Title: Exploring Scientific Method Using Wisconsin Fast Plants

Curriculum: Life Science
Grade Level Span: 9-12

Purpose: To facilitate an understanding of the scientific method and controlled experimentation using fast growing plants.

Description: Students will design and implement a controlled experiment using fast growing plants. Their findings will be presented in a research paper to the teacher. In addition, students will prepare a multimedia summary of their findings.

Activities	Curriculum Standards	NETS for Students
Project data and findings are computer generated and turned in on time in written format.		
Student developed a testable hypothesis.	9-12Sci A1,E1,F1	7
With teacher feedback, student has designed a controlled experiment.	9-12Sci A1,A2	2,9
Student uses lab materials to appropriately set up and conduct their experiment.		
Student has recorded relevant data and observations on a daily basis.	9-12Sci A1,A2	5
Student has organized written data and displayed these data into appropriate graphs.	9-12Sci A1,A2	5
Student has analyzed data and made germane conclusions based on their original hypothesis.	9-12Sci A1,E1	8
Student critiqued their experimental design and suggested plausible follow-up experiments.	9-12Sci A1	8

Students will develop a multi-media presentation of their research project.	9-12Sci A1	5

Tools and Resources

(List all Web sites, specific software and hardware needs)

Web Sites:

www.fastplants.cals.wisc.edu
www.nabt.org
www.zoo.utoronto.ca/abo

Hardware:

Computer/monitor
Plant Growth Light Stand/Greenhouse

Software

Graphing Software (e.g. AppleWorks, Excel, etc.)
Presentation Software (e.g. PowerPoint, Claris Sideshow, HyperStudio, etc.)

Lab Materials

Plant Pots or "quads"
Fast Plant seeds
Soil
Various materials to individualize experiments (colored paper, chemicals, etc.)

Assessment

(How will you assess the students' learning? If you have a rubric, record it here. Be as specific as possible)

Activity Checklist

Authors (including contact information)

(Record the names and email addresses, if possible, of those who contributed to the development of this lesson sequence)

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(Have you taught this lesson sequence before? What are the great learning/experiences you had?)