Question 2

The score should reflect a judgment of the essay’s quality as a whole. Remember that students had only 40 minutes to read and write; therefore, the essay is not a finished product and should not be judged by standards that are appropriate for an out-of-class assignment. Evaluate the essay as a draft, making certain to reward students for what they do well.

All essays, even those scored 8 or 9, may contain occasional flaws in analysis, prose style, or mechanics. Such features should enter into the holistic evaluation of an essay’s overall quality. In no case may an essay with many distracting errors in grammar and mechanics be scored higher than a 2.

9 Essays earning a score of 9 meet the criteria for 8 essays and, in addition, are especially sophisticated in their explanation or demonstrate particularly impressive control of language.

8 Effective

Essays earning a score of 8 effectively analyze how Barry uses rhetorical strategies to characterize scientific research. The prose demonstrates an ability to control a wide range of the elements of effective writing but is not necessarily flawless.

7 Essays earning a score of 7 fit the description of 6 essays but provide a more complete explanation or demonstrate a more mature prose style.

6 Adequate

Essays earning a score of 6 adequately analyze how Barry uses rhetorical strategies to characterize scientific research. The writing may contain lapses in diction or syntax, but generally the prose is clear.

5 Essays earning a score of 5 analyze how Barry uses rhetorical strategies to characterize scientific research. These essays may, however, provide uneven, inconsistent, or limited explanations. The writing may contain lapses in diction or syntax, but it usually conveys the student’s ideas.

4 Inadequate

Essays earning a score of 4 inadequately analyze how Barry uses rhetorical strategies to characterize scientific research. The prose generally conveys the student’s ideas but may suggest immature control of writing.

3 Essays earning a score of 3 meet the criteria for a score of 4 but demonstrate less success in analyzing the strategies Barry uses to characterize scientific research. The essays may show less control of writing.

* For the purposes of scoring, analysis refers to identifying features of a text and explaining how the author uses these to achieve a particular effect or purpose.
Question 2 (continued)

2 Little Success

Essays earning a score of 2 demonstrate little success in analyzing how Barry uses rhetorical strategies to characterize scientific research. These essays may misunderstand the prompt; fail to analyze the strategies Barry uses to characterize scientific research; or substitute a simpler task by responding to the prompt tangentially with unrelated, inaccurate, or inappropriate explanation. The prose often demonstrates consistent weaknesses in writing.

1 Essays earning a score of 1 meet the criteria for a score of 2 but are undeveloped, especially simplistic in their explanation, and/or weak in their control of language.

0 Indicates an on-topic response that receives no credit, such as one that merely repeats the prompt.

— Indicates a blank response or one that is completely off topic.
Scientific research is made to be done methodically. There is even a widely known "scientific method" created in the 15th century based on reason and common sense. It was created from a desire to make the unknown known. As Barry describes the scientific process, he says that uncertainty, in the world of the unknown, must be made a tool - a weapon, even against one's own convictions. However, that concept is very ethereal, so Barry utilizes comparison and logical hypothetical situations to convey that idea.

Barry begins by contrasting the strength and conviction of certainty with the weakness and fear of uncertainty to better define the term of uncertainty, which is the focus of the passage. He establishes direction in his second paragraph; as he lists qualities the ideal scientist should have, he ends with courage, and with courage he runs off and further defines how he will use that term. Courage, to Barry, is not "venturing into the unknown," which is a polite way of saying "charging into God-knows-what, head down and arms flailing," but rather the courage to face a total shattering of your character and all of one's beliefs upon the "sharp edge of a single finding." To be a good scientist, Barry maintains in his third paragraph, one
must reject all that is unproven. This is especially
difficult to do, speaking from personal experience,
because the thought of the possibility that
there is no afterlife, that all that follows
this life is nonexistence, is fund chills me to
the bone and puts a rightful fear of death in
my heart. Barry uses the example of Einstein to
express this point of accepting a total reversal of
beliefs in an attempt to persuade the reader
that to face a destruction of one's convictions
requires a far greater courage, to conceive of
uncertainty as an ally rather than a foe.

Having established the role of uncertainty,
Barry shifts into an analogy comparing scientists
to pioneers. A pioneer marches into chaos, making
order with "tools... do not ex [that] do not exist."

This analogy is used to relate his continuing
argument back to his thesis about uncertainty—
out of chaos, a scientist, despite being uncertain
and having to use nonexistent tools, must make
sense. Barry then finishes the fourth paragraph
with a two-sentence antithesis, with almost a
humorously ironic effect. The former sentence is
long, elaborate, and relates the finding of the
truth to a crystal that illuminates the road for
colleagues. And then, quite bluntly, he provides the inverse result, which is equivalent to falling off a cliff, an image reminiscent of Wile E. Coyote, who himself is very methodical, persistent, and courageous in his pursuit of his goal. Barry's intent with the reversal is to instill, once more, the idea of fear and uncertainty in the reader.

Barry's fifth paragraph is full of questions. Literally. The questions do have a purpose, though. While it is to be expected that questions in writing such as this are rhetorical, these questions have a short and deflective sense to them, as though the writer was bouncing from idea to idea very quickly. Barry's purpose in writing these questions is to simulate the thought process of the pioneer scientist—very uncertain, very entropic. The analogy finally ends.

The analogy finally ends with the scientist's success. Once progress has been made, order achieved, and certainty restored, other scientists rush past him to delve into whatever uncertainty is left, similar to how, in Einstein's wake, hundreds of relativists surged forward, digging at astrophysics like never before. In that small paragraph, though, there is a hint of criticism in Barry's diction,
referring to the post-pioneer scientists as a “flood,” their paved roads as simplistically “orderly and straight,” and remarking that their tools will be ready for them. However, considering Barry concedes that not all scientists can be so courageous in the following paragraph, it is a very subtle judgement at best.

Barry’s concession that not all researchers are pioneers is done in short offerings of potential flaws, done in the hope that the Net sovereign hovering over these researchers being criticized is a broad an inoffensive one. The transition to the fact that experiments do not always work is made to connect again to uncertainty. The fact that experiments fail and can be “manipulated and forced to yield an answer” is itself uncertain in its attempt to fabricate certainty. In the end, Barry managed to evoke that the only certainty in science is uncertainty, and did so using doing so using, which were most effective, very uncertain questions.
In the passage from *The Great Influenza*, John M. Barry characterizes scientific research through his strong use of parallel structure and metaphor.

As John Barry emphasizes that, to be a scientist is to have “the courage to accept—indeed, embrace—uncertainty”. Through his repetition of this idea throughout the entire piece, we get the feeling that scientific breakthroughs are more than hard work and luck, but rather a persistence and application of previous knowledge. Barry insists that “experiments do not simply work”, but with stubbornness and ingenuity “an investigator must make them work”. With this idea of scientific research being unyielding, unwilling to give up its secrets, we understand why “one has to manipulate and even force experiments to yield an answer”. Even Barry’s use of parallel rhetorical questions feels the helplessness one might feel in the face of scientific advancement, not knowing if “a tack [would] be best, or would dynamite be better—or would dynamite be too indiscriminately destructive?”
Barry also uses a strong metaphor in this passage, illustrating the similarities between scientists and early pioneers. The pursuit of scientific research leads them "into a wilderness region where they know almost nothing, where the very tools and techniques needed to clear the wilderness, to bring order to it, do not exist". A single step in the right direction could lead them to findings of Utopian proportions, while one wrong one could "also take one off a cliff". Barry continues this metaphor in his assertion that if one scientist succeeds, "a flood of colleagues will pave roads over the path laid" turning a modest, village-like discovery into a bustling metropolis of new theories, support, refutation, and knowledge.

Through his rhetorical strategies, Barry sets up scientific research as an unforgiving Wonderland of discovery, that leads us, like Alice, "through the looking glass".
A scientist is an explorer, a researcher, a pioneer and an investigator. John M. Barry immerses the scientist to the deepest regions of personality through stimulating syntax, diction and figurative language. Just as an experiment can be manipulated, so too does John M. Barry in an intricate portrait of a scientific mind.

There is a way to truly captivate an audience and Barry understands that. He begins his passage with direct, blunt yet thought provoking syntax. He opens the passage clearly. Particularly in the ever-important opening paragraph, he uses parallel demands attention. He opens with parallel structure as he describes the emotional differences between certainty and uncertainty. Barry's writing carries the reader through a smooth journey. He translates and wildly expands on his opening ideas but flawlessly returns to them to close the passage.

Barry understands the importance of the transition. As he travels through his descriptions he uses metaphors to describe the dynamic nature of a scientist. He compares the steps of the researcher to life defying steps. He describes simple attributes such as curiosity as if they were life necessities. All these elements add to a tone of utmost importance.

The most compelling use of rhetorical language that Barry
uses is also the most apparent. He pays close attention to word choice. This produces a diction that is charging basic moving. His diction is clear. He often uses general words to describe something much more powerful. He defines courage, a simple word, with magnificent detail and precision. Courage is the main theme of his writing and he gives its meaning particular attention often. In addition, he also provides broad ideas in clear and definitive language.

John M. Barry writes with an enthusiasm that is conveyed back to the reader with the same intensity as it was written. The detail he places in his writing care he places in his use of rhetorical language brings his work to life.
Overview

This question asked students to consider the rhetorical strategies used by science writer John M. Barry to characterize the heroic and pioneering nature of scientific research. Students were required to consider how Barry uses elements of language to portray the qualities required of scientists: intelligence, curiosity, passion, patience, creativity, self-sufficiency, and courage.

Sample: 2A
Score: 9

Showing an unusually keen understanding of Barry’s text, this student says that in order to deliver what might seem an “ethereal” idea, Barry “utilizes comparison and logical hypothetical situations to convey that idea.” As it discusses those situations, this essay proves to be one of the rare responses that recognizes the questions Barry poses not as rhetorical ones in the technical sense, but rather as questions posited to illustrate the workings of the inquiring mind of the scientist. The essay explains that the rhetorical effect of the questions is “to simulate the thought process of the pioneer scientist.” It analyzes Barry’s analogies, his use of antithesis, and the arrangement of the piece. The student writes with a confident voice, unafraid to be humorous, comparing Barry’s image of the scientist falling off the metaphorical cliff to “Wile E. Coyote, who himself is very methodical, persistent, and courageous in the pursuit of his goal.” The response is well written throughout and in fact improves as it progresses, demonstrating a student writing his or her way into an effective response. This essay earned a score of 9 both for its mature control of language and for its effective understanding and analysis.

Sample: 2B
Score: 6

This essay presents an adequate response as it analyzes how Barry characterizes scientific research “as an unforgiving Wonderland of discovery.” Its analysis of Barry’s use of metaphor is quite strong, and overall the essay demonstrates good control of language. The student knows how to incorporate quoted material deftly into the syntax of the surrounding prose. For example, the student writes: “Barry insists that ‘experiments do not simply work,’ but with stubbornness and ingenuity ‘an investigator must make them work.’” Paragraph 3 explains that for scientists the “pursuit of scientific research leads them ‘into a wilderness region. . . .’” The essay concludes by saying that Barry presents scientific research as a process “that leads us, like Alice, ‘through the looking glass.’” Such clear expression is often a feature of upper-half responses. But although the prose style might seem to warrant elevation of the score to 7, the essay would require more thorough analysis to rise above adequacy, so it only earned a score of 6.

Sample: 2C
Score: 4

This essay delivers an inadequate response. It does engage in analysis, attempting to discuss the effects of parallel structure, metaphor, and diction. The information presented is not inaccurate, but neither is it compelling. In paragraphs 2, 3, and 4, the student begins an analysis of each of the three features, but in each case the analysis remains limited. The student seems to understand the function of the strategies yet fails to provide specific examples and cogent explanations. The student writes of Barry, for instance, that “he uses metaphors to describe the dynamic nature of a scientist” but does not identify a specific case in point. Adequate analysis of one of the strategies might have lifted this response to a score of 5, but the essay earned only a 4, remaining inadequate because of its limited analyses throughout.