Name _____ Period _____

Science Starters – Cell Reproduction

For extended response questions, answers must be written in full sentences and the question must be restated. For multiple choice questions, first choose the right answer and then using complete sentences explain why you chose the answer you did.

Day 1

A trait is a characteristic or quality that distinguishes one organism from another. How are traits passed from one generation to the next?

A. Binary fission in a multicellular organism
B. Reproduction
C. Cellular Growth
D. Cellular Repair

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Day 2

Mitosis is the process of a cell dividing into 2 daughter cells. Which of the following occurs when a single cell organism goes through the process of mitosis?

A. All cell damage is repaired
B. The single cell organism becomes a multicellular organism
C. Two individual organisms exist after mitosis
D. The original amount of genetic material is divided into 2 separate halves

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Day 3

Which of the following observations is the best evidence to support the theory that cells come from pre-existing cells?

A. One single celled bacterium is placed on a petri dish. The dish is put into a sealed incubator. After 24 hours, a colony of over 10,000 bacteria is on the petri dish.
B. Redwood trees in the state of California have lived for over 500 years.
C. A sugar water solution is put in a dish and the dish is covered by a heavy burlap bag. After four hours the burlap bag is removed and over 200 ants are found near the sugar water solution.
D. Both of the kidneys in a person have failed and no longer function. The person's sister can donate one of her kidneys to her sibling. The kidney can be transplanted into the person and function normally.

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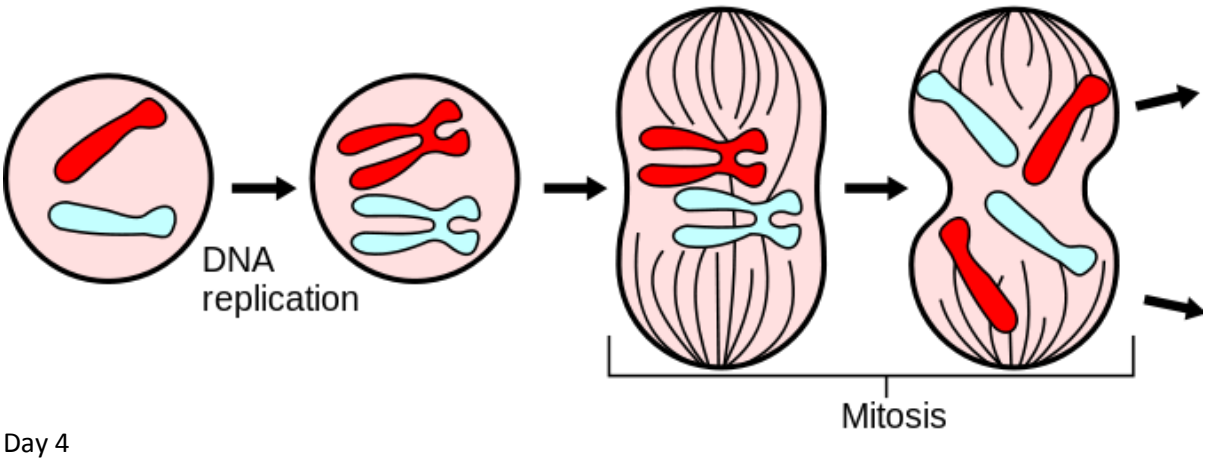
Use the diagram of mitosis below to answer questions Day 4 and Day 5.



Day 4

On the diagram above draw the final stage of mitosis.

On the lines below describe what is happening in the final stage of mitosis that you drew on the diagram. Tell why this stage is important to the process of mitosis.

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Day 5

During the first stages of mitosis DNA replication occurs. The DNA is genetic material.

In Part A tell where this genetic material is located.

In Part B explain why it is important for the DNA (genetic material) to replicate during mitosis.

Part A: _____

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Part B: _____

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