, 2nd, and 3rd choice and placing the dots by posted big ideas. <i>Moderator: Anders Rosenquist</i>
12:00 noon	Lunch Workshop staff identify the top 4-6 big ideas.
1:00 pm	Small Working Groups Participants are assigned to small groups, one for each top big idea. Each group identifies one note taker and one facilitator. Each group explicates why their idea is a big idea, the core science behind the idea (how it works), at least two examples of phenomena that illustrate the idea. <i>Moderator: Tina Stanford</i>
2:30 pm	Break
2:45 pm	Small Working Groups (Cont.) Continue explicating the why, how, and examples of the big idea.
4:00 pm	Groups Report Out (15 minutes each) Each group reports their results. <i>Moderator: Joe Krajcik</i>
5:30 pm	Adjourn
6:30 pm	Dinner at Mandarin Gourmet, Palo Alto

Advancing Nanoscience Education Workshop

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Thursday, June 15, 2006: Education — What Should Students Know and When?

8:30 am	Continental Breakfast at SRI
9:00 am	Learning Goals, Prerequisite Knowledge, and Sequencing Discussion Introduce the objectives for today: for each big idea from yesterday, identify associated learning goals, what things students need to know before they can understand the ideas, and how to sequence the ideas. Examples from other science domains will be provided and discussed. <i>Moderator: Joe Krajcik</i>
10:00 am	Break
10:15 am	Small Working Groups Small groups reassemble to identify learning goals associated with their big idea, what prerequisite things students need to know, and how to sequence the ideas. <i>Moderator: Tina Stanford</i>
12:00 pm	Working Lunch Small group work continues over lunch.
1:30 pm	Small Groups Report on Progress, Problems, Needs (10 minutes each) Small groups report out on progress, and major problems or needs (e.g., missing information) in writing learning goals, prerequisite ideas, and sequencing, and get help from full group. <i>Moderator: Anders Rosenquist</i>
2:30 pm	Break
2:45 pm	Small Working Groups (Cont.) Continue refining learning goals, sequencing, and prerequisite knowledge.
4:00 pm	Groups Report Out Each group reports their list of learning goals, prerequisite knowledge, and sequencing of ideas. <i>Moderator: Joe Krajcik</i>
5:30 pm	Adjourn Dinner on your own; recommendations will be provided.

Advancing Nanoscience Education Workshop

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SRI International, International (I) Building

Friday, June 16, 2006: Alignment — How Do the Learning Goals Link to Standards?

8:30 am **Continental Breakfast at SRI**

9:00 am **Linking Learning Goals to Existing Standards**

Introduce the objectives for today: to link the learning goals identified yesterday to the National Science Education Standards (NSES) and AAAS Benchmarks. Examples from other science domains will be provided and discussed.

Moderator: Jo Ellen Roseman

9:30 am **Small Working Groups**

Small groups reassemble to link their learning goals to the NSES and AAAS Benchmarks and identify where alignment cannot be made. Lists of NSES and AAAS Standards will be provided.

11:00 am **Small Groups Report Out (10 minutes each)**

Each group reports their alignments with the standards.

Moderator: Tina Stanford

12:00 noon **Reflection and Next Steps**

Moderator: Joe Krajcik

12:30 pm **Lunch and Workshop Evaluation**

Complete the short workshop evaluation.

1:30 pm **Report Outlining and Writing**

For workshop staff.