

The Heavens in December.

Now when the earth is bare of leaves and flowers, and when the birds no longer sing in the woods, is the time to turn our eyes to the sky. During this and the next few months of winter, the stars are at their brightest as if to make up for the lack of flowers on the earth.

Every fine evening, shortly after sunset, Jupiter may be seen in the south-east well up in the heavens. If there is any doubt about this planet it can readily be decided on the 16th of the month when Jupiter will be close to the moon. It will be unusually brilliant all through the month, and vies in brightness with Venus in the south-west. Saturn is near Venus but higher up in the heavens. No other planets are prominent in the evening sky.

About eight o'clock in the middle of December the south-east part of the sky will repay a few moments' earnest attention even in the hurry of preparation for Christmas. Orion will be about thirty degrees above the horizon. Below it is the dog star, Sirius, the brightest fixed star in the heavens. The three stars which form Orion's belt will be almost vertical to the horizon. Directly above the belt is the red star Aldebaran, in one point of the V-shaped Hyades, and still further up toward the zenith are the Pleiades, of which six stars can be seen distinctly. (Read Tennyson's apt description of the Pleiades in Locksley Hall. View them with an opera or field glass and notice what clusters of additional stars come into the field). Farther to the north (not in the direction of the zenith but towards the North star) are the twins, Castor and Pollux. Notice how they differ in color from the red star Aldebaran.

Have you ever seen the moon-pass over (occult) a star in the sky? Very few persons have noticed that although it must take place very frequently. Well, you will have a chance to see Aldebaran, the bright red star, occulted by the moon on the evening of December 20. Do not miss that opportunity which may not occur again in your lifetime. Read the following interesting description from the *Scientific American*:

The disappearance of a bright star behind the moon is an extremely interesting phenomenon to watch. It gives many people their first impression of how rapidly the moon is moving among the stars. Then the very sudden extinction of the star is an impressive sight. At first the moon will appear to gain rapidly on Aldebaran. Finally this speck of light will seem to be fastened to the edge of the moon, and to stay in this position longer than the observer expects. But suddenly the star will be gone. Its reappearance from the other side will be equally startling.

This phenomenon is one of our strongest arguments that the moon has either no atmosphere or an extremely thin one.

The sun is at the winter solstice, which marks the beginning of winter, on December 22, at one a. m. On December 31, at midnight, or just as the old year is dying, the earth is at perihelion, and therefore nearest to the sun of any time during the year.

Think of it! the sun nearest to us in the coldest season. Why is this?

School Debates.

Have you ever tried the plan of having a debate in school on Friday afternoons? In many schools where it has been tried successfully excellent results have followed,—in stimulating pupils to read and study questions of the hour and of the past, in learning to express themselves in good English, and in giving them confidence in their own powers. To make a debate successful there should be careful preparation beforehand both by teacher and pupil, and the subject chosen must be interesting and not too difficult. The following subjects are suggested:

Resolved, that the Japanese are braver soldiers than the Russians.

Resolved, that life in the country has more advantages than life in the city.

Resolved, that the telephone is more useful than the telegraph.

Resolved, that the poets have done more for the world than the orators.

Resolved, that the best novelists have done more for the world than the best historians.

SUGGESTED LESSON OR TALK.—What is a hibernating animal? Name three. Name an animal that sheds its horns annually. What is usually the color of Arctic animals? Why? What animals have a government; keep slaves, and have organized armies? How do opossums and kangaroos carry their young? Why are the sparrows in all parts of the American continent? Name an animal that lives in trees, and whose color changes to match the leaves or bark. Why? Is a whale a fish? State what good some insects do to man. What harm? What are amphibians?

Note.—It will make the lesson much more interesting if the teacher or some member of the class can draw on the blackboard each animal when it is named.—*The Western Teacher.*