2014-15 Long-Term Problem Synopses*

Tentative as of April 8, 2014. All problems have an 8-minute time limit.

Problem 1: Runaway 'Train'

The team's problem is to design, build and operate one or more vehicles that will travel on tracks and make stops at different stations without touching the floor. While traveling between stations, the vehicles must overcome obstacles —moving uphill, towing something, and more. The theme of the performance will explain the vehicle's difficulties on the track and will include a 'conductor' character. Once the vehicle reaches its final destination it will display a flag or banner during a victory lap!

DIVISIONS I, II & III. Cost limit: $145 USD.

Problem 2: Experiencing Technical Difficulties

The problem is to design, build, and demonstrate various devices that complete specific tasks. The team will create a theme where technical failures must be resolved through completing the tasks. There will be a list of tasks to choose from including ring a bell, change the wording on something, sound an alarm, move an object, etc. There will also be a mysterious engineer character. Of course, there's a twist — all of the devices must be powered by rubber bands!

DIVISIONS I, II, III & IV. Cost limit: $145 USD.

Problem 3: *Classics...* Pandora's Box

In this classics problem, teams will put a video game spin on the story of Pandora's Box. A gamer character will take on this multi-level game inspired by the Greek myth. The game will include a prologue that depicts the original story of Pandora's Box, three characters representing different evils that escaped the box, and a power meter that represents the gamer character's health. To beat the game, the player will advance to the final level where it will release hope into the world.

DIVISIONS I, II, III & IV. Cost limit: $125 USD.

Problem 4: Lose Your Marbles

This problem requires teams to design, build, and test a structure, made only of balsa wood and glue, that will balance and support as much weight as possible. The structure will also hold five marbles that will be released during weight placement as a result of a team-created device removing a piece of the structure. After the crusher board and one additional weight are placed on top of the structure, the first marble will be released. After the next weight is supported, the team will use its device to release another marble, and so on. The team will incorporate weight placement and "losing your marbles" into the theme of the performance.

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

Problem 5: Silent Movie

Lights, camera...action! In this problem teams will create and present a performance depicting a Director character that produces and presents a silent movie featuring a humorous villain character that commits three silly acts of "villainy." Characters that are in the movie may not speak as part of the presentation of the movie. Instead, like classic silent films, the team will use music played on a team-created instrument and creatively displayed subtitles to convey its story to the audience and judges. Also, teams will use a signal to indicate when the movie begins and ends.

DIVISIONS I, II, III & IV. Cost limit: $125 USD.

Primary: Wacky Weather Warning

Teams will create and present a humorous performance where a meteorologist makes three predictions of "wacky weather". The meteorologist will speak in rhymes and use a team-created forecasting device and a backdrop that serves as a weather map. The community will "tune in" to get the weather report in any creative way the team wishes.

Cost limit: $125 USD.