



Powering Pittsburgh 2019

Dear Student,

Congratulations! You have been selected to help Pittsburgh plan one of the most important parts of its future: the way we Power Pittsburgh and/or Heinz Field. It will be up to you and other members of your four-person team to come up with a plan for how to Power Pittsburgh and/or Heinz Field. Since we want Pittsburgh to be a great city in the future, you will have to make sure that your plan helps the local economy, environment, and people.

To accomplish your mission, you will need to do some research. You should start by getting to know Pittsburgh, its people, and the potential to utilize local resources and attributes to create alternate ways to generate power. Since the focus is on Powering Pittsburgh and Heinz Field, be sure your ideas are feasible in the Pittsburgh area.

After you have completed your research, you should work with your team to turn your knowledge into a plan that will Power Pittsburgh and/or Heinz Field. As you create your plan, you will want to think about how your design will help Pittsburgh become more energy efficient, more environmentally sound, more user friendly, and more economically profitable. The best plans will help Pittsburgh become all these things. They will also be both creative and technologically feasible.

When you have crafted your plan to Power Pittsburgh/Heinz Field, you will need to create some items to show others your plan will work. You will make a PowerPoint presentation explaining your creation and a scale model showing how your teams idea would work and/or how Pittsburgh would look once your idea was implemented. Each of your creations will be judged and will count toward your final score.

Once you have created all your material, it will be time to present your ideas. Each county will present in this preliminary round at the following locations and dates:

- Beaver County – October 28, 2019
- Washington County – October 22, 2019
- Allegheny County – October 8, 2019

In this preliminary round, you will have 10 minutes to present your idea and convince the judges your plan fits the criteria and is a plan with merit, which could be done in Pittsburgh. There will be three (3) middle school teams and three (3) high school teams selected in each county to move on to the finals at Heinz Field. This means there will be nine (9) total middle school teams and nine (9) total high school teams in the final competition.

At the final competition, which will be held on November 19, 2019 at Heinz Field, our judges will select two (2) winners from the middle school level and two (2) winners from the high school level. The winners will be the two highest scoring teams at the middle school level and the two highest scoring teams at the high school level. The winning teams will be awarded \$1,500 for their schools STEM programming along with the ability to bring a guest to a Steelers game this season! Your teams will also accept the prize on behalf of your school with a check presentation on the field!

Before you get started, make sure you read the following information. It explains the project guidelines and specifics of each item you will need to create. Make sure to carefully read all the program rules so you know what will be expected of your team and how you will be judged.



Good luck with your project! We look forward to seeing what you design for the future of our – and your - city!

Best wishes,

Shell Polymers and the Pittsburgh Steelers

GENERAL PARTICIPATION REQUIREMENTS

To participate in the Powering Pittsburgh and Heinz Field competition, a team must:

- Register with your sponsoring teacher to represent their school in the preliminary round with their respective Intermediate Units.
- Your respective Intermediate Unit will advise how to register for the competition.
- Be made up of four (4) students who are currently enrolled in the 6th through 8th grades for middle school and 9th through 12th grades for high school.
- Agree to work on Powering Pittsburgh/Heinz Field project together as a team at a time acceptable to the school, parents and your team.
- Work with an adult sponsor designated by the team's school and district policies as eligible for working with students on this project. A single individual may sponsor multiple teams.
- Agree to abide by all rules and regulations of the Powering Pittsburgh/Heinz Field competition.
- Agree to meet all deadlines established by competition personnel and/or to notify competition personnel prior to problematic deadlines if unable to complete relevant tasks by the established dates.
- Openly and cooperatively, communicate with your local Intermediate Units about project status.
- Agree to allow designated Powering Pittsburgh/Heinz Field representatives and Intermediate Unit representatives to visit the team's school and/or to check on the team's progress.
- Have the technological capacity to create a PowerPoint presentation, to download files and forms from the Internet, and to send and receive e-mail (including e-mail attachments) in PowerPoint, Microsoft Word, and Adobe Acrobat.
- Agree to purchase and/or otherwise procure the rules-compliant supplies needed to create the team's scale model for Powering Pittsburgh/Heinz Field 2019.
- Agree to send four (4) team members and at least one (1) chaperone to the Powering Pittsburgh/Heinz Field 2019 finals on November 19, 2019.

Violation of the above and/or other participation requirements set forth by the Powering Pittsburgh 2019 team may result in point deductions and/or elimination from the Powering Pittsburgh 2019 competition.



COMPETITION COMPONENTS

Each Powering Pittsburgh/Heinz Field 2019 competition team is expected to create one PowerPoint and one model illustrating or demonstrating their idea. Each of these two pieces will be used in the presentation and should be used to explain the team's idea on how to Power Pittsburgh and Heinz Field. Read the following component descriptions for further explanation.

1. PowerPoint Presentation

50% of Total Score

The PowerPoint component provides your team with a chance to tell judges and members of the community what Pittsburgh would look like were your plan implemented. This component also provides your team with a chance to convince the community that your plan is innovative and feasible while also explaining in detail with pictures, words or any other illustrations to demonstrate how your idea would work. Your PowerPoint should be persuasive in tone and conform to the following guidelines:

Focus

Your PowerPoint should focus on how you would create energy and should be backed up with facts. You should demonstrate how the idea will work, why it would work in Pittsburgh, reliability of your solution, and whether you are powering Heinz Field alone or the entire city of Pittsburgh.

Components

Your PowerPoint should provide answers to each of the following questions:

- What does your team propose as a plan for Powering Pittsburgh and/or Heinz Field?
- How will your plan make Pittsburgh more energy efficient and environmentally sound?
- How will your plan make Pittsburgh more economically profitable/grow the job market?
- How will your plan to Power Pittsburgh and/or Heinz Field be implemented?
- Who will be responsible for implementing your plan?
- Are there any potential roadblocks or risks associated with implanting your plan?
- Who will pay for your plan?
- How long will it take to implement your plan?
- Why is your plan the best plan to Power Pittsburgh and/or Heinz Field?

Presentation Requirements

Your team will present its PowerPoint and model to your sponsors within your school. Based on the number of teams at your school, your school district sponsors will decide who will represent your school in the semifinal round in front of your counties Intermediate Unit. From that competition, there will be 3 teams selected at the middle school level from each county and 3 teams selected from each county from the high school level.

Your presentation should be ten (10) minutes in length. There will be points deducted if you are grossly under or over the time limit. There will be a five (5) minute period after your presentation for the judges to ask questions.

Adhere to the following guidelines when making your presentation:

- Your PowerPoint should be clear in explaining your idea and illustrate examples around your plan and be based in verifiable fact.



- At least two (2) members of your team must speak during your PowerPoint presentation.
- All members of your team who are present at the Powering Pittsburgh/Heinz Field 2019 finals must participate in a one-minute question and answer session with judges immediately following your PowerPoint presentation.

Submission Requirements

Please adhere to the following guidelines when submitting your PowerPoint prior to presentation:

- For the semifinals, teachers should forward all presentations to their contact at their county's Intermediate Unit, so they can be loaded in the system for easy access during the competition.
- The e-mail to which your PowerPoint is attached must clearly identify your school & team.
- Your PowerPoint itself may not identify your school and/or school district.
- Each team is required to create a team name based on a current or former Pittsburgh Steeler. As an example, "Team Bus Bettis" or "Team JuJu."

2. Scale Model of Powering Pittsburgh 2019

50% of Total Score

TEAMS MUST BRING THIS TO EVERY COMPETITION

The scale model component gives your team an opportunity to show the judges what Pittsburgh would look like if your plan to Power Pittsburgh and/or Heinz Field were to be implemented. Your scale model should conform to the following guidelines:

Focus

Your scale model should focus how you would bring your idea to life and what Pittsburgh might look like if your idea were to be implemented. Creativity is encouraged!!!

Construction Requirements

Your team will showcase its scale model at the semifinals as well as the final competition at Heinz Field on November 19th, 2019. Adhere to the following guidelines when constructing your scale model:

- Your model may not be larger than 60" (length) by 24" (width) by 24" (height).
- Your model can include moving parts. You must notify your Intermediate Unit if electric will be needed at the semifinals as well as the final competition.
- Your model may be built of any materials EXCEPT:
 - Open liquids (water is acceptable)
 - Dangerous chemicals (e.g. carcinogenic, mutagenic, or highly corrosive chemicals, narcotics or addictive drugs, alcohol, tobacco, flammable, explosive, or highly toxic chemicals, radioactive materials, and gases under high pressure)
 - Dangerous equipment (e.g. equipment requiring 200V or greater, welding equipment, equipment producing unshielded ionized radiation, equipment which produces or utilizes x-rays or nuclear energy, or high temperatures, firearms, and other equipment normally considered dangerous to operate).
 - Controlled substances, including DEA-classed substances, prescription drugs, alcohol, and tobacco
 - Living or preserved organisms (including their parts)



- Microbial cultures (bacterial or viral) or fungi (live or dead)
 - Human or animal food
 - Sharp items (e.g. syringes, needles, pins)
 - Dry ice or other sublimating solids
 - Class III or IV lasers (Class II lasers must have a sign stating: Laser Radiation: do not stare into beam, have protective housing that prevents access to beam, and be disconnected when not operating)
 - Unshielded belts, pulleys, chains, or moving parts with tension or pinch points
 - Devices which emit loud noises
 - Devices which require more than 125V
- You may not spend more than \$40 on materials to create your scale model. Students are encouraged to use recycled, recyclable, and/or refurbished materials. You will not be reimbursed.

Submission Requirements

Please adhere to the following guidelines when submitting your scale model for evaluation:

- Your scale model must be brought with you to each competition. If you make it to the finals, your models will be on display during the competition for others to review, with the exception that you will be using your model during your presentation.
- Your scale model may not identify your school and/or school district.



FINAL COMPETITION GUIDELINES & REGULATIONS

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- Teams will show their PowerPoint presentations and models in an order determined by Shell Polymers and the Pittsburgh Steelers.
- Each team will have ten (10) minutes in which to make its PowerPoint presentation and explain their model. Following each presentation, judges will have five (5) minutes in which to question the presenting team about its project.
- Computer access for PowerPoint/Public Service Announcement viewing will be provided at the competition. All PowerPoints will need to be submitted in advance to the competition to ensure easy access.
- Each team will be provided with one (1) table on which to display its scale model during the final competition at Heinz Field. The order and location of tables will be determined by Shell Polymers and the Pittsburgh Steelers.
- Prior to the competition, a safety judge will inspect each team's scale model to determine whether it complies with stated safety guidelines. Unsafe models will be removed and teams responsible for those models will be disqualified.
- Shell Polymers and the Pittsburgh Steelers reserve the right to invite members of the public and/or the media to observe teams' presentations and scale models.
- Cash Scholarships awarded to the winning teams:
 - High School Level: \$1,500 for two (2) high school teams
 - Middle School Level: \$1,500 for two (2) middle school teams
- Additional award for the winning teams:
 - These four (4) winning teams will receive tickets to attend a December game at Heinz Field. The students will receive two tickets (one for them and one for a guardian) and the teacher sponsors will receive one ticket.
- Other awards:
 - As a reward for making it to the finals, all teams who attend the November final competition will receive lunch and a guided tour of Heinz Field.

There will be an on field check presentation awarded by Shell Polymers and the Pittsburgh Steelers during the game in December.

Judging Guidelines & Regulations

- Shell Polymers and the Pittsburgh Steelers will select a panel of judges to score teams' competition components.
- At no point during the competition may teams identify themselves or their projects as affiliated with a school or school district. All teams must use their chosen team name, which will be based on a current or former Steelers player.
- All judges' decisions are final.

***Shell Polymers and the Pittsburgh Steelers reserve the right to alter the rules at any time.**