**A Game of Selection Rule Sheet**

In this activity participants will take on the role of a population of foraging animals. Individuals will vary in their ability to move while foraging and participants will observe how the population evolves by natural selection as the game progresses.

**Steps:**

1) Inform the participants that they will be taking on the role of a population of foraging animals trying to feed on tokens (for the games purposes these tokens can be practically anything, poker chips, checkers, easter eggs, etc.).

2) Participants will vary in how they are able to move while foraging for tokens. The three movement types are:

Walkers (can move normally)

Heel-Toe-Walkers (must walk with each step placing the heel of one foot directly in front of the toes of the other foot)

Hoppers (can only move by hopping with their legs together)

Divide the students into these three movement types, for best results it is recommended to start the game with only a very small number of walkers. This allows you to suggest that walkers are a new mutation in the population (and as such start out with low numbers) and the class will observe how/whether this mutation will spread through the population.

3) Have the students line up along the edge of a designated game area (the size of the area used will depend on the number of participants).

4) Randomly distribute the tokens within the game area, try to avoid large clumps of tokens. For best results the number of tokens you distribute for the game should be 2X the number of participants.

5) The game takes place over the course of 4 rounds, which can be described as 4 generations. During a round participants will have 20 seconds (the time may be adjusted depending on the size of the game area) to collect as many tokens as possible while maintaining their assigned movement type.

6) Participants that collect at least 2 tokens are able to gather enough food and survive, those who collect less than 2 die and move to the side of the game area designated as the dead zone.

7) Participants that collect 4 or more tokens are able to reproduce. To reproduce a participant brings a “dead” player from the dead zone back into the game, this revived player now becomes the same movement type as the player that reproduced. After reproduction, take a count of the different movement types (have students record this data in the Game of Selection worksheet).

8) Repeat steps 5-7 for the remaining rounds/generations. At the completion of the game take a final tally of the number of each movement type and record the data.

9) Have participants graph the change in movement types within the population over the generations of the game.

10) Optional follow-up discussion: Have participants discuss how each of the key elements of natural selection (variation, selection, heredity) was present in this game.