Resource-Limited Growth Simulation Sheet

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  | ● | ● |  |  |  |
|  |  | ● | X | X | ● |  |  |
|  |  | ● | X | X | ● |  |  |
|  |  |  | ● | ● |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

**Setup:**

Mark the four center squares with an “X” to indicate them as occupied.

**Experiment:**

Each turn proceeds with the following sequence of steps:

1. Use a large dot to mark all unoccupied squares that share a side with an occupied square. (There will be eight such “available” squares in the first turn.)
2. Determine newly occupied squares:
   1. For each available square, roll one die for each adjacent occupied square; Mark the available square with a slash (“/”) if any of the rolls are 5 or 6.
   2. After testing all available squares, turn the slashes into “X” to mark as occupied.
3. Record the new population and the increase in population for the current time step.

Stop when nearly all squares are occupied.