

2017-18 CHALLENGE OVERVIEWS



TECHNICAL

LEARNING OUTCOMES Technical Engineering & Design / Navigation Systems / Transportation Systems / Effective Storytelling

- Design and build a device to navigate a tournament-provided maze.
- Design and build a prop that transforms in the maze.
- Design and build a way to remove an object from the maze.
- Create and present a story about a journey through the maze.
- Create and present two Team Choice Elements that show off the team's interests, skills, areas of strength, and talents.



SCIENTIFIC

LEARNING OUTCOMES Science & Technology / Technical Engineering & Design / Visual & Sound Design / Effective Storytelling

- Explore scientific concepts used in amusement park attractions.
- Design and build an attraction that uses scientific concepts during its operation.
- Create and present a story that features the attraction operating in an unlikely location.
- Portray the unlikely location using sights and sounds.
- Create and present two Team Choice Elements that show off the team's interests, skills, areas of strength, and talents.



ENGINEERING

LEARNING OUTCOMES Impact Force Research / Technical Design Process / Architectural Design / Structural Engineering / Effective Storytelling

- Design, build and test a freestanding structure that can withstand impacts from dropped weights.
- Tell a story about a sudden event with dramatic impact.
- Design and create a visible or audible depiction of the story's sudden event.
- Create and present two Team Choice Elements that show off the team's interests, skills, areas of strength, and talents.



FINE ARTS

LEARNING OUTCOMES Theater Arts Skills / Musical & Lyrical Composition / Production Techniques / Scenic Design

- Create and present a musical that includes a change in plans.
- Include music and lyrics that enhance the storytelling.
- Create and present a spectacle as part of the musical.
- Design and integrate a set change into the musical.
- Create and present two Team Choice Elements that show off the team's interests, skills, areas of strength, and talents.

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IMPROVISATIONAL

LEARNING OUTCOMES Cultural Competency / Improvisational Acting / Character Development / Effective Storytelling

- Research different cultures and famous explorers.
- Create and present an improvisational skit about a quest to return a lost cultural treasure to its owner.
- Integrate two explorers and a prop into the quest.
- Show how characters work together to overcome a setback.



SERVICE LEARNING

LEARNING OUTCOMES Social Entrepreneurship / Graphic Art Design / Theatrical Set & Prop Design / Effective Storytelling

- Identify, design, carry out, and evaluate a project that addresses a need in a real community.
- Create a live presentation that highlights the project and the impact it made on the community.
- Create infographics that include information about the project.
- Create a storage device that transforms as the story of the project unfolds.
- Create and present two Team Choice Elements that show off the team's interests, skills, areas of strength, and talents.



EARLY LEARNING

LEARNING OUTCOMES Cultural Competency / Compare & Contrast / Engineering & Design / Effective Storytelling

- Explore how children of different cultures live, learn and play.
- Create and present a play that tells a story about 2 different cultures.
- Present similarities and differences between the 2 cultures.
- Design and build a prop that will transform and be used in 2 different ways.
- Create costumes and scenery to help tell the story.



INSTANT CHALLENGE

Instant Challenges require teams to engage in quick, creative and critical thinking. At a tournament, a team will receive an Instant Challenge and the materials with which to solve it. The team members must think on their feet by applying appropriate skills to produce a solution in a period of just five to eight minutes. Instant Challenges are performance-based, task-based, or a combination of the two. Although each Instant Challenge has different requirements, all Instant Challenges reward teams for their teamwork. Instant Challenges are kept confidential until the day of the tournament.