



DATE SAVER

Bioinformatics in Genetics

with Susan Kostovny
retired Honors & AP Biology teacher

March 31

8:30am – 3:30pm at IU1 Room 119A

Grades 9-12 Science Education

It used to be called “McGyver” science—taking the book learning and applying it to a real-life situation. Ideally every science unit should culminate in application of the knowledge. Students need to describe, question, explain, test, communicate and build critical-thinking skills in order for this application of knowledge to occur. This is what teachers refer to as “Learning”.

In this supplemental Genetics Unit you will learn how your students can incorporate their basic knowledge of genetics into computer programs (bioinformatics) in order to analyze data and draw conclusions. A simulation occurs in which students assume the roles of employees in a biotechnology company. This company is using bioinformatics to identify DNA sequences associated with cancer. The goal is to use this knowledge to develop products that prevent, diagnose, treat or even cure cancer.

The students assemble DNA sequences, determine if these sequences are part of a gene, compare this sequence to a database, retrieve matches and try to determine the function of this sequence. The sequence is then connected to a rare disease, the disease is researched and the “**Informed Consent Dilemma**” (to tell or not tell) is discussed.

This is teaching at its’ best!!!

An electronic and printed copy of the Biological Sciences Curriculum Study (BSCS) Bioinformatics workbook will be provided to each workshop participant.

Register at <http://www.solutionwhere.com/iu1>

\$20 registration fee. Lunch provided

Questions? – Please contact Nancy Tsupros
ntsupros@washjeff.edu