

# A Time for Science

## “Jumping into Science Research”\*

### A four session Program to Satisfy Your Curiosity about a Topic and Produce a Project for Science Competitions

#### October 24

Student Academy of Sciences District Meeting ....ECU Howell Science Complex\*\*

**This meeting is open to all** and all students and teacher attendees will receive:

- Information about the North Carolina Student Academy of Sciences (history, programs, value, etc)
- Information about other various State and Regional student science competitions NCSAS, Science Fair, Science Olympiad, etc. (dates, requirements, etc.)
- Overview and assistance with how one might go about selecting and researching a topic and problem question of interest.

All attendees will be invited to register for and join one of the “Jumping into Science Research” Programs (3<sup>rd</sup> – 5<sup>th</sup> grade; 6<sup>th</sup> – 8<sup>th</sup> grade; 9<sup>th</sup> – 12<sup>th</sup> grade)

This program consists of a series of four *hands-on working sessions* throughout the school year guided by *experienced science educators*. These workshops will be further supplemented by phone and e-mail *support from an assigned project advisor*. Together these “guides” will enable the participant to produce a scientific research project.

#### November 7

Session 1: Getting Started .....ECU Howell Science Complex\*\*

- ***Arousing your curiosity***  
You will be guided to focus in on and refine topics and problem questions by exploring interesting electronic and print media such as:  
*Live Science.com*                      *Science Week*                      *Science Buddies*
- ***Selecting your topic and question***  
You will learn how to:
  - Narrow it down using 4 Question Strategy
  - Form a problem question
  - Learn to recognize a *good* problem question
- ***Literature search***  
You will learn:
  - What to look up
  - What sources to use
  - What to put into your research paper
  - What else needs to be in your research paper
- ***Begin writing***  
You will begin the intro to your paper *which will be brought to the next session*
- ***Connect with your Advisor***

After you have centered on a topic and problem question you will be paired with an appropriate advisor from among the “*A Time for Science*” (ATFS) volunteer scientists. This advisor will be available to you throughout the year by phone and e-mail to answer questions, offer advice, suggestions, and support on all aspects of your project as you progress.

## **December 5**

### **Session 2: Doing What Scientists Do.....ECU Howell Science Complex\*\***

- ***The Fun Begins***  
With the results of your literature search in hand you will be given guidance in
  - Editing assistance for your intro
  - Using your literature search discoveries to hone in on your hypothesis
- ***Experimental Design and Planning***  
With an hypothesis established you will be guided in formulating an experimental design.
  - Deciding what data you need
    - What measurements to make and how to make them
    - What materials you need
    - Considering safety issues
  - How your data might be presented
    - Data tables
    - Graphs and figures
- ***Advisor approval***  
After you have completed the process described in this session you *must get approval of your experimental design* from either your ATFS advisor or another qualified adult (e.g., yours or another science teacher, technically qualified friend, etc.)
- ***Necessary Forms***  
At this stage you will receive instructions in filling out forms for eligibility for the various science competitions.
- **Prove your point!**  
You will now be able to begin collecting your data and will be required to ***bring data to the next session***

## **January 16**

### **Session 3: You’ve got data. NOW WHAT?... ....ECU Howell Science Complex\*\***

- ***Analyzing your data***  
You will be guided in:
  - Examining different types of data that require different types of analyses
  - Determining which would be best for your data
- ***Presenting your data***  
You will:
  - Experiment using, Excel®, to see different types of graphs for different types of data
  - Determine which type would be best for what you want to show
- ***Discussing your data***  
You will be guided in appropriate ways to:
  - Look at your data
  - To draw conclusions from your data
    - Does your data support your hypothesis?
    - Does it have to support it?
    - What if it doesn’t?

- ***Developing your presentation materials***  
You will learn about preparing:
  - A PowerPoint® presentation for NCSAS competition
  - A poster (backboard) presentation for science fair competitions

## **February 6**

### **Session 4: Stepping Up On the Stage.. ....ECU Howell Science Complex\*\***

- ***Putting it all together***  
In time for the competition season you will be aided in:
  - Reviewing what you have
  - Determining what else, if anything, is needed
  - Editing your work
- ***Presenting to others and thinking on your feet***  
Now that you have the stage you will:
  - Be given pointers on how to share your project with others
  - Be given the opportunity to practice on your peers
  - Be given the opportunity for a dress rehearsal with scientist advisors.
  - Be given practice answering questions from your audience
  - Get an idea of what to expect from judges
- ***Final suggestions from scientist advisors***  
You will receive some final advice suggestions and encouragement and you will know that
- ***It's all up to you now! Go for it!***

**\*\*“Jumping into Science Research” is a program under development by the A Time for Science Nature and Science Learning Center for ultimate presentation on an annual basis. It is currently in a “Beta Test” stage and only the first 25 registrants can be accepted. Consequently, it is being offered at a reduced registration fee of \$25.00.**

**\*\*All meetings will take place at ECU Howell Science Complex unless notified in advance.**

**For more information on A Time for Science (A Greater Greenville Community Foundation Charitable Fund) go to the website [www.atimeforscience.org](http://www.atimeforscience.org).**