a WOW Lab BLUEPRINT

Selection in Action

Activity Instructions

Before the students arrive, set up and cover the obstacles as outlined in *Prep Instructions*.

Part I - Car Building

The following items will be needed for this part of the activity:

- Lego and K'Nex pieces
- boxes or bins

Step 1

Ideally, a wide variety of Lego and K'Nex pieces should be provided, including wheels of different sizes, connecting pieces and blocks in various shapes and colours. The pieces can all be mixed together and then separated into bins and placed at different stations in the classroom so that students have room to build their cars.

Step 2

Tell students that they have 20 minutes to build their cars. Each student must build a car.

Part II - Round One

The following items will be needed for this part of the activity:

- obstacles for Round One (see *Prep Instructions*)
- identifying markers (such as coloured paper, popsicle sticks or straws)

Step 1

Uncover the obstacle course. Explain that the obstacles are the cars' environment and that each car will go through each of the obstacles to see if they survive.

Step 2

Give each student a chance to try all of the obstacles. When the cars reach the obstacles that have been designated as obstacles that must be passed in order to survive, hand out the identifying markers to those students whose cars make it through successfully.

Step 3

At the end of the round, bring the class together to discuss the outcome of the activity. See how many cars have survived.

Part III - Reproduction

The following items will be needed for this part of the activity:

• surviving cars (see Part II)

Step 1

Explain that all surviving cars (those students with identifying markers) should team up with another surviving car. Cars that did not survive must be taken apart. The Lego and K'Nex pieces from these cars can be returned to the storage bins. Students whose cars did not survive should join a group with students whose cars did survive.

Step 2

Tell students that their Lego and K'Nex pieces are genes in the species' gene pool and each pair of cars is to recombine to make two new cars— but they must use all the existing pieces. They can make minor or major changes to the morphology of the cars.

Part IV - Round Two

The following items will be needed for this part of the activity:

- obstacles for Round Two (see *Prep Instructions*)
- identifying markers
- large blanket or sheet

Step 1

Set up the obstacles for Round Two and cover the obstacle course with a sheet.

Step 2

Unveil the obstacle course for Round Two. Give everyone a chance to try all of the obstacles. When the cars reach the obstacles that have been designated as obstacles that everyone must pass, hand out the identifying markers to those students whose cars make it through successfully.

Step 3

At the end of the round, bring the class together to discuss the outcome of the activity. See how many cars have survived this time around and how many have had two generations survive.