

SLO Pilot Project Presentation
Biology 10
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Bio 10- fulfills GE requirement for lab science. Most students see no relation between biology & their life.

My goals:

Survey biological sciences. Show relationship to personal life. Be literate on environmental issues and scientific techniques to vote responsibly.

Requirements:

Generate enough interest to learn vocabulary and integrate facts

Method:

Multiple choice questions on text material – memorize facts

What's new - 6 short reports on class material as it applies to one geographic location. Students choose area. Provides framework for remembering wide variety of subjects

Report example using Tri-Valley Area

1. Location –east of Coast Range so less precipitation & wider temperature swings than areas slightly west. Weather dominated by Pacific Ocean & Central Valley.
2. Native plant – must adapt to hot, dry summers. Oak tree adapts by tap root and waxy leaves, grows in winter when it rains
3. Native animal – deer – don't require much water, spend day in shade chewing tough native shrubs, camouflage coloring
4. Local Biotechnology or Molecular Biology project –Development of test for Sudden Oak Death.
5. Predator/Prey – Fungus & sycamore trees at Del Valle – result of using arroyos during summer to reroute water
6. Unusual organ system –musculoskeletal system of deer -> jump incredible heights, change direction instantly – escape predators, respiratory system of fish

Evaluation of reports:

6 reports

Include important principles from class with information specific to area.

Proper format

On time

Brief oral presentation on area in spirit of sharing information.

Extra credit for graphics

Written final

Organize all 6 papers into a coherent story that combines facts and shows understanding of how facts apply to ecosystem.

Theme examples: water politics, travel log, food web

Changes from traditional Biology 10 class

Formerly - started at beginning of book – chemistry, cells, -> biosphere, larger observations. Multiple-choice tests only on lecture material.

Pilot project

Start at end of book – biosphere to cells & chemistry, finer observations

Multiple-choice tests on lecture material &

Reports with descriptions & applications of class material. Some students better at general principles than fact recall.