

- **Discussing data**

The participant will be guided in appropriate ways to:

- Look at and examine his/her data
- Draw conclusions from the data by answering questions such as:
  - Do the data support the hypothesis?
  - Does it have to support it?
  - What if it doesn't?

### Part IV – Presenting to Others

#### **Stepping Up Onto the Stage**

- **Developing presentation materials**

The participant will learn about preparing:

- A PowerPoint® presentation for NCSAS competition
- A poster (backboard) presentation for science fair competitions AND
- A research paper

- **Putting it all together**

The participant will be aided in:

- Reviewing what he/she has
- Determining what else, if anything, is needed
- Editing his/her work

- **Presenting to others and thinking on your feet**

Each participant will have a chance to take the stage and will be given:

- Pointers on how to share his/her project with others
- The opportunity to practice among his/her our peers
- The opportunity for a dress rehearsal before scientists
- Practice in answering questions from an audience
- An idea of what to expect from judges
- A “dry run,” if it can be arranged, to present before an audience of the participants’ families

- **Final suggestions from scientist advisors**

Each participant will receive some final advice, suggestions, and encouragement so that he/she will know that **It's all in his/her hands now! So go for it!**

**If sufficient interest exists, A Time for Science can set up and conduct a “local” competition to enable students to qualify for regional or district competitions.**



## *Get a Jump on Science Fair*

### **A Program to Satisfy Your Curiosity and Produce a Project for Science Competitions**

*Get a Jump on Science Fair* is a four-part, group program consisting of eight sessions for middle grades students that will fully engage them in the “*Doing of Science.*” Part I is designed to guide the student-scientist through the process of.

- Exploring his/her true interests
- Researching the literature
- Developing a project topic
- Generating a realistic problem question
- Learning experimental techniques
- Setting up experimental procedures to gather and collect relevant data.

After executing “research,” in Part II, Part III is designed to assist the young scientist in

- Assembling the data
- Presenting and analyzing them appropriately
- Then drawing valid conclusions.

Part IV is designed to guide the student in

- Both written and oral presentations of his/her findings.

To maximize the benefit of this program to each of its participants, it is anticipated that participants will pursue their work after each of the sessions in order to complete the tasks required and will work through the “research” period on their selected projects, in order to complete the last sessions of the program.

To be part of the 21st century we must make **A TIME FOR SCIENCE** now.  
PO Box 425 Ayden, NC 28513 \* 252-746-4470 \* atfs@atimeforscience.org

### **Ask about the formation of a Science Club**

*A Time for Science's* Science Club Program (for class, school, club, home-school group, scout troop, organization, *etc.*) requires a minimum of 8 participants. Arrange for an exploratory visit or discussion with *ATFS* to establish an appropriate schedule of sessions and activities to meet the needs of your group's interest and to learn more about fees discounts or possible financial aid.

#### *A Time for Science*

**Location: 949 Contentnea Lane, Grifton, NC 28530**

Mail: P.O. Box 425, Ayden, NC 28513

Phone: (252) 746-4470

E-mail: atfs@atimeforscience.org

Web: www.atimeforscience.org

## *Parents & Teachers, are you aware that:*

- Through student science competitions such as *NC Student Academy of Science (NCSAS)*, *NC Science and Engineering Fair (NCSEF)*, *Envirothon*, and others over \$10 MM worth of prizes and awards are available to competitors in the form of scholarships, internships, money grants, *etc.*?
- Success at local, regional, State competition is required for national participation?
- Years of experience have demonstrated that:
  - It takes time to complete a winning project so early start on a project is helpful.
  - Students receiving assistance of the type offered through this program often fare better in such competitions?
- *ATFS* can assist, advise and support AND provide a local competition - through its sponsorship of Science Clubs.

### Part I - Generating a Project

#### Getting Started

- *Arousing curiosity*  
Participants will be guided to focus in on and refine topics by exploring interesting electronic and print media such as:
  - *Live Science.com*      • *Science Buddies*
  - *Science Week*          • *And others*
- *Selecting a topic and question*  
Participants will learn how to:
  - Narrow things down using a “Four Question Strategy”
  - Recognize & form a good problem question

### Beginning to Write

- *Searching the Literature*  
Participants will learn:
  - What to look up
  - What sources to use
    - Which are appropriate    • Which are not
  - What to put into their research paper and
  - What not
- *Beginning the writing*  
Participants will begin the writing of the all-important introduction to their papers

### Doing What Scientists Do

- *The Fun Begins*  
With the results of their literature search in hand each participant will be given guidance in:
  - Editing his/her introduction
  - Using the discoveries of his/her literature search to zero-in on his/her hypothesis
- *Experimental Design and Planning*  
With an hypothesis established, each participants will be guided in formulating an experimental design considering:
  - What data are needed
    - What measurements to make
    - How to take these measurements
    - What materials are needed
    - What safety issues are involved
  - How the data might be presented
    - Data tables      • Graphs
    - Figures          • Equations

### Administrative Requirements

- *Filling Out the Paperwork*  
In keeping with the regulations, the student (and parent/teacher) will receive instructions for filling out the various forms for eligibility to participate in the various competitions.
- *Advisor Approval*  
Upon appropriate completion of this phase, the participant will be able to receive the necessary approval for his/her experimental design either from an *ATFS* advisor, teacher or by another qualified adult in order to proceed with his/her experiments.

### Part II - Doing the Research

- *Now Go Prove Your Point!*  
The participant will now be able to begin collecting his/her data and can continue to do so throughout the “research” period - and beyond.

### Part III - Making Sense of the Data Got data – Now What?

- *Analyzing data*  
With data collected over the “research” period, the participant will be guided in:
  - Examining different types of data that require different types of analyses
  - Determining which treatments would be best for the data available
- *Presenting data*  
The participant will:
  - Explore the use of Excel®, to examine different types of graphs and figures for different types of data
  - Determine which presentations are best for the project’s purpose.