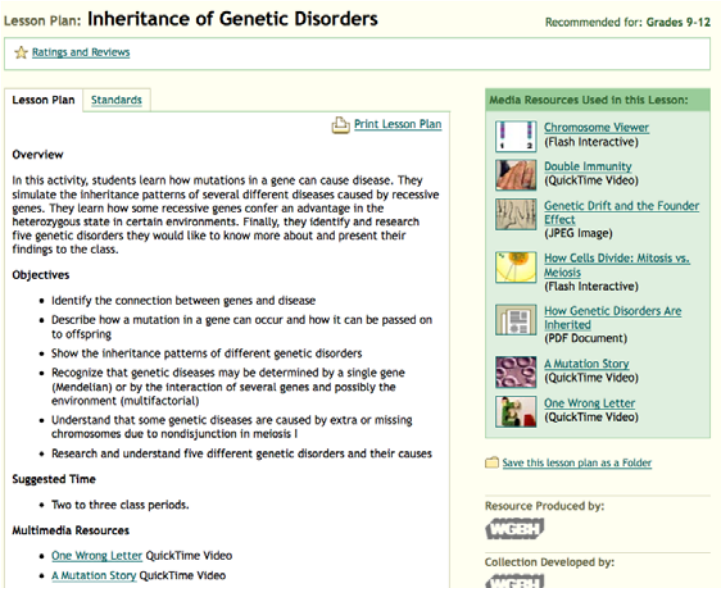
Genetics and evolution digital resource examples from Teachers' Domain.

1. **Common past, different paths.**
   www.teachersdomain.org/resource/tdc02.sci.life.cyc.embryo
   Microphotography shows four embryos inside an egg or mother's womb, capturing the shared ancestry of animals with backbones.

2. **Lesson plan: History of the theory of evolution.**
   www.teachersdomain.org/resource/tdc02.sci.life.evo.lp_evohist
   In the activities in this lesson plan, students make a comparative timeline of events in world history and evolutionary theory.

3. **Inheritance of genetic disorders.**
   www.teachersdomain.org/resource/tdc02.sci.life.gen.lp_disorder
   In this activity, students learn how mutations in a gene can cause disease, simulate the inheritance patterns of diseases caused by recessive genes, identify and research a genetic disorder, and present their findings to the class.



Lesson Plan: **Inheritance of Genetic Disorders**

Recommended for: **Grades 9-12**

Ratings and Reviews

Lesson Plan | Standards

Print Lesson Plan

Overview

In this activity, students learn how mutations in a gene can cause disease. They simulate the inheritance patterns of several different diseases caused by recessive genes. They learn how some recessive genes confer an advantage in the heterozygous state in certain environments. Finally, they identify and research five genetic disorders they would like to know more about and present their findings to the class.

Objectives

- Identify the connection between genes and disease
- Describe how a mutation in a gene can occur and how it can be passed on to offspring
- Show the inheritance patterns of different genetic disorders
- Recognize that genetic diseases may be determined by a single gene (Mendelian) or by the interaction of several genes and possibly the environment (multifactorial)
- Understand that some genetic diseases are caused by extra or missing chromosomes due to nondisjunction in meiosis I
- Research and understand five different genetic disorders and their causes

Suggested Time

- Two to three class periods.

Multimedia Resources

- One Wrong Letter QuickTime Video
- A Mutation Story QuickTime Video

Media Resources Used in this Lesson:

Chromosome Viewer (Flash Interactive)

Double Immunity (QuickTime Video)

Genetic Drift and the Founder Effect (JPEG Image)

How Cells Divide: Mitosis vs. Meiosis (Flash Interactive)

How Genetic Disorders Are Inherited (PDF Document)

A Mutation Story (QuickTime Video)

One Wrong Letter (QuickTime Video)

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