

## Using DNA to Compare Plant Samples

DNA Size in Nucleotides	Ladder	Seed Pods (Crime Scene)	Seed Pods (Suspect's Car)	Seed Pods (Control Location)	Ladder
40 nt	-----				-----
35 nt	-----	-----	-----	-----	-----
30 nt	-----			-----	-----
25 nt	-----	-----	-----		-----
10 nt	-----				-----

1. Examine the diagram above. The banding pattern would be produced through a process called PCR, which is when specific, short segments of an organism's genes are copied, and then processed in such a way as to produce a characteristic banding patterns. A banding pattern should be particular to an individual. Based on the banding pattern, can we associate the seed pods found in the suspect's car with the seed pods present at the crime scene? Why or why not?
2. The seed pods taken from the 'control location' were taken from a location that is not associated with the crime or the suspect. What is the purpose of using seed pods from a control location in this type of analysis?
3. Do you think that above evidence *conclusively* associates the suspect with the crime in question? What other tests or kinds of evidence would you suggest that would further associate the suspect with the crime?