Course: Advanced Biology Grade Level: 11/12

Type: Informational/Explanatory Structure: Definition

Teaching Task 11B: After researching the provided resources on organ transplantation, write an essay that defines organ transplantation and explains reasons for requiring organ transplantation, and medical issues involved in identifying recipients and donors, addressing rejection, and regulating organ/tissue transplantation. Support the discussion with evidence from the research. L2 What implications can you draw?

Performance Level: Approaches Expectations

"Don't think of organ donations as giving up part of yourself to keep a total stranger alive. It's really a total stranger giving up almost all of themselves to keep part of you alive." Every eleven minutes someone is added to the waiting list to receive an organ. On an average day seventy-five people receive organ transplants but however, an average of twenty people die each day waiting for transplants, because they don't have donors.

Organ transplantation is the process of surgically transferring a donated organ into a patient with end-stage organ failure. Organ transplantation is a very risky and stressful procedure. There are various reasons why people are requiring organ transplants. People having certain disease can lead to end-stage organ failure, which can be resulting into getting an organ transplant. Some organ recipients all do not have a disease; some may have had an accident causing injury to an organ.

Organs that can be transplanted are; heart, intestine, kidney, liver, lung, and pancreas. The donors that they have received the organs from are usually people who have had serve head trauma, stroke or brain aneurysm. The medical team has to test to see if the donor is brain dead firs, in order to take the organs. There are many different kinds of conditions the medical team has to follow and take into consideration when matching up the organ to the recipient. The conditions they have to look at are; blood type, body size, severity of patient's medical condition, distance between the hospital and donor, and the patients waiting time. People who are waiting for a heart are categorized by how urgently the need it. Hearts can only survive outside of the body for about four to six hours. The team quickly finds a person closest to the hospital that best fits the conditions. Also, the heart must fit inside the rib cage.

The lungs have to go the a series of test, then that also has four to six hours to survive out of the body. Livers are given to the person who has the highest score of

needing the transplant. Livers can survive outside the body for twelve to fifteen hours, so they can travel further than the heart and lungs.

People who need kidneys are under the conditions of blood type, waiting time, and whether the recipient and donor is a good match. The kidney can stay healthy outside of the body for thirty-six to forty-eight hours, so the kidney has more time to reach a recipient. Pancreas transplant is mostly based on blood type and the waiting time. The intestines must be matched to the identical blood type. The donor should be smaller then recipient too.

Rejection is a big fear for recipients, knowing what they already have gone through and the journey ahead of them. Rejection is the way the body protects itself from the germ, there are two types of rejection. Acute rejection is when the body will assume that the organ or tissue is a foreign invader, and the body will attempt to destroy it. Chronic rejection happens is when the organ will slowly fail. There are many ways to help prevent rejection. Doctors will give the recipient medicine to help stop rejection. Also, recipients should stay very healthy. They should have a low fat diet, and exercise regularly, when they are healthy enough to do so. Recipients should always go to every appointment they have scheduled.

When doctors have an organ donor they call the OPO (organ procurement organization). The OPO will send a representative to see if they have enrolled as an organ donor. The OPO then contacts OPTN to find a matching recipient. OPTN is in charge of the national database. The OPO monitors the organ. The OPO controls organ transplantation.

Organ transplantation is a tremendous operation that saves lives. Although not everyone makes it to receive one or not everyone's body accepts it, but for the ones that have made, it's a great thing. To a person who needed an organ and received one, they probably couldn't say how grateful they really are. It's definitely a chance a recipient takes, but at that point they really have nothing else to lose. A person how donates their organs can save up to eight lives, so only if more people would be organ donor.

### Work Cited

Health and Resources. DONATE THE GIFT OF LIFE. 7 May 2011. http://organdonor.gov/

HOW ORGAN TRANSPLANTS WORK. 2011. 7 May 2011.

http://health.howstuffworks.com/human-body/parts/organ-transplant.htm

"Medline Plus." Organ Transplantation. 5 May 2011. 7 May 2011.

http://www.nlm.nih.gov/medlineplus/organtransplantation.html

Organ Transplantation. 2008. 7 May 2011. http://www.ncbi.nlm.nih.gov/books/nbk24616/

THE GIFT Of ALIFETIME. 7 May 2011. http://www.organtransplants.org/

UNOS DONATE LIFE. 2011. 7 May 2011. http://www.unos.org/

Annotation		
Focus	2	The essay addresses most aspects of the prompt, including the definition of organ transplantation, reasons for this, and rejection issues. Too much emphasis is placed on descriptions of heart, liver, kidney, and pancreas transplantation procedures, and not enough on medical issues in recipients and donors.
Reading/Research	2	Relevant information from the reading is presented, but the essay would benefit from more complete explanation of recipient rejection and regulatory agencies such as UNOS.  Statistics such as "every eleven minutes someone is added to the waiting list to receive an organ" and "On an average day, seventy-five people receive organ transplants, but an average of twenty people die each day waiting for transplants" are included, but their relevance needs further explanation.
Controlling Idea	2.5	The writer establishes a controlling idea with a general purpose: to explain the organ transplant procedure, reasons for organ transplantation, and issues involved in the process. <i>Organ transplantation is a very risky and stressful procedure. There are various reasons why people are requiring organ transplants</i> .
Development	2	The writer includes some appropriate details to support the focus and controlling idea, but several parts of the essay would benefit from additional explanation:  Reasons for organ transplantation are introduced in two sentences, but need elaboration.  Rejection-only two of the three types of rejection are explained.  How do OPO and OPTN control transplantation, in terms of the regulatory process?
Organization	2.5	The essay follows an appropriate organizational structure. The inclusion of transitions to help guide the reader from one paragraph to the next would enhance the organization of the essay.
Conventions	2	The writer's command of the English language is inconsistent. Proper sentence structure is utilized, but there are errors in spelling and verb tense which detract from the essay's flow. Sources are used without citation.
Content Understanding	2	The essay includes background information and research, but the extent to which the writer understands the issue of rejection and regulation of organ transplantation is limited, as evidenced by a basic explanation.

# This student would benefit from feedback, discussion, and/or instruction in the following areas:

- Elaborating on research and examples to provide more thorough explanations.
- Appropriate parenthetical citation in order to avoid plagiarism.
- Editing for grammatical errors.
- Implementing transition statements between paragraphs.