Overall Functional Description of STC Education Website

- The website will be designed with “layers” of content appropriate to different levels of user expertise
  - K-6
  - 7-12
  - College 1-4
  - Graduate
  - Expert
  
  Fine granularity at the college levels with optional sublevels within the K-12 areas where appropriate

- Content may not be needed at each level for each topic
- Interactive Tools (manipulatives) will be provided to augment basic text narrative
- Variable User Interface appropriate to user age-groups and levels of expertise
  - Expert/Graduate – encyclopedia like interface, text search, key word, quickly find appropriate material
  - College – abstract knowledge structure interface (? Concept maps available)
  - K-12 – “game” or “mall” interface, concrete 2D or 3D simulation interface
- Instructor/Teacher Lessons plans
- Different viewpoints for content presented, same topic from perspective of Physics, Chemistry, Engineering, Optics communities
- Theory and practical content throughout website, connections to real world examples
  - Why is this important?
  - Why was this discovered?
  - Why does this matter?
  - Where do I experience this?
- Design for multiple types of use
  - Encyclopedia, information
  - Curious self-exploration and self-assessment
  - Instructor lead, guided instruction (graded, tested, assessed)
- Include peer review and critical review capabilities in design of website (Amazon.com, Epinion.com)
- Ask-the-Expert Community (moderated email interface, archived discussion lists)
- Graduate Course Materials
- Embedded Instructional Design & Object Tagging/Cataloging
- Hierarchy of Content “value” and content author evaluation – encourage quality content – cause learning
  - Basic Text Content
  - Instructional Methodology
  - Utilization by end-users
  - Re-Use/incorporation by other authors
  - Peer reviewed content
  - Peer review of other authors content
  - Creation of interactive objects, manipulatives (author, define specifications, advise, test, review)
  - Re-use of existing interactive objects
Create/integrate assessment into content and interactive objects – answer the question “How will you know this content is effective?”

- Content/objects
  - Single lecture
  - Lesson plan
  - Learning object (complete, add definition of necessary components)
  - Full course

- The website will be open and freely available to the general public. Registration (username) may be requested for tracking and assessment purposes, but authentication or authorization will not be required to access the website content.