Mutation Lab

Goals of Group:

1. Gather the food (9 Smarties per group)
2. Store the food for later use (place the 9 Smarties in your letter-designated container)
3. Retrieve the food at a later time (remove the 9 Smarties from the container and return with them to the home location)
4. Process and consume the food (remove the Smarties from the wrapper and consume them)

Procedure

1. Each group finds out what mutation has occurred to their group by selecting a letter from the bag. The letter drawn will correspond to the mutation and their letter-designated container and home location.
2. Each group must prepare itself to represent the characteristic produced by their mutation.
3. Each group must position itself at its specified home location away from the lettered containers.
4. Start the stopwatch and each group can proceed to the "forest" and gather 9 Smarties. These Smarties are then put in a container marked with the letter of the group. The group members then return to their home base and record the elapsed time.
5. The group members then proceed back to the lettered container to retrieve their food. Once the group has removed all 9 Smarties from the container, they return to their home location. The group must un-wrap each piece of candy. Each group member must consume 3 Smarties. Once all the Smarties have been eaten, the group members record the elapsed time.

Record

Elapsed time (gathering food from forest) _____

Elapsed time (processing/consuming food) _____

Questions

1. Which mutation caused the greatest delay in acquiring food?

2. Which mutation caused the greatest delay in processing and consuming food?

3. Which mutation was the best for the environment?

4. What would these mutations do to the population of the environment?

5. If you were to choose two of the groups to combine to get the best of their traits, what would you be doing?

6. Which two mutations would you combined in the DNA to create an organism that would be superior in the environment?

7. Create a scenario that would make each mutation beneficial.