Electromagnetic Spectrum revision questions

1. List the electromagnetic spectrum in order of increasing wavelength
2. What speed do all electromagnetic waves travel at?
3. Copy and complete the following table

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| --- | --- | --- | --- | --- |
| Type of e-m radiation | Typical source | Application | Detector | Possible hazard |
|  | Electrical antennae | Telecommunications | Aerial | Potential increased cancer risk |
|  | Cosmic sources, magnetron | Cooking, telecommunications |  |  |
| Infra-red |  | Thermograms | Phototransistor, blackened thermometer | Heating of body tissues |
| Visible light | Stars | Vision |  | Intense light can damage the retina |
|  | Sunlight |  | Fluorescent paint | Skin cancer |
|  |  | Medical imaging | Photographic plates |  |
|  | Nuclear decay | Treating tumours |  |  |

1. How can we minimise risk from ultraviolet radiation?
2. Explain refraction (in terms of change of direction)