Students in Science 6, Science 7 and Science 8 will be challenged to enrich their knowledge of science by completing a science fair project. The project will not be limited only to experiments this year. Students may opt to research a topic and present an exhibition or they may attempt to identify and solve a science-based community problem. Student and teacher together will explore possible topics and determine which project format best serves the topic of interest. The information provided here serves as an introduction to the science fair project and includes a calendar of important deadlines. Once the student commits to a topic and project type, a detailed project packet will be provided to guide the student through the project.

Important Dates:
- Students must notify their teacher of their topic choice by **October 11, 2002**.
- Students must notify their teacher of their project type and submit the Science Fair Commitment Form by **October 18, 2002**.
- Students must submit a bibliography that includes a minimum of 4 diverse sources by **November 1, 2002**.
- Students who will perform experiments must submit necessary SRC forms, as determined by their teacher, by **November 8, 2002**.
- SRC form revisions must be submitted by **November 15, 2002**.
- Students must submit the final version of their project with all required components by **January 10, 2003**.

Topic Selection:
- There are a broad range of categories from which students may select a project. Students should consider their interests as the time commitment for this project is extensive. Once a general category of interest has been identified, students should utilize the library, the Internet, and their textbook to select a specific topic. Students should try to avoid topics that are too broad or too narrow. The teacher can provide guidance with topic selection.

*Behavioral/Social Sciences* - psychology, sociology, animal behavior, learning, perception, urban problems, public opinion surveys, education testing

*Biochemistry/Microbiology* - DNA, RNA, proteins, enzymes, photosynthesis, blood chemistry, food chemistry, bacteria, viruses, fungi

*Botany* - soil, plants, trees, hydroponics, algae, plant diseases

*Chemistry* - materials, plastics, metallurgy, acids and bases, atoms, periodic table, elements

*Computers* - new developments in software and hardware, information systems, computer methodologies, data

*Earth/Space Sciences* - geology, oceanography, meteorology, earthquakes, volcanoes, petroleum, geography, minerals, topography, astronomy, astrophysics

*Engineering* - civil, mechanical, electrical, or chemical engineering, transportation, heating and refrigeration, communications, architecture, lasers
Environmental Science- pollution of air, water or land, waste disposal, environmental alteration (i.e., irrigation or erosion), ecology

Mathematics- calculus, geometry, algebra, number theory, statistics, probability, logic

Medicine/Health- medicine, dentistry, pharmacology, veterinary medicine, pathology, nutrition, sanitation

Physics- solid state, optics, acoustics, nuclear, atomic, superconductivity, thermodynamics, semiconductors, magnetism

Zoology- animal genetics, ornithology, ichthyology, herpetology, entomology, animal ecology, anatomy, paleontology, physiology, animal husbandry

**Project Selection:**
The type of project will be determined in large part by the topic selected. In some cases, a topic may be pursued in more than one way. Below are some general guidelines regarding the selection of project type. **It is best to select the topic first and then let the topic guide the selection of an appropriate project type.**

**Experiment**- This is the project type that most students think of when they hear “science fair.” An experiment must include a testable question or problem for which a hypothesis can be proposed. Variables must be identified and manipulated. For example, a student could experiment to determine the effectiveness of 3 different fertilizers on plants. This project will require a logbook, bibliography, display board, and presentation.

**Exhibition**- This is the project type that is most similar to the poster sessions that “real” scientists create for conventions. An exhibition will be created when the topic lends itself only to research. For example, a student may be interested in black holes in outer space. Certainly, no experiment would be feasible for such a topic. This project will require a research paper, bibliography, display board, and presentation.

**Community Problem Solving**- This is the project type that allows a student to explore a real problem in his/her community and use scientific problem solving strategies to explore and implement a solution. For example, a student may identify a need for recycling at The Rice School. The student would research the issue of recycling and the related science of the issue and construct a solution to the problem with a measurable outcome. This project will require a process paper, bibliography, display board, and presentation.
Science Fair Commitment Form

Student Name: ___________________________________________________________

Class Period: _______________________________________

Topic: ____________________________________________________________________

Project Type: Experiment       Exhibition       Community Problem Solving

Grade 6 & 7 only: Individual       Team

If team, other team member: ______________________________

Parent Signature: _________________________________________________________

Student Signature: ________________________________________________________

Teacher Signature: _________________________________________________________