

Grand Challenge Project

Challenge: A nearby hospital has just installed a new Magnetic Resonance Imaging facility, which has the capacity to make a three dimensional image of the brain and other parts of the body by putting a patient into a strong magnetic field. The hospital wishes for its entire staff to have a clear knowledge of the risks involved with working near a strong magnetic field, and a basic understanding of why those risks occur. Your task is to develop a presentation or pamphlet explaining the risks involved, the physics behind those risks, and the safety precautions that should be taken by all staff members.

Project Ideas:

1. Design a safety pamphlet that can be distributed to the hospital staff that explains the physics of magnetic fields, how those fields are present in the MRI room, and the possible safety hazards of the static and changing fields. Remember your audience's perspective in the booklet, keeping it clear and interesting.
2. Design a web site that hospital employees can navigate to answer questions about how magnetic fields work, what fields are present in the MRI room, and what sort of hazards they should be aware of. Make sure that your website accurately and completely describes the physics behind the risks, and remember your audience's perspective, keeping the site clear and interesting
3. Make a PowerPoint presentation that the hospital trainers can use to instruct the staff on the physics of magnetic fields, the fields present in the MRI room, and the safety hazards that may accompany strong magnetic fields. Make sure to completely and accurately describe the physics involved, and remember your audience's perspective, keeping the presentation clear and interesting.