

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

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

### Is Sammy Alive?

- 1) What does it mean to be “alive”? You may interpret this question however you like, and it’s okay if your definition changes. If you can think of any examples of things that are “alive” that do NOT fit your definition, you might consider changing it...
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**After each paragraph, ask yourself, “is Sammy alive?” There is no one right answer so you will have to decide. It’s okay if you disagree with your group, and it’s okay if you change your mind later!**

a) Sammy was a normal, healthy boy no different from anyone else. After high school, he started working in a meat factory. One day, he had an accident and his hand got caught in a meat grinder. It was replaced with a prosthetic (fake) hand that looked almost like a real one.

b) A year later, Sammy developed stomach cancer, and it had to be removed. Luckily, he was able to have a stomach transplant. Surgeons removed Sammy’s stomach and replaced it with a healthy one from a donor (people can give up their functioning organs right after they die, but before the organs stop working).

c) Everything looked good for Sammy until he was involved in a serious car accident. Both of his legs and his good arm were crushed and had to be amputated (cut off). He also lost an ear. Prosthetic legs enabled Sammy to walk again, and a prosthetic arm replaced the real arm. Doctors rebuilt the ear with plastic surgery.

d) Over the next several years, Sammy was plagued with internal disorders. He developed kidney cancer. Since no donor was found for a kidney transplant, the only way he could survive was to use a kidney dialysis machine. He had to be connected to the machine every night while sleeping so it could filter out the waste materials from his blood. He also developed colon cancer and could no longer eat. Instead, he had to have nutrients injected directly into his blood stream through his veins.

e) After a lot of radiation and chemotherapy, the doctors were sure that they had beaten both cancers. However, his heart began to fail. He was immediately placed on a heart-lung machine. This machine supplied oxygen and removed carbon dioxide from his blood, and it also pumped blood to circulate it around his body. Sammy was bedridden, unable to leave the machine.

f) The doctors consulted bioengineers about Sammy. Because almost all of his life-sustaining functions were being carried on by machines, it might be possible to put all of these machines into one body, which could be controlled by electrical impulses from Sammy's brain. To do all this, they would have to amputate at the neck and attach his head to the robotic body, which would then supply all nutrients to his brain. Sammy consented, and the operation was successful.

g) Sammy functioned well for many years. However, Sammy’s brain cells started to break down, and he was diagnosed with a neurodegenerative disease. In order to save his mind, the doctors began to integrate his brain with a miniature computer that would fit in a robotic head that looked and moved like a human head. By the time Sammy's brain cells were completely deteriorated, the computer finished storing his personality, thoughts, emotions and memories. Completely made of machine, Sammy happily left the hospital with complete assurance that he would never again have a biological illness.

h) One day, a boy playing Pokemon GO walked into the street right in front of a truck. Sammy ran in and pushed the boy out of the way. His robotic body and computer brain were destroyed. Luckily, his computer brain was continuously being uploaded to the hospital’s cloud servers. An exact copy of the robotic Sammy was built, and his brain was downloaded, setting Sammy back to just moments before he saved the boy.

i) Many people were concerned that a thinking and feeling robot, like Sammy, would eventually lead to the destruction of all humans. Fearing this robot apocalypse, the government agreed to shut him d3own. His memories and consciousness—thoughts and awareness—were permanently deleted, his robot body was destroyed, and the human race lived happily ever after.

THE END

- 2) Summarize what happened to Sammy throughout the story, as though you were telling someone who didn't read it.
  
- 3) At what point in the story did *you* decide that Sammy was no longer alive? *What happened to Sammy* that made you feel this way? Explain what makes the difference between when Sammy was alive and then not alive.
  
- 4) How well does your answer to 1) relate to your explanation in 3)?  
(How has this activity affected your definition of being "alive"?)
  
- 5) Describe how other students' answers were *different from yours*. What did other students think determined whether Sammy was alive or not?
  
- 6) How did you feel about this activity? Why do you think Mrs. Reese wanted you to participate in it? What did you learn from it?
  
- 7) Examine the 6 characteristics of life and determine how they were affected by Sammy's life history.
  - a. Organization:
  - b. Growth and development:
  - c. Reproduction:
  - d. Response to stimuli:
  - e. Homeostasis:
  - f. Energy:
  
- 8) What are some questions you have now? (optional)

**Interesting facts:** *A person is considered legally dead if (s)he stops breathing, the heart stops beating, and a doctor decides that efforts to restart the heart (resuscitation) are of no use and that recovery is impossible. On the other hand, a person can be considered brain-dead but still have a working heart and lungs.*