

2. DNA replication is required for cells to divide. The genetic material, regulating cell activity, must be found in each new cell.

3a. DNA replication

3b. The duplication of genetic material is needed for cell division since the material must be present in both daughter cells.

6. DNA fingerprinting: DNA is removed from the nucleus, special chemicals cut apart the DNA, segments of DNA are placed on a gel and pulled across the surface with an electrical current making bands of DNA.

10. The cells of a salamander are not as specialized.

11. Stem cells are embryonic cells that have the ability to divide into different types of cells.

12. Cancer cells divide faster than normal cells and they can divide on their own

13. Viruses, radiation, exposure to chemicals.

14. Stop smoking, proper diet, reduce sunlight exposure.

15. Because scientists had believed that specialized cells couldn't be used for cloning.

19a. The immature cells are capable of cell division. This would permit the regeneration of cartilage in the end of long bones.

19b. People who have cartilage problems in their knees would be able to make new cartilage.