

**TEACHING SCIENCE THROUGH HISTORY — Schedule of Discussion Topics & Activities**

	<b>THEME</b>	<b>am</b>	<b>pm</b>	<b>Product [for each case study]</b>
Mon June 15	<b>Science-in-the-making</b>	<ul style="list-style-type: none"> <li>• Intro case study [demo] &amp; discussion</li> <li>• review of existing case studies &amp; <i>Discussion</i> (listing favorable features &amp; caveats)</li> <li>• <i>Discussion</i>: generate list of NOS features</li> <li>• identify terms for "word stories" by historians</li> </ul>	<ul style="list-style-type: none"> <li>• intro to library and online bibliographic resources</li> <li>• consultations btwn teachers and historians on case studies</li> <li>• research and writing</li> </ul>	<ul style="list-style-type: none"> <li>• brief history/overview of case study</li> <li>• list of NOS themes it highlights</li> <li>• bibliography</li> </ul>
Tue June 16	<b>Biographical Contexts</b>	<ul style="list-style-type: none"> <li>• <i>Presentation</i>: on personality, style and biographical origins of scientific discoveries</li> <li>• <i>Presentation 2</i> (by subject): updates on recent historical findings</li> <li>• <i>Discussion</i>: Conner, <i>A People's History of Science</i></li> </ul>	<ul style="list-style-type: none"> <li>• research, writing and consultations btwn teachers and historians</li> </ul>	<ul style="list-style-type: none"> <li>• [text &amp; e-images] biographical sketch of scientists</li> <li>• copy of original paper(s)</li> <li>• flowchart I: map of discovery process, major evidence and other key factors</li> </ul>
Wed June 17	<b>Scientific Contexts</b>	<ul style="list-style-type: none"> <li>• <i>Presentation</i> (by subject): examples of lineages of questions</li> <li>• <i>Discussion</i> (by subject): on chapter in general history of sci. field – how to probe/ "science-in-the-making"</li> <li>• <i>Presentation &amp; Discussion</i>: ways to assess HPS knowledge in history and philosophy classes and in a high school context</li> </ul>	<ul style="list-style-type: none"> <li>• research, writing and consultations</li> </ul>	<ul style="list-style-type: none"> <li>• [text &amp; e-images] guiding student through history of scientific problem, orientation and component ideas, including occasions for engaging students in problem-solving or analysis</li> <li>• flowchart II: roots of discovery</li> </ul>
Thur June 18	<b>Alternative Scientific Approaches</b>	<ul style="list-style-type: none"> <li>• <i>Presentation 1</i>: on role of debates, disagreement or other alternative conceptualizations</li> <li>• <i>Presentation 2</i> (by subject): historical examples of modern student preconceptions</li> </ul>	<ul style="list-style-type: none"> <li>• <i>SPSP conference session</i>: characterizing nature of science in science education (philosophy-of-science "in- practice")</li> </ul>	<ul style="list-style-type: none"> <li>• [text &amp; e-images] on alternative interpretations of evidence, alternative methods or ideas, controversies, &amp;c. Opportunities for engaging students.</li> <li>• [commentary for other teachers] notes on historical misconceptions and ways to remedy views</li> </ul>

<b>Plan of Discussion Topics &amp; Activities</b> (continued)				
Fri June 19	<b>Cultural Contexts</b>	<ul style="list-style-type: none"> <li>• <i>Presentation</i>: on role of cultural context in shaping discovery; sources of funding; institutions; ideas &amp; metaphors</li> <li>• <i>Presentation 2</i>: on gender, class and race in history of science</li> </ul>	<ul style="list-style-type: none"> <li>• <i>SPSP conference session</i>: evaluating HPS knowledge</li> <li>• consultations with historians and educators</li> </ul>	<ul style="list-style-type: none"> <li>• [revised text &amp; e-images] on cultural factors, biographical context</li> <li>• [text &amp; e-images] on sources of funding and of key problems, ideas and metaphors</li> </ul>
Sat June 21	<b>Historical Contexts / Teaching Strategies</b>	<ul style="list-style-type: none"> <li>• <i>Presentation</i>: on situating science in broader histories</li> <li>• <i>Discussion</i>: review existing case studies (#2) for teaching strategies, opportunities &amp; limits</li> <li>• <i>SPSP conference session</i>: TBA</li> </ul>	<ul style="list-style-type: none"> <li>• research, writing, consultations</li> </ul>	<ul style="list-style-type: none"> <li>• [text &amp; e-images] on "News" for period of discovery/case study, including discoveries in other scientific fields, political events, and music &amp; artwork of the period</li> <li>• [text &amp; e-images] on social influence of discovery/idea/work</li> <li>• [text] more on special features of case study (for example, problems of persuasion, institutional power, translation)</li> <li>• map of narrative or possible teaching trajectory</li> </ul>
Sun June 20	<b>Student Labwork</b>	<ul style="list-style-type: none"> <li>• <i>Presentation</i>: on role of instruments, expertise and experimental reasoning</li> </ul>	<ul style="list-style-type: none"> <li>• writing, consultations</li> </ul>	<ul style="list-style-type: none"> <li>• [text] notes on adapting standard lab, OR sketch of new lab activity, w/ handouts</li> </ul>
Mon June 22	<b>Review &amp; Revise</b>	<ul style="list-style-type: none"> <li>• <i>Teacher presentations I</i> (by subject)</li> </ul>	<ul style="list-style-type: none"> <li>• revisions, extensions of incomplete work</li> </ul>	<ul style="list-style-type: none"> <li>• framework for evaluating student HPS knowledge in case study</li> </ul> <hr/> <ul style="list-style-type: none"> <li>[comments on other case studies]</li> </ul>
Tue June 23	<b>Elaborate</b>	<ul style="list-style-type: none"> <li>• <i>Discussion</i>: methods for evaluating HPS knowledge in classroom context</li> <li>• <i>Discussion</i>: sharing and using case studies — prospects and problems</li> <li>• Evaluation of workshop</li> </ul>		<ul style="list-style-type: none"> <li>• revisions</li> <li>• modern epilog (analogous case)</li> <li>• prep for posting on internet, incl. additional resource links, web excursions</li> </ul>