

CREATIVE STRATEGIES TO PROMOTE MEANINGFUL LEARNING

Ask your students to:

Analyze a "Roadrunner" cartoon for its lack of conformity to Newton's Laws

Create a board game:

- reviewing chemical symbols, formulae, bonds, etc.
- reviewing forces, energy conversions etc.
- reviewing cellular parts, functions, relationships etc. Create a crossword puzzle

Create a dictionary of words around a scientific topic/concept

Create an epitaph and obituary for a scientist

Create a "five-wrench tool-kit" for fixing the environment

Create an illustrated time line

Create a mural

Create a three dimensional representation of:

- a molecule or class of molecules
- types of crystals e.g. face centered, rhombic
- plate theory, geological formation, or volcano
- a general cell
- meiosis or mitosis

Create a time capsule showing scientific activity/knowledge in a field in the Year 2050

Create a "wanted" poster

Complete a Venn diagram of similarities and differences

Conduct an environmental impact study

Design a poster

Draw a cartoon:

- illustrating molecules in a thermometer at different temperatures
- showing meiosis or mitosis from the point of view of ...
- illustrating Newton's laws in an everyday activity e.g. pool or billiards
- showing force effects on a common object

Invent a device to make life easier:

- a coffee cup that doesn't burn your hand
- to aid a handicapped person to hold a utensil or pick something up

Keep a diary as:

- a famous scientist
- a plant or animal
- an atom as it takes part in a chemical reaction
- a hamburger as it goes through the digestive tract OR a blood cell as it travels through the body, etc.

Make a commercial or write an advertisement for:

- a new technical device, stressing its scientific base
- a new medicine or medical treatment e.g. laser surgery, transplantation

Make a video

Organize a debate

Plan a contest:

- paper planes
- elastic band powered vehicles
- egg drop

Prepare a photo-essay

Prepare a skit

Prepare a brief for a public hearing on a Science-Technology-Society issue

Present a panel discussion

Do a role play about:

- an electrical circuit
- meiosis or mitosis
- a chemical reaction

Write, administer and analyze a questionnaire on a scientific issue

Write an editorial

Write a human-interest story:

- the effect of a new medical technology
- the effect of environmental rules on working families
- the winner of a Nobel prize
- on someone who was affected by a radiation leak
- on someone who lives near an environmentally dangerous area

Write a letter to a politician regarding a Science-Technology-Society issue:

- cloning
- reproductive technology
- the sale of human organs
- environmental forest/fishing practice
- preservation of endangered species
- genetically modified food

Write a memoir

Write a poem -the possibilities are endless! Write out questions for an interview with:

- a famous scientist
- an animal e.g. effect of global warming on salmon...or effect of population encroachment on cougars
- an element
- trees in a forest

Write a song

Write a travel brochure for:

- part of the solar system e.g. planet, star, moon
- a particular kind of ecosystem