2004 Long-Term Problems

Envirover 2003-2004

Divisions I, II, III & IV

The team's problem is to build and drive a human-powered Envirover vehicle that will collect trash and deliver it to a Factory, where it will be used to manufacture a product of the team's design. The team will present an original prototype of the product then use the trash to produce five samples of the product. The team will also create and present a humorous sales pitch for its product that takes place in a store setting. Time limit: 8 min. Cost limit: $135 USD.

Strategy Sphere 2003-2004

Divisions II, III & IV

This technical problem requires teams to design and build two devices that will mechanically propel balls through a circular hoop. The location of the devices will determine the value of the points scored when the ball passes through the hoop. Teams will also create a device to retrieve the balls after they are launched. All aspects of the problem solution will be integrated into a theme about how a change in the Earth's geosphere affects the Earth's atmosphere. Time limit: 8 min. Cost limit: $135 USD.

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Classics . . . Fantastic Art 2003-2004

Divisions I, II, III & IV

In this problem, teams will create and present a performance that includes works of art that come alive when no one can see them and return to their original state when others are around. The team will make four works of art: two will be replicas of works by artists from a list, and two will be original works created by the team. The performance will include at least one scene where the works of art come to life and interact with each other. The performance will also include a character that is not part of the works of art. Time limit: 8 min. Cost limit: $125 USD.

Balancing Act 2003-2004

Divisions I, II, III & IV

This problem calls for the team to design, build and test a structure made of balsa wood and glue. The structure will be wider at its top than at its base. The structure will be tested by balancing and supporting as much weight as possible. The team will also create a container that will transport the structure a maximum distance of 20 feet. The container and structure may not be touched while they are traveling. Time limit: 8 min. Cost limit: $135 USD.

Featured Creature 2003-2004

Divisions I, II & III

The problem is to create and present an original performance about mythological creatures. The team will choose a mythological creature from a list and make the audience aware of its characteristics. The team will also create its own "mythological" creature and present a legend that includes that creature and its unique physical characteristics and special power. The performance will include a stage set that changes. Time limit: 8 min. Cost limit: $125 USD.

Rewind With Humor 2003-2004

Primary: Grades K-2

The team will create a performance that tells a story in reverse -- from the end to the beginning. The story will have a beginning, a middle, and an end, but the team will present it backwards. Therefore, the performance will start out with the ending of the story, then show the middle, and end with the beginning. The team will tell at least three jokes during its performance. Time limit: 8 min. Cost limit: $50 USD.