

NJRSF REGISTRATION LIST
for Essex County (of residence)
March 22, 2006

Sagarika Nag West Essex H. S. grade: 11 age: 17
North Caldwell

advisor: Rui Dionisio (973-228-1200 x758)

Reaction Rates of Lactase Enzyme

Reaction rates of the lactase enzyme will be tested as assessed under various conditions.

Grace Dalton Cullen Villa Walsh Acad. grade: 9 age: 15
Maplewood

advisor: Mrs. Diane Cummo (973-5383680)

Hydroponics Plant Food: Blue-Green Algae Gloeocapsa vs. Pure Blend Pure Grow Hydroponics Plant Solution

Hydroponics: Can Blue Green Algae be Used as a Substitute Hydroponics Solution and Sustain Plant Growth?

Objectives/Goals The objective was to determine if blue-green algae *Gloeocapsa* could be used as a substitute hydroponics solution, which would successfully sustain plant growth.

Marisa Takada Martinez Millburn H.S. grade: 11 age: 16
Millburn

advisor: Dr. Paul T. Gilmore (973-376-3600)

Assessment of Stress Levels in Male Shelter Dogs

The purpose of this study is to observe and analyze the behavior in neutered and non-neutered male shelter dogs during the shelters open and closed hours to determine whether unfamiliar human presence induces stress.

Nina Louise Lee Millburn H.S. grade: 12 age: 17
Short Hills

advisor: Dr. Paul Gilmore (973-564-7130)

Effects of a Beverage Stimulant and Dietary Supplement Interaction on Cognitive Processes

The study tested the effects of Ginkgo biloba extract and its interaction with caffeine at different dose levels on learning and memory functions using a zebrafish model.

Ezra Adam Ginder North Jersey Home School Assn. grade: 10 age: 16
Bloomfield

advisor: Mr. David Cincotta (973-792-5800)

Corrosion of Steel

I will determine how the rate of corrosion of steel is affected by the salinity of water and what causes the changes in the rate of corrosion.

Jeremy Francis Kane St. Benedicts Prep grade: 11 age: 17
Glen Ridge

advisor: Dr. David Cincotta (973-7925800)

Periodic Trends in Spectroscopy

Looking for periodic trends in the intensity of light emitted when certain elements are excited by heat.

Felipe Londono St. Benedicts Prep grade: 10 age: 17
Bloomfield

advisor: Dr. David Cincotta (973-7925800)

Alloy with an specific heat

An alloy made out of copper and calcium will have the same specific heat as aluminum. Specific heats of different alloys will be presented.

Gavrielle Rebecca Untracht Millburn H.S. grade: 11 age: 17

short hills

advisor: Dr. Gilmore (973-3763600)

A neural circuit model for integrating a multiple visual cues: application to real-time object recognition and tracking

I am building a robot that will eventually be able to track an image moving through a scene. At the moment, I am working with the object recognition code.

Alexander George Bick Millburn H.S. grade: 12 age: 17

Short Hills

advisor: Dr. Paul Gilmore (973-376-3600)

Learning on the Go: The First PDA Intelligent Tutor

This research resulted in the creation and evaluation of the first intelligent tutoring system that runs on the Personal Digital Assistant Platform.

Emily Nicole Bick Millburn H.S. grade: 9 age: 14

Short Hills

advisor: Dr. Paul Gilmore (201-376-3600)

A More Discriminating Insect Repellent

A novel method and apparatus was devised. Significant statistical analysis demonstrated that a new citronella based, environmentally friendly, insect repellent was more discriminating between harmful and helpful insects than the industry standard: DEET.

Alex Michael Blumenthal Millburn H.S. grade: 11 age: 16

Short Hills

advisor: Dr. Paul Gilmore (973-564-7130)

Theoretical Modeling of an Inertial Electrostatic Confinement Fusion Apparatus

The study refined the mathematical model for an Inertial Electrostatic Confinement device, an alternative form of fusion which uses a spherical anode grid to confine plasma; the focus of the study was upon the effects of varying the radius of the grid.

Maria Raquel Baab, and Joanna Palma Ricciardi

West Essex H. S. grade: 12 age: 18

North Caldwell

advisor: Mr. Rui Dionisio (973-2281200)

Diffusion/Osmosis of Various Water Types: O2 Go a No?

This experiment is going to compare the diffusion/osmosis of different water brands (especially the brand O2 Go) against other bottled, tap, and distilled waters.