Activity Sheet

Team member #1: _____   **Team member #2:** _____

Team member #3: _____   **Team member #4:** _____

Team member #5: _____   **Team member #6:** _____

Swarmathon Gamification Implementation:

During the NASA Swarmathon competition, robots will operate in unison to autonomously search for and retrieve resources. The goal is to revolutionize space exploration through cooperative robotics.

While participating in this outreach, you will have the opportunity to experience the essence of the Swarmathon Challenge. In accordance with our available resources, this activity will mimic the NASA competition Utilizing VEX 12' x 12' field and the VEX version of the Swarmies. Additionally, the same base and cubes from the actual NASA competition will be used.
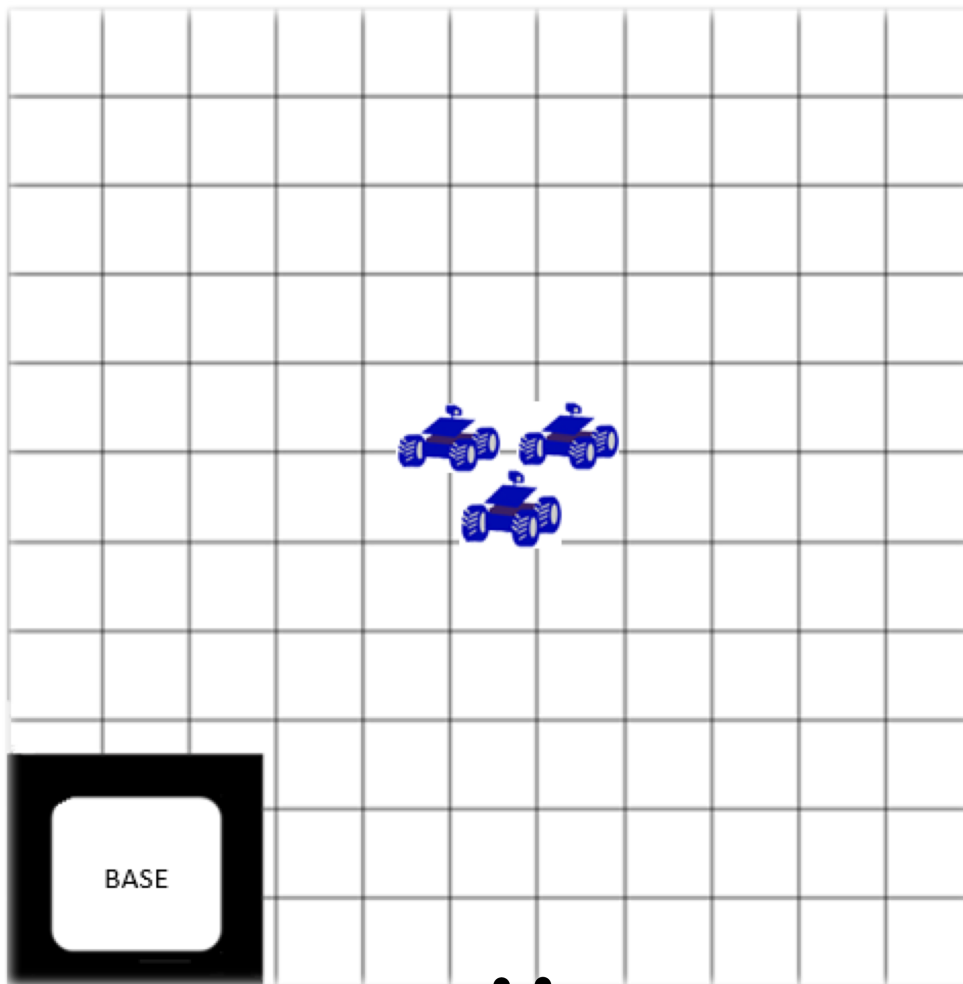
Instructions:

a) The objective is to search and retrieve 20 cubes and deliver them to the base.
b) Each Team must develop a search algorithm using the grid field map provided.
c) The team will be composed of six students. Three of them will be drivers and three will be coaches. The drivers will be blindfolded while the coaches will guide them to accomplish the objective.

Competition Guidelines:

a) Running time will be 5 minutes per team.
b) Base will be allocated on one corner of the field.
c) Robots will start in the middle of the field.
d) Cubes will always start in the same position to allow testing of each group's efficiency.
e) Only Cubes that are completely inside the base count.
f) Cubes can't be dragged in to the base.

1.Create your own searching algorithm.

2. Describe your Team Strategy?

3. How many cubes does your team expect to collect from the 30?
   a. 0 - 5 cubes
   b. 6 – 10 cubes
   c. 10 – 15 cubes
   d. 15 – 20 cubes

4. How many cubes did your team collect?

   ☐

5. Did your search algorithm using the grid field map work?
   a. Perfectly
   b. Part of it
   c. Not at all

6. How was your overall experience working as a group?
   a. Excellent
   b. Good
   c. Indifferent
   d. Bad

7. How would you evaluate this activity?
   a. Excellent
   b. Good
   c. Indifferent
   d. Bad

8. Comments or recommendations?