

THE STANDARD

Brightness of the Sun and Stars

Support an argument that the apparent brightness of the sun and stars is due to their relative distances from the Earth.



ESS1.A · The Universe and its Stars

"The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth."

The sun is a star, just like the ones you see at night. It looks gigantic and blinding only because it is the closest star to us. The other stars are unbelievably far away, so they shrink to tiny dots. **A 5th grader explains the sun's brightness by saying it is the nearest star, then backs that claim with evidence.**



Engaging in Argument from Evidence

"Support an argument with evidence, data, or a model."

5th graders don't just state that the sun is close. They build an argument and back it with proof. A flashlight that dims as you walk it across the room, a data table of distances, a labeled model. **The skill is making a claim and pointing to the evidence that supports it.**



Scale, Proportion, and Quantity

"Natural objects exist from the very small to the immensely large."

Here's the idea 5th graders carry out the door: space is bigger than they can picture. The sun is enormous, but it looks small enough to block with a thumb because it is so far away. Other stars are even farther, so they shrink to specks. **Real size and apparent size are not the same thing, and distance is why.**