

2019-20 Challenge Overviews



TECHNICAL

LEARNING OUTCOMES: Technical Engineering & Design, Product Development, Theatrical Set Design, Effective Storytelling

- Design and build an invention.
- Create and present a story about how a problem is solved with the use of the invention.
- Integrate an invention artifact to highlight the development process.
- Design and build scenery that shows the impact of solving the problem.
- Create and present two Team Choice Elements that show off the team's interests, skills, areas of strength, and talents.



SCIENTIFIC

LEARNING OUTCOMES: Ecology, Technical Engineering & Design, Theater Arts Skills, Effective Storytelling

- Research a real species and a real habitat.
- Create and present a story about the first encounter between the species and the habitat.
- Show how the species and the habitat change as a result of the encounter.
- Present the story in theater in the round.
- Create and present two Team Choice Elements that show off the team's interests, skills, areas of strength, and talents.



ENGINEERING

LEARNING OUTCOMES: Construction Management, Structural Engineering, Technical Design, Effective Storytelling

- Design and build a bridge that will be assembled during the Presentation.
- Move weight across the bridge to test its strength.
- Create and present a story about an unexpected connection and its outcome.
- Design and create a set piece that transitions between settings.
- Create and present two Team Choice Elements that show off your team's interests, skills, areas of strength, and talents.



FINE ARTS

LEARNING OUTCOMES: Photography, Visual Arts Skills, Theater Arts Skills, Effective Storytelling

- Create and present a story that features an unseen character and its impact on a team-selected photograph.
- Theatrically recreate the photograph during the Presentation.
- Create and present a visual effect that includes a photographic technique.
- Show how the visual effect changes the perspective of one or more characters.
- Create and present two Team Choice Elements that show off the team's interests, skills, areas.

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IMPROVISATIONAL

LEARNING OUTCOMES: Character Development, Improvisational Acting, Sound Design, Effective Storytelling

- Research superpowers and how they are portrayed in comic books, literature, film, and other media.
- Create and present an improvisational skit about a villain who uses a superpower to cause an unexpected situation.
- Include a hero who uses an underwhelming power to try to overcome the unexpected situation.
- Enhance the skit with sounds effects.



SERVICE LEARNING

LEARNING OUTCOMES: Social Entrepreneurship, Project Management, Technical Design, Effective Storytelling

- Identify, design, carry out, and evaluate a project that addresses a need in a real community.
- Create and present a story that shows at least one character in a race against time.
- Integrate information about the project into the story.
- Design and build a device that represents time and highlights milestones from the project.
- Create and present two Team Choice Elements that show off your team's interests, skills, areas of strength, and talents.



RISING STARS

LEARNING OUTCOMES: Engineering & Design, Puppetry, Theater Arts Skills, Effective Storytelling

- Create and present a play about characters who travel from one planet to another.
- Include something surprising that happens during the trip.
- Design and create a puppet to use in the play.
- Launch team-created rockets during the play.
- Create costumes, props, and scenery to help tell the story.



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.