DIRECTIONS FOR TEACHERS

LISTENING SECTION

COMPREHENSIVE EXAMINATION IN ENGLISH

Thursday, June 18, 2015 — 1:15 to 4:15 p.m., only

BE SURE THAT THE LISTENING SECTION IS ADMINISTERED TO EVERY STUDENT.

1 Before the start of the examination period, say:

> Do not open the examination booklet until you are instructed to do so.

2 Distribute an answer sheet to each student. Then distribute one examination booklet, one essay booklet, and scrap paper to each student.

3 After each student has received an examination booklet, an essay booklet, scrap paper, and his or her answer sheet, say:

> A separate answer sheet has been provided for you. Follow the instructions for completing the student information on your answer sheet. You must also fill in the heading on each page of your essay booklet that has a space for it, and write your name at the top of each sheet of scrap paper.

4 After the students have filled in all headings on their essay booklets, say:

> You will listen to a passage and answer some multiple-choice questions. You will hear the passage twice.
>
> I will read the passage aloud to you once. Listen carefully. You may take notes on page 3 of your examination booklet. Then I will tell you to open your examination booklet to page 4. You will be given a chance to read the questions before the second reading. Then I will read the passage a second time. You may also take notes during the second reading or answer the questions.
>
> Now I will read the passage aloud to you for the first time. Open your examination booklet to page 3.

5 Note the time you start reading the listening passage. The three-hour examination starts now. Read both the introduction and the passage aloud, including the attribution at the end. Read with appropriate expression, but without added comment.

Listening Passage

The following passage is from an article entitled "Charting the Stars" by Elizabeth Dougherty, published in *New York Archives* in Summer 2006. In this excerpt, Dougherty discusses the Dudley Observatory's history and impact on astronomy.

For most of the nineteenth century, people considered the stars to be fixed in the sky, as if embedded in a spherical black canvas. They also believed that stars moved in lock step—that any movement of one star relative to another was imperceptible, especially when compared to the planets (whose very name means "wanderer"). Even the most learned scientists could scarcely imagine that stars existed beyond our galaxy, or that our galaxy was one among millions.

That perception changed, however, as astronomers developed methods to measure a star's position in the sky and to calculate its distance from the earth. By carefully recording a star's precise position, astronomers could detect miniscule movements over time. This paved the way for a three-dimensional view of the heavens, and allowed scientists to determine the shape of our galaxy and its place among many other galaxies in the universe.

This revolution in understanding grew from one major accomplishment: the cataloguing of the stars, a significant portion of which was completed at the Dudley Observatory, a small civic observatory in Albany, New York. When it opened in 1856, Albanians were optimistic that their city would become a center for scientific research. But little did they imagine that Dudley would ultimately advance the very research that would vault astronomy out of the realm of small observatories into the domain of supercomputers, radio telescopes, and deep-space voyages.

In the mid-1800s, before radio and television brought entertainment into American homes, communities provided their own intellectual activities. People formed social clubs and invited speakers to lead discussions about science, art, and culture. After one such presentation in Albany by astronomer Ormsby M. Mitchel, a social club decided to make it possible to research what Mitchel had called the "wonders of the heavens" by agreeing to found the Dudley Observatory. …

The Dudley Observatory's prominent research began under the direction of the self-trained astronomer Lewis Boss, who became director in 1876. Around this time, the Astronomische Geselleschaft, a German astronomical society, decided to chart the stars "from pole to pole of the heavens, down to the ninth magnitude, which includes stars sixteen times fainter than the faintest star visible to the unassisted eye," according to Boss's son, Benjamin. Lewis Boss chose to participate alongside fourteen world-class observatories by carefully calculating the positions of the stars in one slice of the sky. He started late, but was among the first to finish, and followed his achievement with a more ambitious plan to determine the movements of the mapped stars relative to one another as a means to gauge their distances from Earth. …

By the close of the nineteenth century, Boss had made enough observations to begin calculations. Since each hour of observation generated twenty hours of calculations, he needed to assemble a team of reliable staff members to help with the mathematics—but he also needed to do it economically. So, following in the footsteps of Edward C. Pickering at Harvard, he hired women as "computers" and paid them about half of the men's salaries. In a letter written in 1903, according to John Lankford's *American Astronomy*, Boss described the women as being "…as rapid and accurate as men and much more patient. In copying for duplicate computations and in all such work, I have found them superior to men." From 1900 to 1940, Dudley Observatory employed more female computers—eighty by the project's completion—than any other astronomical institution. …

Today the Dudley Observatory, located in Schenectady since 1977, performs educational outreach work to support and encourage young astronomers. Director Janie Schwab recognizes that science is becoming increasingly more interdisciplinary, and she has made it a significant part of Dudley's mission to introduce astronomy to young people by using it to teach them about math, technology, and science. Dudley offers astronomy camp scholarships, funds a Rising Star Internship program that rewards students with telescopes, and helps students host public "star parties" where they learn to find such celestial objects as double stars, galaxies, clusters, planets, and nebulae. Dudley also encourages participation in the New York State Archives Student Research Awards by offering a prize for research that uses material from the observatory's archives.

The power of such programs can transform the way young people see the world around them. By sharing their enthusiasm for the "wonders of the heavens," they can inspire their communities as Ormsby M. Mitchel did over a century and a half ago—in the singular moment in time that put the Dudley Observatory on the map.

—excerpted from "Charting the Stars"
New York Archives, Summer 2006

6 After reading the passage aloud once, say:

> You may take five minutes to read the questions on page 4 of your test booklet before I read the passage aloud the second time.

7 After the students have had five minutes to read the questions, say:

> As you listen to the second reading, you may take notes or answer the questions. You will be given an opportunity to complete the questions after the second reading. Now I will read the passage aloud a second time.

8 Read both the introduction and the passage a second time.

9 After the second reading, say:

> Now turn to page 4 of your test booklet, read the directions and answer the multiple-choice questions. You may look over your notes to answer the questions.