How exactly LIGHT ENERGY transform into HEAT? why we feel HEAT?

Light is transforming into heat this phenomenon is commonplace and everyone knows this. But hardly any one thinks about it.

The electromagnetic spectrum is the range of all possible frequencies of electromagnetic radiation light from sun consists of different spectra infrared waves, visible waves, x-rays, gamma rays etc.

Light radiated from sun consists of number of wavelengths in form of photons (small packets of energy). Transmission of photons is measured in quanta. Since childhood we have been told that photons are energy packets sent by sun, which are mass less and travel as a wave (electromagnetic radiation). When they strike any surface, two things happens either they get absorbed or reflected back.

When strikes the surface of a body it excites electrons in atoms. These atoms are already vibrating in a frequency. Some of those atoms vibrate sufficiently vigorously that their vibrational energy is roughly equal to the electronic energy (photons) absorbed from the sun—in essence, they are in resonance with the solar energy. Those atoms then make a quantum transition from 'electronically excited' to 'vibrationally excited,' meaning that the energy causes the whole atom to move. We humans feel that excited vibration as "heat" (described below). The atoms which make jump to vibrational excitation soon collide into neighboring atoms, dissipating their vibrational energy in the form of infrared radiation, making body surface hot enough.

This hot body also emits visible red radiation, you must be thinking why? We know body emits infrared radiation by absorbing photons, with that red light also. What we don’t observe is infrared and red light has very close spectra and red radiation is there because of emission of wave that is same as red visible light spectra.

But why do we feel heat? It is just a wave in form of infrared radiation right. The sensation of heat comes from nerve-endings that detect the temperature of the skin. When infrared radiation touches our body the molecules get excited and starting to collide. The temperature of the skin increases when heat energy flows into the skin. For moderate ranges of temperature, the nerve endings tend to adapt; this is why when you first get into a hot shower, it can seem VERY hot, but as time goes by you get used to it. For this reason, the nerve-endings are most sensitive to changes in temperature.