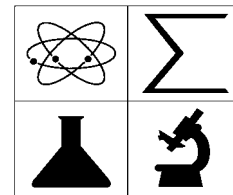


# MESA DAY CONTEST RULES 2003-2004



## Model Science – The Eye

- LEVEL:** Junior High School
- TYPE OF CONTEST:** Individual/Team
- COMPOSITION OF TEAMS:** 1 - 2 students per team
- NUMBER OF TEAMS:** 3 teams per Center
- SPONSOR:** Vonna Hammerschmitt, Director, CSU Fullerton MSP Center
- OVERVIEW:** Students will build an original model of a bisected eye and will answer questions drawn from related assigned reading provided in the MESA Day curriculum.
- MATERIALS:** The following materials will be provided by the student:
- “items that are not perishable” with which to build their model

### RULES:

- 1) Designated materials must be used in the model’s construction. **Violation of this rule will result in disqualification**

### Points will be awarded for the following:

- 2) The model meets minimum and maximum size requirements. (See JUDGING #3)
- 3) The model is clearly labeled.
- 4) The hand drawn diagram of the bisected eye is attached to the front of the display.
- 5) A materials table is attached to the display.
- 6) The competitors will attempt to answer five questions.

### JUDGING:

- 1) The competition will be judged in two parts. Judges will receive a score sheet.
- 2) The first element judged will be the model of the bisected eye.
- 3) One point will be awarded for each of the following: **(3 points maximum)**
  - a) The display including the stand and all of its components should fit into a space that is 3 ft. high x 3 ft. wide x 2 ft. deep. The model of the eye is no larger than 2 ft. high x 2 ft. wide x 2ft. deep and no smaller than 1 ft high x 1 foot wide x 1 inch deep.
  - b) The display is freestanding at the time of judging.
  - c) The display has a clearly labeled (14 required elements), hand-drawn diagram of the bisected eye on the front.

- 4) The designated materials for 2003-2004 are referred to as “**any materials that are not perishable.**” **Use of any other items will result in disqualification. No commercial models may be used.** Points will be awarded to models that most fully incorporate a variety of designated materials. A table of all materials utilized should be included in the display. A sample follows:

**MODEL SCIENCE – THE EYE– MATERIALS TABLE**

Structure	Item
1. Optic nerve	Elbow macaroni
2. Iris	Marble
3.	
4.	

- 5) One point will be awarded for each of the required elements listed below (0.5 points if the item is present and an additional 0.5 points if the item is labeled, **14 points maximum**)

Item	Present (0.5 points)	Labeled (0.5 points)
Cornea		
Sclera		
Choroid		
Iris		
Pupil		
Retina		
Optic Disc		
Optic Nerve		
Lens		
Central Fovea		
Vitreous Chamber		
Retinal Artery		
Conjunctiva		

- 6) Bonus points may be awarded for additional elements that are present, clearly labeled, and included in the materials table (1 point per additional element, **4 points maximum**).
- 7) Points will be awarded for accuracy. (**6 points maximum**)
- 8) Points will be awarded for creativity. (**4 points maximum**) Does the model display characteristics of originality and creativity in terms of overall composition? Has a creative use of materials been demonstrated?
- 9) The second element judged will be the students’ understanding of the anatomy of the eye. (**10 points maximum**)
- Students will answer questions based on information in a reading packet previously distributed.
  - Judges will determine the order of competition by a random draw.
  - Students will randomly select 5 questions.
  - Each correct answer will be awarded 2 points.
  - There will be a set of 5 previously **unpublished** tiebreaker questions available on the day of competition.

**AWARDS:** Awards will be given for 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place.

**MODEL SCIENCE – THE EYE**  
**Specification Checklist**

- 2003 – 2004** MESA Day Rules were used
- Only items which are **not perishable** have been used
- The **display** fits into a space that is 3 ft. x 3 ft. x 2 ft.
- The **model** is no larger than 2 ft. x 2 ft. x 2 ft
- The **model** is no smaller than 1ft. x 1ft. x 1 inch
- The **model** is clearly labeled
- Hand drawn diagram of the eye is attached to the display
- Hand drawn diagram is labeled
- There is a materials table

**ATTACHMENTS:** Questions  
Model Score Sheet  
Judging Guidelines

**OFFICIAL EVALUATION FORM FOR MODEL SCIENCE – THE EYE**  
Junior High School

*Copies of this score sheet will be provided by the MESA Day Host Center.*

Competitors: \_\_\_\_\_

Center & School: \_\_\_\_\_

Judges: \_\_\_\_\_

**Part I: General Model Criteria (3 points total)**

One point for each criterion met:

Size \_\_\_\_\_ Freestanding \_\_\_\_\_ Diagram \_\_\_\_\_ **Subtotal for Part I** \_\_\_\_\_

**Part II: Specific Model Criteria (14 points, plus 0-6 bonus points, total)**

Item	Present (0.5 points)	Labeled (0.5 points)
Cornea		
Sclera		
Choroid		
Iris		
Pupil		
Retina		
Optic Disc		
Optic Nerve		
Lens		
Anterior chamber/cavity		
Central Fovea		
Vitreous Chamber		
Retinal Artery		
Conjunctiva		
<b>TOTAL</b>		

**Bonus Points:** One point per additional structure present, clearly labeled and included in materials table  
**(0-4 points total)**

Item	Bonus Points
<b>TOTAL</b>	

**Subtotal for Part II** \_\_\_\_\_

**Part III: Overall Accuracy of Model (0-6 points total)**

- 1. Accuracy of the overall model \_\_\_\_\_
- 2. Accuracy of the individual parts \_\_\_\_\_

**Subtotal for Part III** \_\_\_\_\_

**Part IV: Creativity (0-4 points total)**

- 1. Overall creativity of model \_\_\_\_\_
- 2. Creative use of materials \_\_\_\_\_

**Subtotal for Part IV** \_\_\_\_\_

**Part V: Brain Power Questions (10 points total)**

Up to 2 points for each answer.

Question 1 \_\_\_\_\_

Question 2 \_\_\_\_\_

Question 3 \_\_\_\_\_

Question 4 \_\_\_\_\_

Question 5 \_\_\_\_\_

**Subtotal for Part V** \_\_\_\_\_

**GRAND TOTAL** \_\_\_\_\_

**Tie Breaker Questions**

Question 1 \_\_\_\_\_

Question 2 \_\_\_\_\_

TOTAL INCLUDING TIE-BREAKER QUESTIONS \_\_\_\_\_