

DIRECTIONS: Below are the directions you will follow during today's reading. Read the directions, then answer the questions at the bottom.

1. If you are sitting to the left of your partner, you are **Partner A**. If you are sitting to the right of your partner, you are **Partner B**. Which are you? _____
2. **Partner A** is the **reader** for the first paragraph, while Partner B follows along silently. Both partners should text-mark by underlining evidence to answer this purpose question: **When is Sammy no longer alive?**
 - There are many tricky words. If you see a little number above a word, that means the word is defined in a Glossary at the bottom of the page.
3. **Partner B** is the **summarizer** for the first paragraph. When Partner A is done reading, Partner B attempts to summarize by saying: "I believe Sammy (is / is not) alive at this point in the story because ..."
 - Partner A can agree and both partners write it down to the right of the paragraph, or Partner A can (respectfully) disagree, and the two partners can discuss.
 - It is perfectly OK for the partners to disagree and write different things!
4. For the next paragraph, Partner B becomes the reader and Partner A is the summarizer. Continue this pattern until you are finished with the entire reading.
5. When you are done with the reading and summaries, move on to prepare for the Socratic Seminar.

Is Sammy Alive?

Sammy was a normal, healthy boy. There was nothing in his life to indicate that he was anything different from anyone else. When he completed high school, he obtained a job in a factory, operating a machine press. On this job he had an accident and lost his hand. It was replaced with an artificial hand that looked and operated almost like a real one.

Is Sammy Alive? Yes No

Reason: _____

Soon afterward, Sammy developed a severe intestinal difficulty, and a large portion of his lower intestine¹ had to be removed. It was replaced with an elastic silicon tube.

Is Sammy Alive? Yes No

Reason: _____

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 amputated². He also lost an ear. Artificial legs enabled Sammy to walk again, and an artificial arm replaced the real arm. Plastic surgery enabled doctors to rebuild the ear.

Is Sammy Alive? Yes No

Reason: _____

Over the next several years, Sammy was plagued with internal disorders. First, he had to have an operation to remove his aorta and replace it with a synthetic³ vessel. Next, he developed a kidney malfunction, and the only way he could survive was to use a kidney⁴ dialysis machine (no donor was found for a kidney transplant). Later, his digestive system became cancerous and was removed. He received nourishment intravenously. Finally, his heart failed. Luckily for Sammy, a donor heart was available, and he had a heart transplant.

Is Sammy Alive? Yes No

Reason: _____

It was now obvious that Sammy had become a medical phenomenon. He had artificial⁵ limbs, nourishment was supplied to him through his veins; therefore he had no solid wastes. The kidney dialysis machine removed all waste material. The heart that pumped his blood to carry oxygen and food to his cells was not his original heart. But Sammy's transplanted heart began to fail. He was immediately placed on a heart-lung machine. This supplied oxygen and removed carbon dioxide from his blood, and it circulated blood through his body.

Is Sammy Alive? Yes No

Reason: _____

The doctors consulted bioengineers⁶ about Sammy. Because almost all of his life-sustaining functions were being carried on by machine, it might be possible to compress all of these machines into one mobile unit, which would be controlled by electrical impulses from Sammy's brain. This unit would be equipped with mechanical arms to enable him to perform manipulative tasks. A mechanism to create a flow of air over his vocal cords might enable him to speak. To do all this, they would have to amputate at the neck and attach his head to the machine, which would then supply all nutrients to his brain. Sammy consented, and the operation was successfully performed.

Is Sammy Alive? Yes No

Reason: _____

Sammy functioned well for a few years. However, a slow deterioration of his brain cells was observed and was diagnosed as terminal⁷. So the medical team that had developed around Sammy began to program his brain. A miniature computer was developed: it could be housed in a machine that was humanlike in appearance, movement, and mannerisms. As the computer was installed, Sammy's brain cells completely deteriorated. Sammy was once again able to leave the hospital with complete assurance that he would not return with biological illness.

Is Sammy Alive? Yes No

Reason: _____

Is there a difference between "living" and "life"? Explain.

Glossary:

1. **Intestine:** The part of your body that does most of the work digesting your food
2. **Amputated:** When a part of your body is surgically removed
3. **Synthetic:** Man-made, not natural.
4. **Kidney:** A body part that helps humans take waste materials out of the food you digest.
5. **Artificial:** Not natural, man-made. For example, many sodas have "artificial flavoring."
6. **Bioengineers:** Scientists who specialize in building machines and technologies that support life and living things.
7. **Terminal:** When a disease is incurable, or fatal. It is going to kill the patient.