The Science of Sports

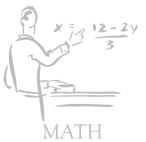
By actively participating in various sport activities, the students will investigate and apply Newton's Laws. The students will gain knowledge and develop teamwork skills.

9-12

GRADE LEVEL

ARTS

LANGUAGE



MATH

Misc

MISCELLANEOUS

SCIENCE

HISTORY

SOCIAL STUDIES

7

CLASSES

$900

TOTAL BUDGET

Curriculum/State Standard

Physical Science/Relationships of Newton's Laws and Sports.

Hands on activities that demonstrated the scientific principals of Newton's Laws.

Team Work/Cooperative Learning

Overview

The students will participate in various sports activities that will increase their knowledge of scientific principals related to sports. The students will develop games, activities, and report on a sport using information they have learned.

Objectives

- The student will participate in various sports activities.
- The student will define vocabulary terms related to the sports/science unit.
- The student will relate principals learned by writing and reporting on a sport.
- The student will experience working with a cooperative team of 2-3 people.

Materials

Camera, film, film development, computer software, photo albums, calculators, science lab equipment, sporting equipment, sports related activities in the community, and videos on scientific principals

Readiness Activity

We worked on classroom activities that introduced Newton's Laws. We also learned to use a calculator to compute necessary formulas. To prepare for this project, we watched a video on Newton's Laws. The students worked in teams and participated in activities using sports equipment and games to prove Newton's Laws.

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Kids In Need

THIS WINNING LESSON PLAN WAS SUBMITTED BY:

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"The Science of Sports" project continued...

Strategies/Activities

On January 8, the students were introduced to the concept of motion and force. The students participated in an activity that demonstrated this concept.

On January 29, the students designed a slow flyer and were introduced to the formula for speed.

On February 5, the students used matchbox cars to investigate speed and acceleration.

On February 12, the students played a ballgame and applied the concepts of gravity and force.

On February 26, the students went to COSI and participated in a lab conducted by COSI that reinforced previous concepts.

On March 5, the students tested the concept of acceleration and centripetal force by developing and testing various experiments.

On March 12, the students participated in various games at an area grand slam. As a culmination to the unit, the students analyzed a sport and applied principals that they learned.

Culminating Activity

Our culminating activity was a team building event at a grand slam. The students participated in various sport activities and applied learned principals. Students also prepared posters, worked together to report on and demonstrate a sport.

Evaluation

The students were evaluated through journal writing, active participation, and their sport/demonstration report; also, by how much fun we had in learning Newton's concepts. My main goal was to let the students enjoy themselves and to conclude that learning can be fun.