

2008-09 Long-Term Problem Synopses*

**Tentative as of April 11, 2008. All problems have an 8-minute time limit.*

Problem 1: Earth Trek

This problem requires teams to design and build a small vehicle that will visit four locations. The locations will be different places within one or more team-determined environments. Each time the vehicle leaves a location it will look different in appearance, and after leaving one of the locations it will appear to be a group of vehicles that are traveling together. The team's performance will incorporate the visits to the locations, the environments, and the changes in appearance of the vehicle. Sponsored by NASA.

Divisions I, II, III & IV Cost limit: \$145.

Problem 2: Teach Yer Creature

Teams will create a humorous performance about a mechanical creature that acts like a real mammal or bird and learns lessons. The creature will act like the real animal by performing tasks the way it would, including traveling, eating, or turning its head. It will be taught two lessons by a Creature Teacher and will "accidentally" learn a behavior by observing others. During the performance the creature will surprise the audience by demonstrating the "accidental" behavior it learned.

Divisions I, II & III Cost limit: \$145.

Problem 3: Classics . . . The Lost Labor of Heracles

Teams will create and present an original performance about the ancient Greek hero Heracles. (Romans called him Hercules.) In Greek Mythology, King Eurytheus ordered Heracles to perform 12 labors. The team will reenact Heracles performing one of the 12 labors, as well as a Lost Labor — a team-created thirteenth labor forgotten in history. The performance will also include a god or goddess from Greek Mythology, an original mythological creature that plays a role in the Lost Labor, and the team's version of why the Lost Labor was forgotten in history.

Divisions I, II, III & IV. Cost limit: \$125.

Problem 4: Shock Waves

The problem is to design and build a structure out of balsa wood and glue that will balance and support as much weight as possible while absorbing shockwaves. The team will test its structure by placing weights onto it. During specific intervals the team will place one or two spacers on the top weight and will then place a weight on them. The team will remove the spacers so the top weight falls onto the stack causing a shockwave. The team will add weight until its structure breaks or time ends. The team will also create and use an original method to place its structure onto the tester and will incorporate the testing of the structure into a performance.

Divisions I, II, III & IV. Cost limit: \$140.

Problem 5: Superstition

The problem is to create and present a performance that includes two documented superstitions, an original superstition created by the team, and the events that caused the original superstition to come to be. The performance will also include a funny narrator, a costume that is worn by two or more team members at the same time, and a stage set. During the performance the same stage set items will be used to change from one setting to another.

Divisions I, II, III & IV. Cost limit: \$125.

Primary: Candy Factory

In this problem teams will create and present a performance about a Candy Maker and her/his factory. The twist is that the primary ingredient for each type of candy has to be something that is healthy. The team will create a setting that looks like the inside of its candy factory and have five samples of candies. During the performance the Candy Maker will present the candies to customers and explain how each is made.

Grades K-2. Cost limit: \$125.