An initial conversation to frame the workshop:

1. Why incorporate research into your courses?
   - Relationships and context
     - Helps students take ownership/develop a relationship with class
     - Connects to science more directly
     - Personal connection, personal context, “what does this course mean to me?”
     - Building community
     - Relevance, builds context of course material
   - Student development
     - Develop critical thinking skills
     - Gain self-confidence - ability to overcome obstacles
     - Career training, also beyond sciences
   - Awareness and appreciation
     - Appreciating science/process
     - Understanding the limitations of science, data interpretation and support
     - Learning that failure is okay
   - Pedagogy
     - Can help frame the course
     - Another way of learning – more tactile
   - Recruitment, retention, transfer, diversity – engaging
   - Faculty benefits – keeps faculty connected to field

2. What are the greatest obstacles/challenges?
   - Constraints
     - Overwhelming – too many students, data, too little time (short time frame)
     - Fitting it into a course – how to blend content with research
     - Financial obstacles, resource obstacles
     - Fitting it into class time constraints
     - Limited equipment/access/space/time
     - How to make it part of the class and not just extra work
   - Perceptions
     - Too much work for students, feels like too much of a challenge for students who are already leading busy lives
     - Perception by faculty that there isn’t enough time in terms of content
     - Hope that it helps with tenure but unsure about value
   - What is the quality of course-based research?
     - Varying abilities of students
     - Student research may not be research quality – more like high-level inquiry
A final reflection on the workshop:

1. What are the take-home points from today’s workshop?
   - Validity/benefits of using undergraduate research as pedagogy
     - Undergraduate research is a vehicle for collaborating with many disciplines and leveraging relationships
     - Using undergraduate research as a way of increasing science literacy, especially for non-majors
   - Strategies for success
     - Show students how to do something then ask to apply it to their research
     - Focus on the most important things and determine what can be eliminated
     - Importance of integration – undergraduate research is not an add on; it’s part of the class
   - Suggestion of community-based research – engaging with community = engaging with class
   - Showing different avenues of research – multiple entries into research; flexible definition of research

2. What did you gain by participating in this workshop?
   - **Solid start on fall teaching plans!!** And follow-up on action plan
   - Resources – people, SERC sites
   - Lots of organizations to join - CUR, NAGT