THE MOON

The moon is a satellite of the earth, about 238,000 miles distant from it, and accompanies it on its annual journey round the sun. It is a sphere of about 2150 miles in diameter.

The Revolution of the Moon. — Once every month, about sundown, the moon is seen as a thin-curred streak of light near the western horizon. The fact that moon and sun now set almost together shows them to be on the same side of the earth. About seven days later the moon will be seen as a half circle high in the heavens, at sundown, thus showing sun and moon to be at right angles to each other. A week later the moon will appear as a complete circle on the eastern horizon as the sun disappears below the western, thus show-



Diagram to illustrate the relative han and oblique rays. Seven days later the

ing sun and moon to be now on opposite sides of the carth. After the lapse of seven days more the moon will rise as a half circle at midnight, sun and moon being again at right angles ; while a little more than seven days later the sun and moon are

again together. Thus the moon has made one complete revolution about the earth. The time required for the completion of this movement from the sun back to the sun again is $29\frac{1}{2}$ days, and is called a *lunar month*.

The Moon's Phases. — The moon, as we have seen, shows a constantly changing appearance from a complete circle to a narrow erescent. These different appearances are called *phases*, and are owing to the fact that it is constantly changing its position with reference to both sun and earth.

In Figure 9 A, the moon at a is between earth and sun. Its dark side is then turned to the earth, and we receive no light from it. This is the new moon. About seven days later, when the moon has completed a quarter of its revolution, and has reached position c, half of its illuminated face is turned to the earth and it is seen as a half circle. It is then said to be i.