Grade: HS (9^{th}) Date: MM/DD/YYYY Teacher: WL Boswell

Unit: Alternate Energy

Activity: Develop a lesson/demonstration utilizing an alternative energy resource

Goals: 1) Demonstrate an understanding of the importance/application of alternative energy sources in the world today.

2) Demonstrate understanding of processes involved in generating energy using one method of alternative energy production.

3) Describe the benefit(s) provided by a specific alternative energy resource.

Cognitive Objectives: 1) Describe how alternative resource in converted into energy (include equipment necessary and stages involved).

2) Describe where and how much of the alternative resource is available.

Affective Objectives: ???

Psychomotor Objectives: Present lesson to class (emphasis on posture and voice inflection)

Equipment: PC availability (Powerpoint & Alice software)

Safety Precautions: None

References/resources: Text, Internet (specify legitimate sites, etc…)

I. Focus/Review (15 min.):

Discuss with the group key material from text/lesson material. Incorporate discussion of any relevant current events in alternative energy sources.

II. Statement of Objectives (5 min.):

Share grading rubric with the class. Review <u>required</u> elements. Reinforce learning goals for the project.

III. Teacher Input (10 min.):

Demonstrate personal/previous projects, drawing attention to good/bad points of each. Suggest possible sources, encouraging students to get approval if a source may be questionable. During independent work, check progress and help troubleshoot production problems/challenges.

IV. Guided Practice (30-60 min.):

Set milestones/deadlines for early part of independent work to ensure progress/productivity/understanding.

V. Independent Practice (90-150 min.):

Encourage exploration of Alice concepts/uses not necessarily covered in lessons with Alice. Encourage work at home – extra effort tends to produce better results.

VI. Closure (20 min.):

Lead group discussion to include a review of the benefits of alternative energy sources and the feasibility of utilizing such sources. Finally, draw a connection to other topics in curriculum, such as climate zones, geographic features, etc….