

# NCOSP Tools from Years 1 & 2

## Year 1 • Summer Academy 2004 • August 2-13

## Year 2 • Summer Academy 2005 • August 1-12

Summer Academy

Physics for Elementary Teachers (PET) | Personal Action Plan | Preconceptions | Inquiry Competence | Metacognition

Life Science Immersion | Curriculum Topic Study | Lesson Study

NCOSP Website

Educator Resources

Special Topics

WASL Scoring Training | Professional Achievement | Teachers as Researchers | Native Culture | Questioning Strategies | Integration Techniques | Literacy Science Notebooks

Inquiry/Special Education | Inquiry Boards | Write to Learn | Questioning Strategies | Research | Cultural Adaptation | National Boards | Science Notebooking | Coaching

Leadership

Standards of Assessment

LCF's

#1: Lesson Study | #2: Questioning Strategies in Science Instruction | #3: WASL as Powerful Classroom Assessment | #4: Unburdening the Curriculum: Inquiry Boards; Connecting Science & Language | #5: Improving our Lesson Study Practice | #6: Preparations for Lesson Study Observation and Observations in Schools  
Monte Cristo Elementary Presentation

#1: Leadership Skills | #2: Best Practices in Science Teaching – How People Learn | #3: Implementing Change – Leading by Listening: CBAM | #4: Science Notebooks | #5: State of NSOCP Partnership – Building a Plan to Sustain Science Education Reform | #6: Increasing Science Literacy Goals and Curriculum Coherency | #7: Using CTS to Aid in Professional Development

Curriculum Topic Study

LCF

NCOSP Materials

Summer Academy Participant Binder | How People Learn

Summer Academy Participant Binder | Science for All Americans | Science Curriculum Topic Study | ATLAS | Benchmarks

Lesson Study

Inquiry Boards

LASER Materials

How Students Learn | The Teaching Gap | Inquiry and the National Science Education Standards | Learning Science and the Science of Learning | Designing Professional Development for Teachers of Science and Mathematics | Leading in a Culture of Change

TOSA Times

Literature Review

1 copy to each LASER team

1 copy to each LASER team

## NCOSP Tools – From Years 1 & 2

The NCOSP Tools packet chronologically lists Summer Academy, Learning Community Forums (including articles/handouts), books, LASER, and website helps. Use this tool to remember activities and LCFs that could support the NCOSP District Action Plan.

### Events

- Feb. 6, 2004: “Coming Together”, 1st gathering for NCOSP
- May 25, 2004: NCOSP Open House

### Summer Academy 2004: August 2-13, 2004

(Additional 3rd week optional-Aug. 20)

- Defining components of Professional Learning Community
- Elements of high quality science instruction (break outs)
- “Looking inside Classroom, preconceptions, constructivism”
- Physics Immersion (PET)
- Personal Action Plan–Identify student learning targets in your science unit
- Special Topics:** WASL scoring training, Native culture, Questioning strategies, Integration techniques, Teachers as researchers, Professional advancement, and Literacy Science Notebooks
- Special Guests:** Lorna Spear (Principal Bemiss Elementary Spokane), Scott Stowell (Science, Health, Human Growth and Development Coordinator for Spokane Sc. Dist.), Jeff Goldstein (Executive Vice President for Science and Education at Challenger Center for Space Science Education)
- Book given:** *How People Learn*

### Articles/Handouts

- “Looking inside the Classroom: A study of K-12 mathematics and science education in the United States”
- “Inside the Classroom: Observation Protocol Summary, Coding Sheet, Capsule Rating of the Quality of the Lesson” Horizon Research Inc.
- “Making Connections to Ideas in Constructivism”
- “The Importance of Professional Community” Garmston and Wellman
- “Professional Development Strategies: Immersion in Inquiry Science” NCOSP
- “Professional Development Strategies: Coaching” NCOSP

### Learning Community Forums: 2004-2005

- LCF #1 (Dec. 3, 2004): Lesson Study-Catherine Lewis
- LCF #2 (Jan. 14, 2005): Questioning Strategies in Science Instruction: Pamela Krause (FACET Innovations)
- LFC #3 (Feb. 11, 2005) Science WASL as a powerful classroom assessment tool.
- LCF #4 (Mar. 18, 2005): 3 Sessions in AM: Unburdening the Curriculum, Inquiry Boards, Literacy-Connecting Science and Language Arts k-8-Lesson Study time for groups in afternoon

### Articles /Handouts

- Chapter 7 Unburdening the Curriculum Designs for Science Literacy
  - Less is More: Trimming the Overstuffed Curriculum Lisa Fratt
  - “Scientific Inquiry: How Is an Experiment Different from an Activity?” Helen Buttemer
- LCF # 5 (May 1, 2005): Improving Our Lesson Study Practice: AM-Lesson Study Panel and Breakout sessions: Challenges, Addressing Challenges PM-Facilitated Lesson Study work time.

- LCF # 6 (May 20-21, 2005): Preparation for Lesson Study Observation and Observations in schools in PM. May 21, 2005-Reflections and Monte Cristo Elementary L.S. Strategy for building-based Prof. Development

### Articles /Handouts

- “Lesson Study Resources – Key Articles and Books” NWREL Lesson Study Leaders Symposium
- “Guidelines for Lesson Observations and Debriefings” NWREL
- “Protocol for Observing a Research Lesson”-NWREL
- “Guidelines for Pre-Observation Meeting of a Research Lesson” NWREL
- “Lesson Study Group: Observing, Debriefing and Reporting the Lesson” Adapted from the Spokane School District
- “Challenges to Importing Japanese Lesson Study: Concerns, Misconceptions and Nuances” Sonal Chokshi and Clea Fernandez
- “Lesson Study: Crafting Learning Together” Catherine Lewis

Break outs: Jeanne Harmon: Teacher Leader Professional Development, Carolyn Mullinex: Initiating Lesson Study Multi-grade, Kelly La Baron: Improving “students’ problem solving in Math and Science

### Summer Academy 2005: August 1-12, 2005

- Aug. 1, 2005:** AM-Language Shock, Meeting Needs of Diverse Learners, Trish Skillman/ PM-Life Science Immersion
- Aug. 2-3, 2005:** AM-Life Science Immersion / PM Integrated Curriculum Topic Study (Book given to all Teacher Leaders)
- Aug. 4, 2005:** AM-Life Science Immersion / PM-Special topics: Inquiry/Special Education, Inquiry Boards, Write to Learn, Questioning Strategies, Research
- Aug. 5, 2005:** AM-CTS/ Lesson Study / PM-Life Science Immersion
- Aug. 8, 2005:** Administrators at Summer Academy AM-Mike Klentschy-EL Centro School District Superintendent, CTS/LS Administrators observe / PM-Administrators at Implementing Effective Professional Development-Mike Klentschy and Teacher Leaders in Life Science Immersion
- Aug. 9, 2005:** AM-Life Science Immersion / PM-CTS/LS
- Aug. 10, 2005:** AM-Life Science Immersion / PM-Special Topics: Inquiry/ Special Education, Inquiry Boards, Cultural Adaptation, Science notebook, National Boards
- Aug. 11, 2005:** AM-Life Science Immersion, CTS/LS / PM-Special Topics: Cultural Adaptation, Coaching, Science Notebook, Questioning, Research
- Aug. 12, 2005:** CTS/LS and Planning for Continuous Improvement
- Book given:** *Science Curriculum Topic Study*-Page Keeley

### Articles/Handouts

- 2005 Summer Academy Strands Reference List
- Examining the Effects of Research-based Instructional Materials on Learning and Teaching
- “Using Questioning to Assess and Foster Student Thinking” Jim Minstrell and Emily van Zee

### Learning Community Forums: 2005-2006

- Sept. 30, 2005:** Planning Day @ SMATE (Lesson Study Work not finished at S.A.)
- LCF #1 (Oct. 21, 2005 Pen., Oct. 28, 2005 Skagit & Whatcom) Invite administrator Leadership Skills-Carolyn Landel / PM- Lesson Study group time

- LCF #2 (Nov 10, 18, 2005 invite colleague)-Best Practices in Science Teaching-How People Learn-Lois Sherwood, Mary Janda / PM-Lesson Study group time
- LCF #3 (Dec. 2, 2005-invite Administrator) Implementing Change-Leading by Listening (CBAM-Concerned Based Adoption Model) Carolyn Landel / PM-Lesson Study group time
- LCF #4 (Jan. 13, 2006-invite a colleague)-Science Notebooks-Peggy Willcutts / PM-Lesson Study group time
- LCF #5 (Feb 3, 10, 2006-invite Administrator) State of NCOSP Partnership-Building a Plan to Sustain Science Education Reform-Research team: Jim Minstrel, Ruth, Dan Hanley, Sara, Molly / PM-Lesson Study group time
- LCF #6 (Mar. 3, 10, 2006-Invite Administrator) Increasing Science Literacy Goals and Curriculum Coherency-Pinky Nelson / PM-Lesson Study group work
- LCF #7 (May 10-11, 2006) Using Science Curriculum Topic Study to Aid in Professional Development-Page Keeley and Susan Mundry
- New Books given: *ATLAS*, *Benchmarks*, *Science For All Americans*

### Articles/Handouts

- 2005 Summer Academy Strands Reference List
- Examining the Effects of Research-based Instructional Materials on Learning and Teaching
- “Using Questioning to Assess and Foster Student Thinking” Jim Minstrell and Emily van Zee

### Books (we have received):

- The Adaptive School* - Garmston Wellman (TOSA)
- How People Learn* - (Summer Academy 2004)
- The Teaching Gap* - James Stigler and James Hiebert (LASER)
- How Students Learn* - (LASER)
- Learning Science and the Science of Learning* - Roger Bybee (LASER)
- Inquiry and the National Science Education Standards* (LASER)
- The Presenter's Fieldbook* - Garmston-(TOSA)
- Leading in a Culture of Change* - Fullan (only one book per LASER team)
- Designing Professional Development for Teachers of Science and Mathematics* - Susan Loucks-Horsley (1 copy LASER)
- Leading Every Day* - Kaser, Mundry, Stiles, Loucks-Horsley (TOSA)
- Science Curriculum Topic Study* - Keeley (Summer Academy 2005)
- ATLAS* (May 2006 LCF)
- Benchmarks* - (May 2006 LCF)
- Science For All Americans* - (May 2006 LCF)

### LASER

- Strategic Planning Institute-Summer
- Curriculum Showcase (Jan. 2006) “Processing Features of the Brain” Dr. John Medina-UW
- Networking Forums-Fall-Dr. Duane Baker, BERG Group Powerful Teaching and Learning (STAR [Skills, Thinking, Application, Relationships] tool)
- Networking Forum-Spring “Effectively Leading Change for Science Ed. Reform” Dr. Mark Windschith UW

### GROUPS/AGENCIES

- OSPI-Powerful Classroom Assessment
- Foss Initial Use Training
- ESD 189, ESD 114

### Educator Resources

NCOSP web site: <http://www.ncosp.smate.wvu.edu>

### Leadership Page

- A PowerPoint overview of the NCOSP grant
- Getting started with a lesson study group ppt

- Lesson study Facilitator's guide
- Introduction to Inquiry Boards and the WASL K-5
- Introduction to Inquiry Boards and the WASL 6-8
- Intentional Inquiry powerpoint
- Concerns Based adoption Model powerpoint
- Dealing with Resistor's document

### Standards and Assessments Page

- Links to GLE's by gradeband
- Links to National science standards and project 2061 documents
- Links to OPSI assessment information
- Powerful classroom assessment workshop materials

### Curriculum Topic Study Page

- Link to the CTS web site

### LCF page

- All LCF documents and power points (see LCF list)

### Lesson study Page

- Lesson study tools (green and orange books)
- Facilitator's guide
- Electronic templates for lesson study
- Flowchart poster
- Reporting instructions
- LS reports from participating teachers

### Inquiry Page

- Inquiry Boards introduction PowerPoint
- Inquiry Boards booklet
- Board words (original, WASL conclusion,
- Inquiry Board planning documents for STC and Foss kits

### TOSA Times Page

- All TOSA times documents

### Literature reviews page

- Reviews of articles on:
  - New teacher support
  - WASL
  - Teacher as Tutors
  - Staff development
- Request literature instructions

### Binders

Summer Academy 2004: Aug. 2-13, 2004 (Additional 3rd week optional-Aug. 20, 2004)

- Summer Academy binder: 2004
- Physics for Elementary Teachers Binder

Learning Community Forums: 2004-2005

- Unburdening the Curriculum Binder

Summer Academy 2005: Aug 1-12, 2005

- Summer Academy Binder: 2005
- Investigation the Flow of Matter and Energy in Living Systems Binder

Learning Community Forums: 2005-2006

- 2005-2006 Cumulative Binder (self directed).

Summer Academy 2006: Jul. 31 - Aug. 11, 2006

- Summer Academy Binder: 2006

Other:

- LASER Strategic Planning Institute Materials 2004/2005/2006
- LASER Instructional Materials Showcase: 1/17/06
- Initial Use Training: Developing Science Leadership Manual: 2005/2006
- Washington State Professional Development Planning Guide IN ACTION: Linking Professional Development to Improved Student Learning OSPI Conference 1/06

**Summer Academy 2006: Jul. 31 - Aug. 11, 2006**