**Heather Bartos Science Literacy Skills BSC 307**

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| Science Literacy Skill | Plan to Develop this skill | Why this skill is important | Representative Activity |
| Assessing validity | At the beginning of the lesson, students will watch a 15 minute documentary called “The Bermuda Triangle Exposed”. Next, the instructor will inform students on about definition of science, the six criteria of science, and the importance of identifying science from pseudoscience. Students will evaluate if the Bermuda Triangle phenomenon is scientific or pseudoscience by completing a student handout guide. Instructor and students will discuss their findings. | Much of science is about questioning, critically analyzing, and assessing validity. Scientists are trained to search for flaws or holes within research. This method is meant to improve upon existing ideas; this is how scientific knowledge progresses, improves, and ultimately advances. | <http://www.indiana.edu/~ensiweb/lessons/conptt.pdf>  <http://www.youtube.com/watch?v=Q8KXhT9tsnQ> |
| Self-reflection | At the beginning of the school year, students will be asked to bring a “reflection” journal to class daily. At the beginning of each Monday (modifications can be made), the instructor will write a daily self-reflection question on the board. Students will answer this question in their reflection journal. A classroom discuss will follow. | Self-reflection is an extremely important skill to develop in both science and life. Introspection is method to learning that allows students to set goals, establish problems and solutions, critically analyze, and release feelings and emotions. Being able to share self-reflections can create a supportive and respectful classroom environment. Students are teachers can learn from one another on a personal level; strengthened cognitive abilities and personal engagement will be more likely to result. | <http://www.marcandangel.com/2008/07/24/20-questions-you-should-ask-yourself-every-sunday/>  <http://www.marcandangel.com/2010/03/29/25-beautifully-illustrated-thought-provoking-questions/> |
| Problem-Solving | Students will participate in the Madagascar activity. The objective of this game is to have a group standing on a large tarp flip the tarp upside-down without touching the ground, and then rescue a series of objects strewn around them. This activity would take place outdoors during a class period. It allows students the opportunity to develop teamwork, communication, and problem-solving skills. | Problem-solving is essential in science. The scientific method is a problem-solving process used in science. During experimentation, problems will inevitably arise; it is our job as scientists to indentify, predict, plan, and ultimately solve issues that may arise. Science also involved teamwork and communication; scientists work with one another in research, experimentation, and peer review review. | <http://inspireyourgroup.com/blog/problem-solving/madagascar-rescue/> |