



fill a need - solve a problem



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## MENTORING - 2010

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1. Review team selection
  - a. Members shall be in 5<sup>th</sup> Grade. Are you in fifth grade?
  - b. Teams shall consist of 3 members. Are there 3 of you on the team?
  - c. Teams shall all go to the same school. Do you all go to \_\_\_\_\_?
2. Choose team name
  - a. Like a sports team or a rock band
  - b. No students names: BobSueJoeJane
  - c. No school names: Covington Cool Cats
  - d. No community names: Birmingham Bombers
  - e. No Optimist Club names: Birmingham Bombers
  - f. Example: Magnifica, Stargazers, The Force
3. Design something to fill a need or solve a problem
  - a. Concept: Telephone, vacuum sweeper
  - b. Ideas:
    - i. Portable shelter for the homeless
    - ii. Robocook
    - iii. Automatic dog sitter
4. Provide Project Description - Part 1 (Remember to get print from website and fill-in before you get to the contest.)
  - a. Define the need or problem:
    - i. The dog needs care while everyone is away at work and school.
  - b. Describe how your project will solve the need or the problem:
    - i. Give dog a place to sleep and exercise
    - ii. Give dog fresh food and water automatically
    - iii. Give dog a sanitary place to go to the bathroom
5. Discuss materials for project
  - a. Receive **4 kits**:
    - i. Kit of K'NEX
    - ii. Kit of household materials on the list – discuss cutting, hole-punching, and modifying
    - iii. Kit of 3 mystery items
    - iv. Tool kit
  - b. Use only materials in kit
  - c. Do not need to use everything
6. Discuss possible uses for materials
  - a. Aluminum foil: Floor of the toilet area
  - b. Styrofoam plates: Floor and ceiling of the exercise area
  - c. Film containers: Food and water containers
  - d. K'NEX: Exercise machine, supports for other items, fences, gates,
7. Discuss tools
  - a. Pencils for planning (You can use the paper included as household material)
  - b. Paper punch to make holes for K'NEX
  - c. Ruler to measure and draw lines
  - d. Scissors to cut poster board or plates
  - e. You can **NOT** use tools as part of project

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## MENTORING, Continued

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8. Discuss mystery items (3 materials you don't know about)
  - a. Use at least 2 of the 3 mystery items you receive at the contest
    - i. Big continuous loop: Treadmill for the dog
    - ii. Butter tub: Water reservoir
    - iii. Chicken wire: Ventilation grille so dog can look out and get fresh air
  - b. Remember to use as an important part of the project. Don't just add it on at the last minute as a decoration.
9. Build the project
  - a. Remember you work as a team without assistance from your teachers, parents, and others.
  - b. You have 1 hour to complete you project
  - c. Build the basics and then come back and refine it
  - d. Keep the project on the project board so it can be moved
  - e. Make it strong enough so it will not fall apart when being moved
10. The most important thing is to have fun.
11. Your day at the contest
  - a. Remember bring 3 things – your registration fee check, your talent release forms, and your Project Description.
  - b. After your entire team arrives, check-in at or before your designated time
  - c. You will receive your T-shirt and your Team Competition name tags
  - d. If you are late, you can join your scheduled Round at any time, you will not be able to enter in a later Round.
  - e. After the assemble announcement, you can go to your team table
  - f. After the begin announcement, you can begin construction
  - g. After the stop announcement
    - i. Stop construction.
    - ii. Put unused KNEX in the gray tote and unused materials in the plastic bag.
    - iii. Remain in the construction area during the judging until your team is photographed with your project.
  - h. Each participant and their school will receive a Certificate of Participation immediately after judging. The Certificate will have a space where you can glue your photograph which will be delivered to the school after processing.
  - i. Results will be announced.
  - j. Winning team members will be called back to the stage to receive their recognition
12. Your project
  - a. If you are not a winner: your project will be dismantled and recycled for use in following contests.
  - b. If you are a winner:
    - i. Your project will be saved and entered into a final judging at the end of all the preliminary contests.
    - ii. Winning projects will be announced and awarded a gold, silver, or bronze medal.
    - iii. Winning team members will receive an additional Certificate indicating their accomplishment, gold, silver, bronze, honorable mention (if awarded) or finalist that will be delivered to the school.
13. Discuss rules (Remind the participants to carefully read the rules)
14. Discuss judging (The Rules contain information on what the judges will be looking for.)
15. Practice, Practice, and Practice
  - a. Teams that have practiced taking their project apart and assembling again fare better in the contest.
  - b. When you complete an assembly – think about how can I make this better – success comes from building on what you have done and not being satisfied with your project as-it-is. You should strive to make it a little better each time.
  - c. A good idea is to have each team member bring a mystery item and then try to incorporate into the project. When everyone has done that – take your projects apart and trade mystery items with another team to challenge them – make it a difficult item to incorporate.
  - d. Divide project construction so each member has a part to do. However each member should know the work of the others in case a member has to is unable to attend the contest at the last minute
  - e. Remember you first ideas might not be the best – Thomas Edison did not get the light bulb right the first time but kept working on it until it worked.