## The RULES for the GAME OF LIFE (Questions #6 and #7 on the test).

- Show what the GRID will look like after clicking the GO-ONCE button.
- If a cell died that was alive, put an E in it. The E means the cell diEd that was ALIVE. The cell is Empty now.
- If a cell was empty and became alive, write an  $\mathbf{A}$  in that empty cell with your pen or pencil. LIFE was born in an empty cell, so it will now be  $\mathbf{A}$ live.

## LIFE GAME/MODEL RULES:

For a space that is 'populated': Populated equals Alive with life, a living cell.

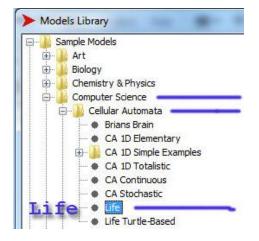
Each cell with one or no neighbors dies, as if by loneliness.

Each cell with four or more neighbors dies, as if by overpopulation.

Each cell with two or three neighbors survives.

For a space that is <a href="mailto:">'empty'</a> or <a href="mailto:">'unpopulated'</a>

Each cell with three neighbors becomes populated.



## **HOW IT WORKS**

The rules of the game are as follows. Each cell checks the state of itself and its eight surrounding neighbors and then sets itself to either alive or dead. If there are less than two alive neighbors, then the cell dies. If there are more than three alive neighbors, the cell dies. If there are 2 alive neighbors, the cell remains in the state it is in. If there are exactly three alive neighbors, the cell becomes alive. This is done in parallel and continues forever.