



Academic Activity Chapter 11

Diagnostic Techniques

Bioengineers have played a role in the development of new diagnostic techniques that help physicians diagnose, treat, and operate on people with a greater degree of accuracy. Go online to discover some of these machines, learn how they work, and do a short descriptive presentation on the following technologies developed by bioengineers and their predecessors. This activity can be done in graphical presentation software like Keynote or PowerPoint, in the form of an informative brochure, or as a 3–4 minute presentation with a visual aid.

- 1. Search the Internet for CT scanning. Read three different web resources and find and save, or print, a representative image. Record the names of the websites you obtain information from for citation purposes. Use the following prompts to create a descriptive presentation on the development and uses of CT scanners:**
 - Who were the original inventors of the CT scanner?
 - What was the previous technology used to perform the same job?
 - How did CT scanners improve diagnostic medicine?
 - Are CT scanners used outside of medicine?



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- 2.** Search the Internet for Nuclear Magnetic Resonance Imaging (NMRI). Read three different web resources and find and save, or print, a representative image. Record the names of the websites you visit for citation purposes. Use the following prompts to create a descriptive presentation on the development and uses of Magnetic Resonance Imaging:
- Several people were involved in the development of NMRI technology. Who received the Nobel Prize? Who did not?
 - What are some of the advantages of NMRI over CT scanning?
 - How does an NMRI machine work?

- 3.** Search the Internet for information about medical ultrasound imaging. Read three different web resources and save, or print, a representative image from each. Record the names of the websites you read for citation purposes. Use the following prompts to create a descriptive presentation on the development of ultrasound for medical imaging:
- Researchers in what three countries developed the use of ultrasound for medical imaging?
 - Who were these researchers and what did each do?
 - How does ultrasound work?
 - What is ultrasound used for primarily today and why?
