Sample Agenda for 1.5-Day Project 2061 Workshop

Exploring the Use of Project 2061 Tools to Analyze Curriculum Materials

Workshop Summary

This workshop is designed for a group of K-5 teachers who plan to revise their curriculum to align it with the science literacy goals recommended in *Science for All Americans* (*SFAA*) and the learning goals in *Benchmarks for Science Literacy (Benchmarks)*. Before they make decisions about purchasing new curriculum materials, they are examining how well their existing materials address those goals. The teachers have spent time reading both *SFAA* and *Benchmarks* and are now eager to use them to guide their selection and adaptation of curriculum materials.

During this workshop, teachers analyze three lessons from a curriculum resource currently in use in the district. This experience will demonstrate how they can use *SFAA* and *Benchmarks* to evaluate and possibly adapt curriculum materials to help their students achieve specific learning goals and to learn a procedure for examining other existing materials for their match to these goals. The estimated time shown for each option is the minimum required.

AGENDA

DAY 1

INTRODUCTION — OPTION A: LANDSCAPE ANALOGY ON IMPORTANCE OF DESIGN

Estimated Time: 5 minutes.

Overview: This option emphasizes the importance of using a design approach to curriculum development by comparing it to landscape design. The presentation can be used to set the stage for workshops that focus on exploring the use of Project 2061 Tools to improve the design of curriculum, instruction, or assessment.

AVAILABLE TOOLS — OPTION B: CHARTING PATHWAYS TO REFORM

Estimated Time: 15 minutes.

Overview: The presenter emphasizes Project 2061's commitment to a coherent set of learning goals as the basis for reform. Participants then examine a flowchart that describes Project 2061's view of alternative pathways to goal-oriented curriculum reform. This option explains how Project 2061's vision of science literacy for all fits into the larger context of education reform and is therefore particularly appropriate for those already engaged in some aspect of education reform.

WORKSHOP GOALS — OPTION E: WORKSHOP ON CURRICULUM ANALYSIS

Estimated Time: 5 minutes.

Overview: The presenter shares with the group the workshop goals, which are appropriate for participants involved in analyzing curriculum materials. The goals involve making the case that changing systems to implement science literacy goals is worth the expense and effort; using science literacy goals promotes effective teaching; and using *SFAA* and *Benchmarks* can improve the quality of curriculum choices and can make teaching more intellectually stimulating and rewarding.

WHAT PARTICIPANTS KNOW — OPTION C: DIAGRAM OF WHO KNOWS WHAT

Estimated Time: 10 minutes throughout workshop.

Overview: Participants indicate how familiar they believe they are with *SFAA* and *Benchmarks* by placing a mark in overlapping circles. At other points during the workshop participants can be asked to reaffirm or modify their placement. The distribution of their marks reminds participants that their knowledge varies widely and informs the presenter about what they think their knowledge is.

NEED FOR CHANGE — OPTION D: VIDEO ON MOLECULAR MISCONCEPTIONS

Estimated Time: 15-30 minutes.

Overview: Videotaped interviews with "gifted" 8th and 10th grade students demonstrate that even bright and motivated students are not able to explain observable phenomena in terms of the behavior of atoms and molecules. If time is available, an additional excerpt from the video can be used to show how a 6th-grade student modifies his ideas about the particulate nature of air when he is asked probing questions and given time to think. Participants can consider how the questioner builds on the student's knowledge to help him progress toward understanding. This option is particularly appropriate for workshops addressing topics that rely on student understanding of the particulate nature of matter, such as the water cycle.

EXPLORING THE PROJECT 2061 TOOLS, 3: TO ANALYZE CURRICULUM MATERIALS
OPTION B: SCIENCE PLACE: EARTH, SUN, AND WATER (STEPS 1-4)

Estimated Time: 5 hours.

Overview: Participants use *Science for All Americans* and *Benchmarks for Science Literacy,* and a specially developed analysis procedure to evaluate how well *Air, Sun, and Water,* a first-grade curriculum module, addresses specific learning goals from *Benchmarks for Science Literacy*. Participants examine three lessons from the curriculum module that address the concepts of evaporation, condensation, and the water cycle. Next, participants identify benchmarks that appear to be central to the lessons and study these benchmarks to clarify their meaning. Then they analyze how specifically *Science Place* addresses the actual content of the benchmarks and the likelihood that students will learn the benchmarks from the presented activities.

DAY 2

EXPLORING THE PROJECT 2061 TOOLS, 3: TO ANALYZE CURRICULUM MATERIALS
OPTION B: SCIENCE PLACE: *EARTH, SUN, AND WATER* (STEP 5)

Estimated Time: 2 hours.

Overview: Participants summarize their findings and suggest revisions to *Science Place* activities to increase the likelihood that they will contribute to students' understanding the benchmarks. Then they share their analyses and suggested revisions with the group. Finally, they discuss how the analysis procedure can be used to inform their district's curriculum decisions.

Closing

SUMMARY — OPTION B: THE ROLE OF TEACHERS IN CURRICULUM REFORM

Estimated Time: 15 minutes.

Overview: Participants consider what aspects of the resource analysis procedure are important to share with teachers and other educators in their school district.

EVALUATION — OPTION B: USING PATHWAYS TO REFORM QUESTIONNAIRE

Estimated Time: 30 minutes.

Overview: Participants indicate the path their school district is (and should be) taking on the flowchart of alternative pathways to goal-oriented curriculum reform and what tools they think will be helpful. This gives the workshop leader a chance to evaluate participants' views on the utility of existing Project 2061 tools (*SFAA* and *Benchmarks*) and forthcoming tools (*Resources, Designs, Blueprints*) in K-12 curriculum reform.