

# Physics, Preparation for Tuesday, Nov. 28

## Read N8 from *Six Ideas*

Either read N8 carefully if you feel very solid on N1-N7, or work more N1-N7 problems and read N8 cursorily. It is up to you. It won't hobble you to not be able to think in non-inertial frames. You can always solve problems by doing your analyses in inertial frames.

The exception is general relativity. It can simplify a problem greatly to go to a freely falling frame. For example if a photon is falling toward the Sun, it gains energy and is blue-shifted, while still falling at the speed of light. To get this result it is useful to change to a freely-falling frame, which is of course accelerating toward the Sun due to the gravity of the Sun.

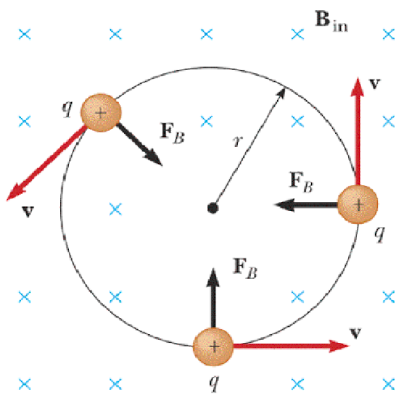
## Presentations

### N7 Presentations

1. Will & Trey, N7M.9, p. 117, a slowing down in the curve problem (start with Eq. N7.18)

Carried forward from last time:

2. All, N7D.4, p. 118, your first encounter with the magnetic field, and because we aren't doing Unit E, possibly your only encounter with the magnetic field in our course:



### N8 Presentations

3. Jack & Emma, N8M.6, p. 135, the fictitious centrifugal force in a centrifuge
4. Rebecca, Hexi, and Brian, N8D.2, tackling the bending of light using our Newtonian tools in combination with Einstein's extremely powerful Principle of Equivalence