

HIGH SCHOOL CIA
TUE, MAY 27, 2008

ANNOUNCEMENTS:

Employment/Positions:

Some open positions: many MS Science (034,234,235), more to come?

Ninth grade science/Chemistry

No new Bio openings anticipated.

Requests for transfer must be approved by both principals and supervisor.

Teachers leaving system are asked to informally inform supervisor. (Resignation before June STILL saves health benefits for summer).

IDEAS???

Summer Programs:

2,3,4th grade with UNH.

BioDiversity Peabody still has slots??

CCAT/UCONN program on nanotech/lasers/photonics saving 3 spots for NH. Brochures available and attached.

Others... see CT Science Connection newsletter emailed.

Science Fair: Feedback welcome, look for survey

Curriculum:

FEEDBACK WANTED!!!!!! On all curriculum, ideas for other activities, projects, labs, assessments, etc... send via email!

Official curriculum survey as well.

DISTRICT Committee: to look at time and schedules for science. K-8 now, HS next year.

QUARTERLY ASSESSMENTS: Scantrons in mail on Wed/Thur, tests online now (copies not made in time ☹ for CIA)

. GOOD QUESTIONS always wanted, but please submit in advance.

TOPIC of the DAY:

Issues based Science

WHY?

HOW?

WHAT?

CT SCIENCE STANDARDS

apply science process skills
read and write science-related texts
search scientific databases
use mathematics to make sense out of data
pose and evaluate arguments based on evidence
apply logical conclusions from such arguments

INQ2 Read, interpret and examine the credibility and validity of scientific claims in different sources of information.

INQ9 Articulate conclusions and explanations based on the results of the research, and assess their validity based on the design of the investigation.

INQ10 Communicate about science in different formats, using relevant science vocabulary, supporting evidence and clear logic.

STUDENTS TALK TO EACH OTHER ABOUT SCIENCE, ISSUES and THEIR THINKING!!

HOW:

Evaluate a web site:

Have a debate:

Write an essay:

Present an issue:

Have a FORUM:

(assign a role to each group, they investigate, present, discuss, a town council decides)

IMPACT OF SCIENCE AND TECHNOLOGY:

RISKS

BENEFITS

ADVANTAGES

DISADVANTAGES

ASSESSMENT:

GENERAL RUBRIC (writing) 1-6

Taking a clear stand or position

Supporting position with accurate and relevant information

Organizing ideas logically and effectively

Expressing ideas with clarity and fluency

MAKING DECISIONS/ FORMING OPINIONS

Yes/No ---→ IN BETWEEN -→ OPEN ENDED

What is the effect of fossil fuel use on global temperatures? (science)

Why do we use fossil fuels for energy? (science, economics)

What is the effect of fossil fuel use on the environment? on society? (science, social)

What alternatives are there to fossil fuels?

What are the risks/benefits or the advantages/disadvantages to using fossil fuels for energy?

What are the credible, reliable sources on using fossil fuels for energy?

Should we keep using fossil fuels? (Yes/No)

Yes, but..... NO, and use this instead....

What should we do about fossil fuels? Why? How?

HIGH SCHOOL:

How should/do we protect ourselves from natural/man made disasters (acid rain)?

What are the advantages and disadvantages of genetically modified food? What is your opinion and why?

What's the right use of refrigerants in the 21st century?

Online resources:

National Center for Case Study Teaching in Science

<http://ublib.buffalo.edu/libraries/projects/cases/case.html>

Case Study Teaching in Science Bibliography:

<http://ublib.buffalo.edu/libraries/projects/cases/teaching/casebiblio.html>

FORCES OF NATURE

<http://library.thinkquest.org/C003603/english/index.shtml>

CHEMISTRY CASES

<http://www.ChemCases.com>

Should we add interdisciplinary writing essays/projects to our curriculum?

What are some ways we can/have used this with students?

What are the structures needed?

How will you get the students talking/discussing with each other?

EXAMPLE:

Slippery Slope landslide: http://ublib.buffalo.edu/libraries/projects/cases/landslide_notes.html
SLIPPERY SLOPE OF LITIGATING GEOLOGIC HAZARDS:
CALIFORNIA'S PORTOGUESE BEND LANDSLIDE

DISCUSSION NOTES:

What does YOUR GROUP think the main cause of the landslide was?

Earthquake Vibration from Construction Added Mass to the head of the slide

Added Mass to the "toe" of the slide Vibration from traffic

Added water from septic system to the clay/groundwater volcanic ash

Weakening of clay from detergents wave erosion at the toe

WHY?

WHO SHOULD PAY FOR "FIXING" THE SLIDE?

The homeowners on the hillside the company who built the homes

The people in Rolling Hills (north of the slide)

the company who built Crenshaw Blvd the company who built Palos Verdes Drive

the company who built the septic systems geologists who helped the county

the county of Los Angeles who approved the roads

WHY?

WRITING ASSIGNMENT: Who is responsible for protecting against landslides? (in general) . Discuss your opinion, and what you think the role of individual people, scientists, companies, and local and state governments should be in protecting against landslides. What should each do, and why?

(3-5 paragraphs)

THEN:

Meet as a class and DECIDE!