

Solar radiation (sunlight)



Sollys bryder igennem skyerne over Huon-floden i Tasmanien. Skyerne kaster noget af lyset tilbage, resten når jordoverfladen.

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All the electromagnetic radiation coming from the Sun.

Some of the Sun's radiation passes through the [atmosphere](#) and reaches the surface of the Earth. The amount of solar radiation hitting the Earth is called [insolation](#). Energy, from the sunlight that reaches Earth, drives the [climate](#) and the [ecosystem](#).

Some sunlight is visible to humans as light, but there are also components of solar radiation that are not visible to the human eye. These are important too. Infrared sunlight is heat and ultraviolet sunlight is damaging to living organisms. However, most of the ultraviolet radiation is blocked by the [ozone layer](#).

Some of the radiation reaching Earth is reflected back into space. This process is called [albedo](#). Around 30 percent of the sunlight is reflected by Earth's surface and the atmosphere.

The part of the radiation that is not reflected back into space is [absorbed](#) and converted into heat. Some of this heat escapes and some of it stays around Earth's surface, because of the greenhouse effect, where greenhouse gases capture the heat and stop it from escaping the Earth.

The energy that the Earth receives from the Sun is almost constant. There is a slight [variation](#), which is connected to the amount of [sunspots](#). Some argue that this and longer term variation in solar radiation play a significant role in [climate change](#), but this is controversial.

While the total insolation on Earth is relatively constant, the regional distribution of sunlight varies with the Earth's orbital position in the [annual cycle](#), which is the reason why we have seasons on Earth.

The sunlight also powers [photosynthesis](#). This is the process by which plants capture CO₂ from the oceans and the atmosphere and convert it to organic materials.

Sådan henviser du til opslaget

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