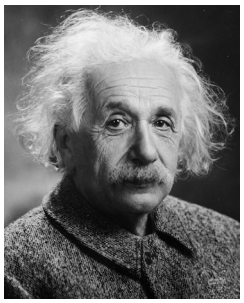
Task Shell Example 11—Giants of Science

Science Assessment Activity: Giants of Science

"You cannot hope to build a better world without improving the individuals. To that end, each of us must work for our own improvement and, at the same time, share a general responsibility for all humanity, our particular duty being to aid those to whom we can be most useful." Marie Curie (1867–1934)

"Two things inspire me to awe—the starry heavens above and the moral universe within." Albert Einstein (1879–1955)



Introduction: Marie Curie and Albert Einstein are among thousands of notable scientists who, through the ages, have advanced humankind through their work. There are chemists, biologists, physicists, environmentalists, astronomers, earth scientists, and many others who have played important roles in helping us understand our world and advance technology and medicine.

In this activity, you will

- choose and research a "giant of science" in a field of science that you are studying;
- present your findings in written form; and
- make an oral presentation about what you learned.

Science Assessed

- Research skills
- Historical development of science
- Distinguish among theories
- Communicate science concepts and information
- Make connections to social and political issues

Part I—The Research

After you have selected a scientist to study, research the following aspects about your scientist:

1. The major contribution or discovery of the scientist—Why is this person considered a "Giant of Science"?
   - Make a drawing(s) or model to represent one of the major ideas of the scientist.
   - What were political and social conditions like when this scientist made his or her major contributions? Did the political or social conditions influence his or her thinking or prevent the scientific ideas from developing? If yes, in what ways?
   - Does that science discovery still hold true today? Why or why not?
2. Include supporting biographical information.
   - Personal history
   - Educational background
   - Other relevant information of interest

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3. *OPTIONAL*: Select a quote made by your scientist and then demonstrate how the scientist's actions are consistent or inconsistent with the chosen quote.

Part II—Present Your Findings in a Written Presentation

Select one of the following to present the information about your scientist. Include the information from your research in Part 1, and cite all references, regardless of the written form you select.

- Formal research paper
- Magazine article
- Newspaper article
- Brochure
- Poster
- PowerPoint presentation (must include a script)

Part III—Present Your Findings in an Oral Presentation[9]

Prepare and deliver a two- to three-minute oral report about your scientist. Your presentation should include the following:

- the most important and most interesting aspects of your scientist's life and contributions; and
- a prop—You must select or make a prop to use in your oral presentation that best characterizes your scientist and his or her work. The prop can be an object, model, or poster, but must be an essential part of the oral presentation.

Source: Adapted from assessment developed as part of the Wyoming Body of Evidence Consortium & Wyoming Department of Education Performance Assessment Project—Grade HS (2002–2004). Source of image of Albert Einstein: Pixabay .com/janeb13 Image of Marie Curie (photographer unknown) licensed under CC BY 4.0: https://creativecommons.org/licenses/by/4.0/deed.en

9. The observation rubric designed to record evidence for this assessment is included in this module, in the section discussing rubric formats.

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