



2010 METRIC MASTERY

Description: Students will demonstrate an intuitive feeling for estimating and later for measuring different events/objects using S.I. metric units. Both parts may include mass, volume, distance, ~~time~~ and ~~temperature~~. **area.**

A Team of Up To: 2

Approximate Time: 55 Minutes

The Competition:

No calculators

1. Approximately 10-12 objects will be designated for contestants to estimate and later to measure. Each team will be given a form to record the estimations. After turning in the estimation form, a second answer sheet will be provided to record the actual measurements. Contestants will move from station to station as directed by the monitors of the event. The recommended time at each estimation station will be about 60 seconds. The time for the measurement stations will be about 90 seconds. Desired units will be identified by the supervisor (e.g., kilogram, gram or milligram).

2. No standardized or marked measuring devices, including fingers, pencils, pieces of paper, etc., will be allowed for the estimation portion. Supervisors will furnish pencils. Calculators are not permitted, ~~in the estimation portion of the competition.~~ Each of the objects will have been precisely measured, in advance by the supervisors of the event. Officials may choose to do this event inside or outside.

3. The ideal system would allow students to move from station to station making their estimations. Then they would return to the same stations to make their measurements. Measuring devices will be kept out of reach, hidden in a drawer or covered in some way during the estimation portion of the competition.

Scoring:

Scores for both portions of the event will be rated according to the precision of the estimates for each object/event--highest score wins. For the estimation competition, scores that are within 10% of the measured value will be awarded 5 points, within 20% will be awarded 3 points, while scores within 30% will be awarded 1 point. In the measurement portion of the competition measurements within the instrument's range of precision will receive 5 points. All others receive zero. Ties will be broken with pre-selected tiebreaker question(s).

Note: supervisors should determine the acceptable measurement with the same equipment that is available to students.