

STARLIGHT, STAR BRIGHT

"Starlight, star bright," the first star you see tonight will be a star that's close to Earth. In 150 B.C., a Greek astronomer named Hipparchus recognized that some stars appear brighter than others and organized a list of one thousand of the brightest stars seen from the Northern Hemisphere. Hipparchus rated the stars according to their magnitude (brightness) on a scale of 1 to 6, with 1 representing the brightest down to 6 for those barely visible to the naked eye.

In 1830, English astronomer John Herschel fine-tuned Hipparchus's scale and showed that 1st magnitude stars are about 100 times brighter than 6th magnitude stars. He also found that a few brilliant stars were too bright for Hipparchus's scale and added 0 and negative numbers to the scale. Herschel said that distant stars appear dimmer; closer stars appear brighter. For instance, Sirius, in the constellation Canis Major, is actually brighter than our Sun but it's much farther away from Earth. Sirius measures -1.4, and the Sun is a whopping -26.8.

BRIGHTEST STARS OF THE YEAR

Use a planisphere (see page 14) to locate the brightest stars in the night sky. It may take you a year to see them all!

Name of star	Constellation	Magnitude
1. Sirius	Canis Major	-1.4
2. Arcturus	Bootes	0
3. Vega	Lyra	0
4. Capella	Auriga	0
5. Rigel	Orion	0.1
6. Procyon	Canis Minor	0.3
7. Betelgeuse	Orion	0.7
8. Altair	Aquila	0.7
9. Aldebaran	Taurus	0.9
10. Spica	Virgo	1





DISTANT CLOSE-UP

Try this easy experiment with a friend to show why distant stars appear dimmer than stars closer to Earth.

You'll need:

2 identical flashlights

a dark room

1.

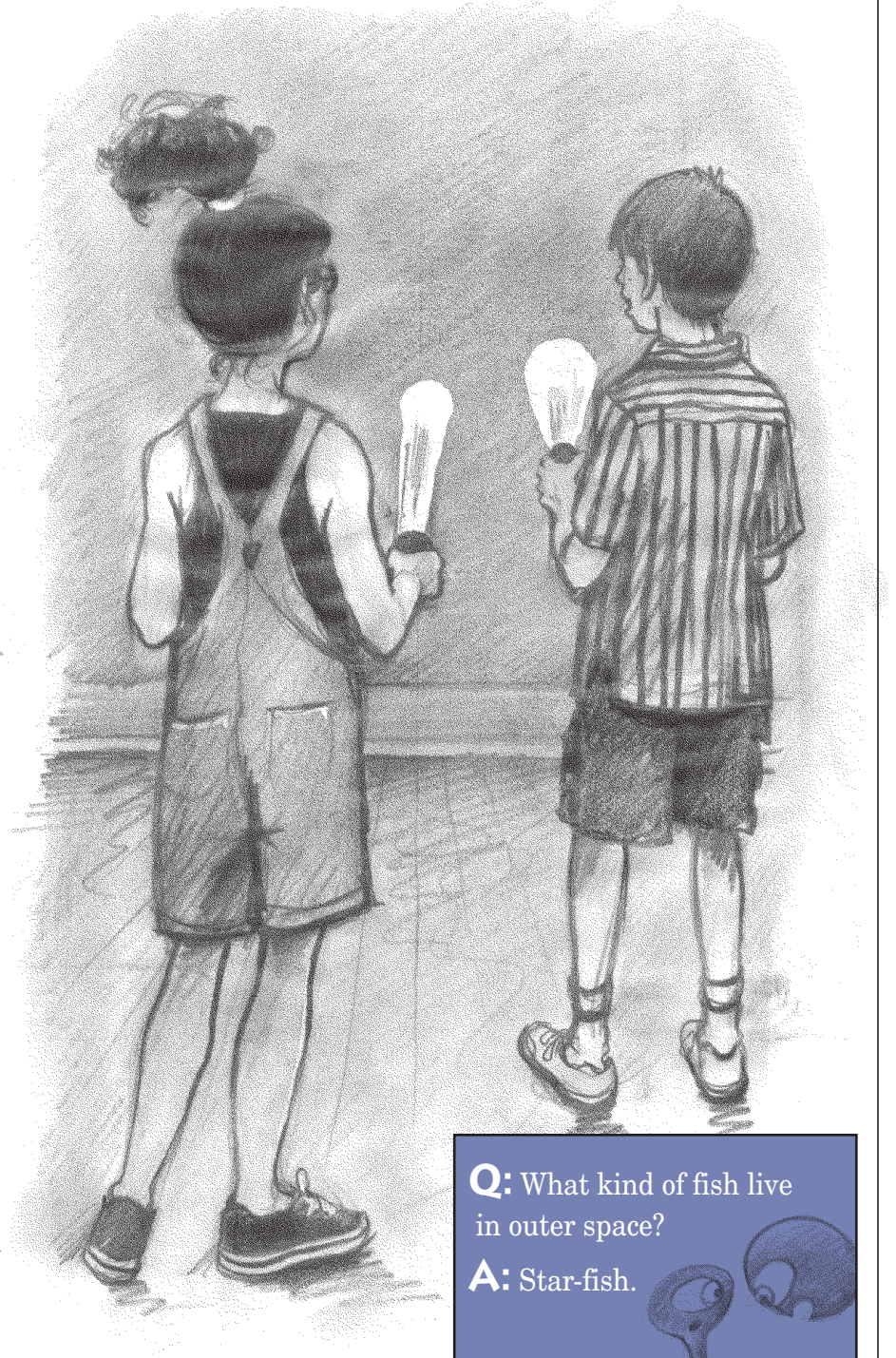
Stand beside your friend about 1 m (3 ft.) from the wall (Earth) in a dark room. When your eyes are adjusted to the dark, shine the flashlights (stars) at Earth (the wall).

2.

One person takes a giant step backward. What do the star beams look like now?

3.

Repeat step 2 until you are standing as far away from each other as possible. The star closest to Earth will appear brighter than the other one. But you know the stars are equally bright, right?



Q: What kind of fish live in outer space?

A: Star-fish.

