

Learning Activity Template

Title: Human Genetics Project

Curriculum: Biology

Grade-Level Span: Tenth Grade

PURPOSE:

Students will understand the fundamentals of human genetics and evolutionary trends in population.

DESCRIPTION:

Students will complete classroom and community genetic surveys. Students will analyze surveys by applying the Hardy-Weinberg Principle. Finally students will use the results of the analysis to create a family pedigree.

ACTIVITIES	CURRICULUM STANDARDS	NETS PERFORMANCE INDICATORS
Human Genetics Classroom Survey	IV: B – 3 IV: D IV: E	1,2, 3
Develop Community Survey and Complete Sampling	IV: B – 3 IV: D IV: E	1,2, 3,5
Apply Hardy-Weinberg Calculations Using Excel Spreadsheet & Graph	IV: B – 3 IV: D IV: E	1,2,3,4,6
Analysis and Conclusion – Word Process	IV: B – 3 IV: D IV: E	1,2,3,
Family Pedigree: Computer Flow Chart	IV: B – 3 IV: D IV: E	1,2,3,
Post Results to Local Server	IV: B – 3 IV: D IV: E	1,2,3,4

TOOLS AND RESOURCES:

(List all Web sites, specific software and hardware, and other needs.)

Microsoft Office: Word, Power Point, & Excel

Data Bases: www.isd361.k12.mn.us (Links to research tools)
www.elem4your.org

Local Sever Interface or Web Page Publishers

ASSESSMENT:

(How will you assess the students' learning? If you have a rubric, record it here. Be as specific as possible.)

Facet:	Expected Action:	Result of Action:
Explain Interpret Apply	Students will be apply, interpret, and explain the variation or lack off in a local population.	Attempt Achieve Excel
Perspective Empathize Self-knowledge	. Students will perceive, empathize, a realize the affects of geographic isolation on population genetics	Attempt Achieve Excel

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COMMENTS:

(Have you taught this learning activity before? What are the great ah ha's/experiences you had?)

Students are very interested in this topic and with minimal alterations technology can be incorporated.