

Cancer Education Project Abstracts



The Cell Cycle and Cancer

This series of 6 learning experiences is designed to develop students' understanding of the cell cycle in the context of skin cancer. As students complete the activities, their understanding of mitosis shifts from a simplistic 5 stage model towards a cell cycle model that is regulated to maintain homeostasis. They then apply this understanding to model how defective cell cycle regulation can lead to cancer.

- **Part 1: Catching Some Rays**

Information gathering in the context of a young female who has been diagnosed with skin cancer.

- **Part 2: Cancer, a Historical Perspective**

Exploration of a basic understanding of cancer from a historical perspective. This experience utilizes a series of four short video clips from the NIH Supplement: *Cell Biology and Cancer*.

- **Part 3: Class Noted on Mitosis**

Class Lecture Notes. Student version and teacher key are provided.

- **Part 4: Mitosis in Plant and Animal Cells**

Lab that includes a mitosis simulation using red and yellow popping beads, and online and hands-on experiences identifying cells in various stages of mitotic division.

- **Part 5: Causes of Cancer Animations**

Cell animations from the NIH Supplement, *Cell Biology and Cancer* that bridge cell cycle and cancer information.

- **Part 6: Modeling the Normal Cell Cycle**

Hands-on activity that models the cell cycle in a normal cell.

- **Part 7: Modeling the Cell Cycle and Cancer**

Hands-on activity that models the cell cycle in a cancer cell.