

Recovering the Romanovs

CORRELATION TO NATIONAL SCIENCE EDUCATION STANDARDS

5-E Instructional Model for *Recovering the Romanovs*

Engage

Part I engages student interest through a series of family photos, actual film footage, and a brief narrative describing the political climate of the times.

Explore

Part II explores the question of Anna Anderson's claim that she was actually Anastasia.

It also explores the ways in which pedigrees can be used to show family inheritance patterns.

Explain

Part II provides students with information so that they can explain how the following concepts were important in solving the mystery

- **Pedigrees**
- **Mitochondrial vs Nuclear DNA**

For enrichment activities, students can go to: www.dnafb.org (concept #30).

For the genetics of mitochondrial disease go to www.umdf.org/mitodisease/genetics.html.

- **Sex-linked Traits**

For information and enrichment activities, students can go to www.dnafb.org (concept #13).

For the cause, symptoms, and genetics of hemophilia, students can go to www.ygyh.org.

Elaborate

Part II allows students to access data through the Cold Spring Harbor Laboratory's *Bioservers* site. Students can analyze and compare DNA sequences from the Romanov family and Anna Anderson.

Evaluate

Have students produce a storyboard or poster showing how DNA technology was used to answer the question about Anastasia.

Have students do research to find out how DNA sequencing is important in medicine and forensics.