LS-HHMI Outreach Curriculum Project Information			
Title	KenBatemanPlantJeopardy.ppt, KenBatemanPlantDiversity.ppt, & KenBatemanLessonPlan.doc		
Resource Type	Lesson Plan ☒ Classroom Activity ☒ Laboratory Activity ☐ Homework Assignment ☒ Bioinformatics ☐ Other ☐ <Specify>		
Description	Students will use a self directed PowerPoint to learn about the evolution of land plants. The students will then play jeopardy of land plant evolution based on the PowerPoint.		
Author(s)	Ken Bateman		
Author Institution(s)	Wellesley High School		
Objective	• To determine the differences between the 4 major plant groups (Bryophytes, Seedless Vascular Plants, Gymnosperms, and Angiosperms). • To understand that land plants have adaptations that enabled them to better survive in their environment. • To understand alternation of generations in plants.		
Key Concepts	Differences between four land plant groups. Adaptations have enabled plants to evolve.		
Student Prep	Students will gain knowledge through using the homework PowerPoint for the next day's jeopardy game.		
Materials	A computer.		
Grade and Level(s)	9, 10, 11, 12th grade Best for AP of Honors biology, but can be modified to fit any class that goes over the evolution of land plants.		
Teacher Prep Time	10 minutes to set up jeopardy PowerPoint	**Class Time**	1 night's homework and 1 class period.
National Standards	Biological evolution: 12CLS3.1 Species evolve over time. Evolution is the consequence of the interactions of (1) the potential for a species to increase its numbers, (2) the genetic variability of offspring due to mutation and recombination of genes, (3) a finite supply of the resources required for life, and (4) the ensuing selection by the environment of those offspring better able to survive and leave offspring. 12CLS3.4 The millions of different species of plants, animals, and microorganisms that live on earth today are related by descent from common ancestors. 12CLS3.5 Biological classifications are based on how organisms are related. Organisms are classified into hierarchy of groups and subgroups based on similarities which reflect their evolutionary relationships Species is the most fundamental unit of classification.		
State Standards	5. Evolution and Biodiversity: *Central Concepts:* Evolution is the result of genetic changes that occur in constantly changing environments. Over many generations, changes in the genetic make-up of populations may affect biodiversity through speciation and extinction. 5.1 Explain how evolution is demonstrated by evidence from the fossil record, comparative anatomy, genetics, molecular biology, and examples of natural selection. 5.2 Describe species as reproductively distinct groups of organisms. Recognize that species are further classified into a hierarchical taxonomic system (kingdom, phylum, class, order, family, genus, species) based on morphological, behavioral, and molecular similarities. Describe the role that geographic isolation can play in speciation.		

Sources	
References	http://botit.botany.wisc.edu/index.html http://www.eplantscience.com/ http://faculty.clintoncc.suny.edu/faculty/Michael.Gregory/ http://www.eol.org/
Assessment	The jeopardy game can serve as an assessment. Additionally, students can use the jeopardy as a study session and can be given a quiz the following day.