



Rubric

DNA Electrophoresis Gel – Using DNA to determine genetic diversity within a population of Cottonwoods.

	Beginning D	Developing C	Accomplished B	Exemplary A	Score
Identifying Alleles and Genotypes by using a DNA Gel	Student is able to identify genotypes and alleles of gel with at least 50% accuracy	Student is able to identify genotypes and alleles of gel with at least 70% accuracy	Student is able to identify genotypes and alleles of gel with at least 80% accuracy	Student is able to identify genotypes and alleles of gel with 100% accuracy	
Follow up Questions to Electrophoresis Gel Activity	Student is able to answer questions 1-3 accurately	Student is able to answer questions 1-4 and 7 accurately	Student is able to answer questions 1-5 and 8 accurately	Student is able to answer ALL questions accurately	
Application	Student fails to use the data to make the recommendation to the forest managers	Student uses the data to make the recommendation to the forest managers, but the actual recommendation is poorly worded. Spelling, grammar, and/or illogical conclusions	Students are able to apply genetic information of diversity and somewhat accurately provide a forest management recommendation	Students are able to apply genetic information of diversity and accurately provide a forest management recommendation	

Students will look at the results of an actual DNA electrophoresis Gel, supplied by NFGEL, of six populations of Cottonwood Species and determine genetic diversity within the populations and also identify species.