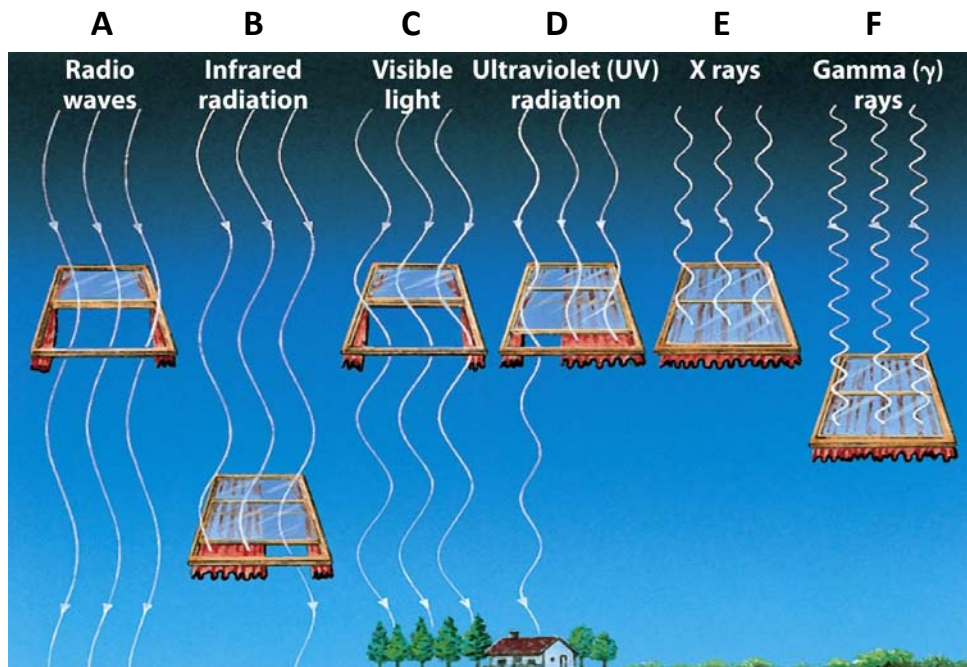


Astronomy Ranking Task: The Electromagnetic (EM) Spectrum

Exercise #4

Description: The figure below represents different wavelengths of light penetrating down through Earth's atmosphere. Notice that the atmosphere can be completely transparent to light at some wavelengths (all three waves passing through the atmosphere to the surface of Earth), yet can also completely absorb other wavelengths (all three waves stopping in the atmosphere before reaching Earth's surface). The different types of radiation are labeled with letters A through F.



A. Ranking instructions: Rank the amounts of each type of radiation that reaches the surface of the Earth.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ Least

Or, the same amount of radiation of each type reaches the Earth's surface. ____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

B. Ranking instructions: Rank the maximum depths in the Earth's atmosphere to which each type of radiation penetrates.

Ranking Order: Shallowest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ Deepest

Or, all types of radiation penetrate the Earth's atmosphere to the same depth. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

C. Ranking instructions: Rank the speeds of each type of radiation as it penetrates the Earth's atmosphere.

Ranking Order: Fastest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ Slowest

Or, all types of radiation travel at the same speed through the Earth's atmosphere. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:
