

SCIENCE OLYMPIAD
SUMMER INSTITUTE
PHOENIX, AZ
7/11/05

WRITE IT – DO IT

AGENDA

(Handouts and discussion will explore specific criterion in depth)

I. INTRODUCTION

- A. Goals of presentation
- B. Background/history of the event - Intent of the activity
- C. 2006 Rules interpretation
- D. Integrate the curriculum

II. COACHING THE EVENT

- A. Identification of possible building materials
- B. Techniques and development of writing skills
- C. Paring possibilities to develop a team
- D. Practice model building and identify variables
- E. Expectations of Event Supervisors' emphasis
- F. Discussion on symbols, diagrams & drawings
- G. Orientations and connections
- H. Student awareness of competition logistics

III. ADMINISTERING THE EVENT (For Site Coordinators and Event Supervisors.)

- A. Logistics - tables, chairs, space/number of rooms, traffic, windows, timing, security
- B. Model building and types
- C. Number of models
- D. Scoring

GOALS OF PRESENTATION

- **RULES OF THE EVENT**
- **STUDENTS PREPARATION FOR THE EVENT**
- **SUGGESTED STRATEGIES FOR SUCCESS**
- **RESOURCES**
- **EXAMPLES AND SAMPLES OF MATERIALS**
- **STRESS REDUCTION IN COACHING THE EVENT**

BACKGROUND AND HISTORY OF THE EVENT

- Original activity has a history of over 25 years. Has been a National Event for 22 years.
- Intent of the activity was and still is to encourage communication and expression with the use of acceptable language arts skills. Now has expanded to emphasize the scientists cooperate and communicate.
- The event's most recent significance is as a National Standards content Standard G, " Science as a human endeavor", i.e. teams and communication. It obviously also embraces subject matter contents as well as inquiry.

Write It Do It

INTEGRATE THE CURRICULUM

- **MATHEMATICS**
- **SCIENCE AND TECHNOLOGY**
- **LANGUAGE ARTS**
- **GROUP DYNAMICS**
- **ART**

**REALIZE A GOAL OF ATTAINING HIGHER LEVELS
OF SCIENTIFIC LITERACY**

WRITE IT DO IT

COACHING THE EVENT

PRACTICE, PRACTICE, PRACTICE

- **OVERVIEW OF 2006 RULES PARAMETERS AND THE COMPETITION**
 - Team members, time limits, words and numbers only to be used, (Exclude symbols, drawings, diagrams)
 - Use of acceptable writing skills, designated abbreviations defined.
 - Students should practice extensively with various building materials. Note list of possible, but not exclusive, items that may be utilized.
- **DEVELOP A WRITING STYLE**
 - Practice writing techniques to emphasize concise writing.
 - Each team member is to become familiar with their partners design explanations and handwriting.
- **DESCRIPTION CONSIDERATION**
 - Orientation, number and type of items, number of connections and angles, color, size, shape, if applicable design of structure

STRATEGIES FOR SUCCESS

- Design models
- Orienting design of model
- Use Experimental Design and Picture This activities
- Practice explaining design
- Initially, each team member should practice both writing and doing
- Concise and direct writing
- Count the number of connections
- Identify color, size, description
- May use common editing symbols
i.e. strike through, ^ for insertion
- Stress reduction for coaches
 - Involve language arts staff and faculty resources
 - Have students take responsibility for practice, models / design, writing skills and partner selection

MATERIAL LISTS

(Not exclusive)

- Straws (colored or plain)
- Push pins
- Styrofoam balls
- Paper cups
- Popsicle sticks (plain or with notches)
- Colored pipe cleaners
- Colored paper clips
- Colored tooth picks /Connector rods
- Modeling clay
- S mall wooden spools (approx. 1/4" diam.)
- 3x5 pleated like accordion
- Cotton balls
- Rubber bands
- Nails
- Screws
- Golf Tees
- Balloons
- Fishing Bobs
- Commercial sets, examples:
 - Pattern blocks
 - Googolplex
 - Tinker Toys
 - d-Stix
 - Legos
 - Lincoln Logs
 - String
 - Tape
 - Note cards
 - Skewers
 - Toys
 - K-nex

ADMINISTRATION LOGISTICS

• FACILITY

- **Two rooms - one with flat top desk/tables or lab tables (Alternative - can use the floor to build) one large enough to group writers at 4-5 models.**
- **Classroom that can be sealed from outside view.**

- **Black board to record time.**

- **Traffic control between the two rooms so that there is no communication between team members.**

- **Personnel - Dependent upon number of teams and sessions. Ideal 1 Event Supervisor or 2 Co-Supervisors - One for each room. Two Judges or proctors to assist with timing doers. Scorer.**

• EQUIPMENT

- **Building materials and models - see suggested list.**
- **Stop Watches**
- **Information, extra paper, pencil sharpener or extra pencils.**
- **One bag of “toys” for every student. Have a list posted as to what should be in the bag. Suggest putting more in bag than used, then announce that there may be pieces left over.**

• COMPETITION

- **A model for no more that 3-4 students. (Ideal is one per doer, but costly.)**
- **No advantage for finishing writing early as all writers are released at the same time.**
- **Writers may not touch or change the model position. They move themselves around the model.**

• SCORING

- **Number of connections.**
- **Orientation**
- **Number of pieces used (or left)**

