Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Evolution Webquest**

*Go to evolution.berkeley.edu*

* *Click on “Evolution 101”*
* *Click on “Introduction to Evolution”*
* *As you read, click “next” to continue the introduction.*

What is biological evolution?

What is the difference between small-scale and large-scale evolution?

What is the central idea of biological evolution?

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* *Click on “Mechanisms” on the menu to the left.*
* *For each mechanism, write a brief description of what it is and/or an example*

1. Mutation
2. Migration
3. Genetic Drift
4. Natural Selection

What are the three sources of genetic variation?

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* *Click the link for “What About Fitness?” on the menu to the left.*

What is fitness? Is it always the strongest organism?

Now, go to http://www.sciencechannel.com/games-and-interactives/charles-darwin-game/ and play “Who Wants to Live a Million Years?”

Click the box that says “Learn about Natural Selection” and write out each step listed in the presentation.

1. Part 1:
2. Part 2:
3. Part 3:

Now, play the survival game! Record your attempts in the table below.

|  |  |  |  |
| --- | --- | --- | --- |
| **Attempt** | **3 Variations in Starter Population** | **Mutations** | **Years Survived** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Questions:**

1. What did you have to do to survive a million years in the game?
2. Why do you think the “life preservers” in the game were called “mutations”?
3. List some examples of things that killed your population in the game.
4. Can individual organisms adapt genetically or evolve?
5. Is adaptation and natural selection always driven by a predator?
6. What are the two things species populations need to cause adaptation?