

TechFest v2.017 Competitive Event Playbook

Competition Title: Mysteries of Science

Competition Sponsor: Fort Wayne Metals

Competition Summary: Teams of up to four students will perform destructive and non-destructive tests to wire samples to identify each alloy. Teams will also determine the best alloy to use in various applications based on test results and customer performance specifications within the allotted time.

Competition Details: Wire samples, testing equipment and procedures, product specifications will be and a work surface will be provided to each team. Each team will test multiple wire samples using a variety of testing methods. The results will be used to identify the alloy type. Teams will have to compare test results against specifications and/or material requirements to recommend the most appropriate alloy for specific medical applications.

School Points Awarded for Gold, Silver, Bronze: 5,000, 3,000, 1,000 points, respectively

Scoring Rubric: Each team will be evaluated on:

- 1- Accuracy of test results
- 2- Alloy identification
- 3- Recommendations for application

Materials/Supplies Required: wire/metal samples, test equipment & procedures, specifications (provided by Fort Wayne Metals)

Information to be provided to competing teams: Basic instructions at the time of the event

Pre-Work Required: None