

## INS 2007-08 Learning Goals

The following are the learning goals for INS. We hope that by the end of the year we will have helped you to meet these goals. They will be posted on the INS website for reference.

Students will . . .

- Have confidence for doing science
- Take risk and try new approaches
- Be creative
- Recognize appropriate approaches to problem solving
- Work both independently and collaboratively in the process of scientific inquiry
- Learn to try and put forth effort for all endeavors
- Utilize scientific literature autonomously for scientific inquiry
- Understand the structure of different types of scientific literature
- Write scientifically (use professional standards, record key pieces of information for replication)
- Communicate science in different ways (posters, papers, oral presentations)
- Appropriately utilize techniques to answer self-guided research
- Apply scientific knowledge to real-world applications
- Gain mathematical problem solving strategies and skills, making use of analytical, graphical, qualitative and numerical approaches
- Use computer applications to solve problems in science
- Learn to work collaboratively in small groups
- Take responsibility for their own learning
- Prepare graphical materials with proper labels and concise and accurate titles
- Know and use the key elements of experimental design
- Interpret and utilize data, particularly for inference
- Use tools (NCBI tools, databases, and search engines, software for viewing protein structures, sequence alignment, gene annotation)
- Utilize appropriate vocabulary
- Utilize scientific resources (books, Google, journal articles, news articles, and other types of literature)