

Date

School



Mark as shown:      Please use a pencil, a ball-point pen or a thin felt tip. This form will be processed automatically.

Correction:      Please follow the examples shown on the left hand side to help optimize reading the results.

**1. Enter the last four digits of your cell phone number in rows 1.1 - 1.4, one number per row. If you do not have a cell phone, use your home phone number. We only use this to match your pre-lab and post-lab surveys for statistical analysis.**

		1	2	3	4	5	6	7	8	9	0
1.1	FIRST of the LAST FOUR digits of your phone number.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2	SECOND of the LAST FOUR digits of your phone number.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3	THIRD of the LAST FOUR digits of your phone number.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4	FOURTH of the LAST FOUR digits of your phone number.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		4	5	6	7	8	9	10	11	12
1.5	What grade are you in?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.6 What is your gender?  Male  Female

**2. Please mark the box that best expresses your OWN opinion about each statement.**

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2.1	A better understanding of science will help me in my own life and career.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2	I know how to design an experiment and make accurate conclusions from my observations and results.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3	I want to learn more about science.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4	I am eager to take more science courses in high school and college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.5	I am eager to learn more about the topic that this lab activity covered.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6	I enjoy my science classes in school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7	I enjoy learning about science from TV shows, books, magazines, or the news.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8	I work hard in my science classes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.9	I usually understand what we are doing in science class and get good grades.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.10	I will consider a career in science, technology, engineering, math, or healthcare.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



3. Please answer the following questions based on your OWN best current knowledge. This is not a test. Please don't share answers with others. We simply want to know how much you know now about the topic of this lab activity.

- 3.1 Which of the following is NOT a required component of a PCR reaction? A  B  C  D  E
- a restriction enzyme
  - template DNA molecules (target DNA)
  - nucleotides: dATP, dCTP, dGTP, and dTTP
  - Taq DNA polymerase
  - oligonucleotide primers
- 3.2 Which of the following is the correct series of steps in a PCR reaction?
1. template denaturation. 2. strand extension or polymerization. 3. primer annealing or hybridization.
  1. template denaturation. 2. primer annealing or hybridization. 3. strand extension or polymerization.
  1. primer annealing or hybridization. 2. template denaturation. 3. strand extension or polymerization.
  1. primer annealing or hybridization. 2. strand extension or polymerization. 3. template denaturation.
  1. strand extension or polymerization. 2. template denaturation. 3. primer annealing or hybridization.
- 3.3 Gel electrophoresis is used to
- separate DNA molecules that are different in length.
  - separate DNA molecules that are different in nucleotide sequence.
  - separate DNA molecules that are different in electrical charge.
  - separate DNA molecules that are from different species.
  - separate the two strands of a DNA double helix.
- 3.4 In order to prove that a crime suspect was the source of a DNA specimen obtained at a crime scene using DNA forensics, A     D
- the suspect's DNA must contain at least ONE allele (or "band") at ONE CODIS locus that is also present in the DNA from the crime scene specimen.
  - the suspect's DNA must contain at least ONE allele (or "band") at EACH OF SEVERAL CODIS loci that is also present in the DNA from the crime scene specimen.
  - The suspect's DNA must contain BOTH alleles (or "bands") at ONE CODIS locus that are also present in the DNA from the crime scene specimen.
  - The suspect's DNA must contain BOTH alleles (or "bands") at EACH OF SEVERAL CODIS loci that are also present in the DNA from the crime scene specimen.
- 3.5 The PCR products obtained when doing PCR on the D1S80 locus ... A     D
- are always different sizes within a single individual because one allele came from the mother and the other from the father.
  - can be different sizes among many individuals because of the varying number of tandem repeats.
  - are sufficient to prove someone is a match to a forensic DNA sample.
  - are different sizes because the primers bind to different sequences in different individuals.

