

Grade Level: 10th Grade

Topic: The Human Heart

Essential Questions:

What does it mean to be alive?

How do nature and science work together?

Resources:

- A. Excerpts from Brian Doyle's *The Wet Engine*
<http://osupress.oregonstate.edu/blog/holy-human-heart-selections-from-brian-doyles-wet-engine>
- B. "Joyas Voladoras" by Brian Doyle
https://theamericanscholar.org/joyas-volardores/#.VKf_WCvF_QQ
- C. Heart with No Beat Offers Hope of New Lease on Life
<http://www.npr.org/2011/06/13/137029208/heart-with-no-beat-offers-hope-of-new-lease-on-life>
- D. Ted Goleworthy: How I Repaired My Own Heart (first 8 minutes)
http://www.ted.com/talks/tal_goleworthy_how_i_repaired_my_own_heart#t-327577
- E. Top 10: The Best Copies of Nature (with graphics)
<http://sciencenordic.com/top-10-best-copies-nature-part-1>

Additional Resources:

- F. Pump On: A Sublime Biography of the Human Heart
<http://www.npr.org/2011/02/12/1336182160/pump-on-a-sublime-biography-of-the-human-heart>
- G. Heart Failure Overview (with graphics)
<http://www.nytimes.com/health/guides/disease/heart-failure/overview.html?module=Search&mabReward=relbias%3Ar%2C%7B%221%22%3A%22RI%3A7%22%7D>
- H. All Pumped Up: Can Stem Cells Fix Human Hearts?
<http://www.npr.org/2011/06/13/137106353/all-pumped-up-can-stem-cells-fix-human-hearts>

Writing Types	Guiding Questions	Prompts	Reminders/Things to Consider (Student-Friendly Rubric Descriptors)
Argument Resources A, B, C	- What do all hearts have in common? - Why have previous attempts to create an artificial heart failed?	The heart has long been a symbol for life, and the heartbeat itself, an assurance of life. The advances in technology are heading toward an artificial heart without a pulse, and the researchers in Resource C assert that the loss of the heartbeat is a "small poetic price to pay." Consider the perspective offered in Resources A and B. How important is it that the artificial heart have a pulse? (may also use Resource F)	<ul style="list-style-type: none">• State a clear argument related to the resources and prompt and maintain it throughout the work.• Distinguish main argument from alternate or opposing arguments.• Use relevant and accurate details/evidence from two or more resources to support argument.• Clarify relationships between and among ideas, and connect evidence to argument.• Include an introduction and conclusion.• Use grade-level conventions correctly.

<p>Informative</p> <p>Resources C, D, E</p>	<p>How does nature inspire inventions? How can man-made structures inspire “natural” inventions?</p>	<p>Resource C states, “what works in nature is often not the only mechanical solution, or even the best one.” Consider the invention explained in Resource D and the inventions described in Resource E. Explore the relationship between nature, science, and technology. Explain how the cooperation and influence of each field advances the understanding of the other fields.</p>	<ul style="list-style-type: none"> ● State and maintain a clear, controlling idea related to the resources. ● Organize ideas, concepts, and information to increase understanding of controlling idea. ● Use relevant and accurate details/evidence from two or more resources to support position. ● Use words and phrases to clarify relationships among and between ideas. ● Include an introduction and conclusion. ● Use grade-level conventions correctly.
<p>Narrative</p> <p>Resources A & B</p>	<p>What moments make the author feel most vulnerable? What is the author’s claim about the heart? What evidence does he use to support that claim?</p>	<p>Consider Resources A and B. Reflect on a time when you first understood something in a way you had not before understood it. Describe the event or events that led to this understanding.</p>	<ul style="list-style-type: none"> ● Establish and maintain a setting, and point of view. ● Use sensory language and vivid descriptions to create context. ● Include an introduction and conclusion. ● Use grade-level conventions correctly.