

# Technical Design

## 2018 Region 8

Your school received a grant to hire a new elementary STEAM teacher (K-5). As a part of this grant, the school will add an addition to the school for this position. This addition will be a separate building added onto the current school. The size of this building will be no more than 1200 sq.ft. It is up to you to design this room, with a plan of what the new STEAM teacher should focus on. Try to include Green Building Technologies as a part of this building. Design a 2D drawing, with dimensions of this room, including walls, storage, machines, tables, and desks. Also, as a part of this competition, you need to interview (by email, phone, or in person) two teachers to gain their input to what this room should look like. This could be an elementary teacher, middle school teacher, technology education teacher, etc. Include this information as a part of your Brainstorming research.



Included in the Portfolio will be:

(Each page is 8.5 x 11 inches)

1. Title page with the event title, conference city and state, the year, and the team/chapter ID number; one (1) page
2. Table of contents; one (1) page
3. Team's interpretation of the problem, including a list of criteria and constraints set forth in the design brief; one (1) page
4. Demonstrated use of a brainstorming technique of the team's choice (mind mapping, reverse engineering, word association, etc.), to develop ideas to solve the problem; brainstorming ideas should be documented; one (1) page
5. At least three (3) hand-drawn sketches of different solutions to the given problem:
  - a. Each hand-drawn solution must be developed based on the selected brainstorming technique.
  - b. Each hand-drawn sketch also must include a solution pro/con list written on each sketch to aid in selecting the best design;
  - c. One (1) page for each hand-drawn sketch; three (3) pages total
6. Based on the pro/con list for each of the hand-drawn solutions to the problem, select the best solution and create an engineering (architectural) drawing based on the solution; one (1) page
7. Using the engineering (architectural) drawing of the final solution, write a paragraph that evaluates the final solution and answers the following question, "Does the final design meet all the elements set forth in the design brief?"; one (1) page
8. LEAP Response