

The World of Chemistry

Episode 2 - Color

1. Color depends on tiny particles called _____.
2. What did Newton use to demonstrate that white light was a mixture of colors?
3. How is the wavelength of red light different from that of blue light?
4. What by-product of coal use was of interest to chemists?
5. Perkin was trying to synthesize quinine but made this instead.
6. The quest for new synthetic dyes did what to chemistry?
7. Bayer manufactured what important medicine from coal tar?
8. Many leading chemical manufacturers are German companies who started in what industry?
9. Dyes used to analyze other chemicals are called _____.
10. Attaching a poison to a dye that stains only certain cells is a form of _____.
11. How a ruthenium dye binds to DNA can provide what kind of information?

12. How are dyes used to improve glass used in greenhouses?

Answer Key

1. Color depend on tiny particles called molecules.

2. What did Newton use to demonstrate that white light was a mixture of colors?

Prism

3. How is the wavelength of red light different from that of blue light?

Red light has a longer wavelength.

4. What by-product of coal use was of interest to chemists?

Coal tar

5. Perkin was trying to synthesize quinine but made this instead.

Aniline dye, a purple synthetic dye.

6. The quest for new synthetic dyes did what to chemistry?

It advanced it rapidly by creating trained chemists and new reagents.

7. Bayer manufactured what important medicine from coal tar?

Aspirin

8. Many leading chemical manufacturers are German companies who started in what industry?

Synthetic dye manufacture.

9. Dyes used to analyze other chemicals are called indicators.

10. Attaching a poison to a dye that stains only certain cells is a form of chemotherapy.

11. How a ruthenium dye binds to DNA can provide what kind of information?

Information about the structure of DNA.

12. How are dyes used to improve glass used in greenhouses?

Dyes convert green light to red light which can be used by plants.