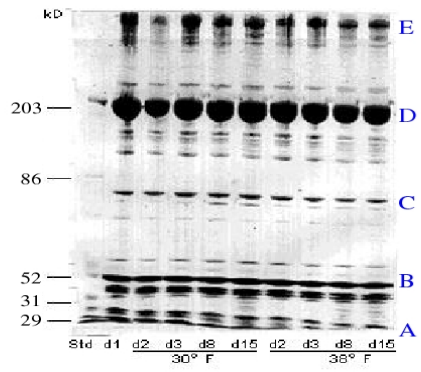
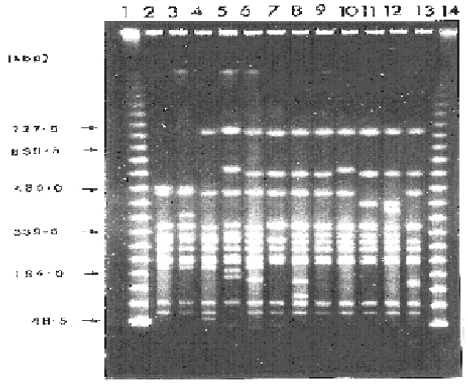
DNA Technology Worksheet **Name:**

The picture to the right is an actual electrophoresis gel.



1. What is the appearance of the bands? Are they clear and defined or blurred and indistinguishable?
   **
2. Which of the labeled bands (A, B, C, etc.) contain the smallest DNA fragments?
   **
3. Which of the labeled bands (A, B, C, etc.) contain the largest DNA fragments?
   **
4. What is the size of the fragments labeled 'B'? **
5. Did all of these samples come from the same DNA source? **
   How do you know?
   **

The picture to the right is an actual electrophoresis gel.



6. Lane 1 & 14 are called a standards. What do you notice about the bands produced by the standard?
   **
7. A standard consists of DNA fragments that scientists KNOW the lengths of. Why is it important to have a standard?
   **
8. Did all of these samples come from the same DNA source?
   **
   How do you know?
   **
9. Look at the DNA 'fingerprints'. Did ANY of the samples come from the same individual? **
   How do you know? **

10. Name two situations when DNA fingerprints are useful. **
11. How does the DNA migrate from one end of the gel to the other? **
12. What cuts up the DNA into tiny fragments? **

Continue analyzing DNA profiles on the following page.