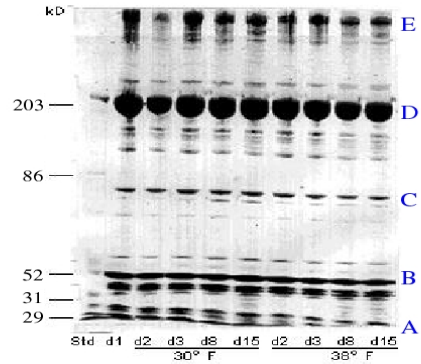


**DNA Technology Worksheet**

**Name:**

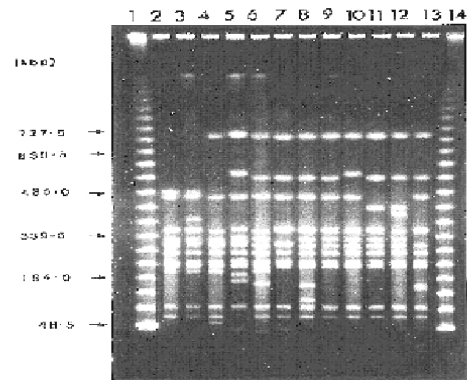
**The picture to the right is an actual electrophoresis gel.**

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.