how the properties of plaster of Paris fit it for the uses to which it is applied.

Hornblende replaces mica so frequently in rocks, that they should be examined in connection with each other. The greater hardness and heaviness of hornblende and its lack of elasticity, will distinguish it from mica. Asbestos is a variety of hornblende.

Limonite, hematite, and magnetite may be studied together. They are hard minerals—in their compact form—although limonite is not as hard as the others usually are.

The streak of limonite is yellow, of hematite red, of magnetite black. It will be found that although the magnet will not attract either of the first two, nor any of the minerals previously examined it has a strong attraction for magnetite. Heat a bit of hematite and another of magnetite in the same tube. Then replace them by a small piece of limonite. It will be found that one of them yields water, and that the streak is different after the water has been expelled. Before leaving them, try water and hydrochloric acid upon them.

Pyrite resembles gold in color, but its hardness, nearly equal to that of quartz, and its brittleness, at once distinguish it from that metal. Notice the beautiful effect produced when a lump of pyrite is briskly struck with a file. When heated in a closed tube, a yellow substance is deposited on the inside of the tube above the mineral. The color and the sulphurous smell which may be perceived on holding the mouth of the tube near the nose, indicate that this deposit is sulphur. Treat pyrite, also, with acid and with water.

Common manganese ore (pyrolusite), graphite, and rock salt should be examined as the preceding minerals were. The hardness of manganese ore is only two degrees. This and its lack of attractability by the magnet immediately distinguish it from magnetite. If specimens of the ore cannot be conveniently obtained, the powdered black oxide of manganese, which is nothing but the ore ground up, may be examined instead. It may be used afterward in the preparation of oxygen and chlorine by the class in chemistry.

To heat graphite, twist one end of a wire around a piece of it and hold it in the flame. To show its softness and streak write on a piece of paper with it. The pupils will notice that the writing closely resembles that of a lead pencil. Upon testing the *black lead* of their pencils, they will conclude that it also is graphite. Let them find out why, although it contains no lead, it is called black *lead*.

Rock salt will be found to differ from any mineral studied before in being readily soluble in water. Hang some threads in a strong solution of it, and note the shape of the crystals which form on them. Also observe the colour which the mineral, while being heated, imparts to the flame of the spirit lamp.

If rock salt cannot be conveniently obtained, ordinary coarse salt may be used instead.

Let the pupils review all the minerals which have been examined, repeating any of the tests whose results have been forgotten. Then give the *pupils* an examination. Supply each of them with a box or envelope containing specimens of the various minerals including varieties which difier somewhat from those used in the lessons. The pupil will identify the specimens, enclose each in paper, write the name of the mineral on the paper, and state clearly in writing the considerations which enabled him to reach a decision in each case.

Lastly, as soon as time and weather permit, require every member of the class to make a collection, correctly labelled, of all the known minerals to be found in the neighborhood.

The list of minerals taken up in these lessons includes several of the most abundant, and some of the most important species. If the work has been intelligently and thoroughly done—if the pupils have been permitted to discover the distinctive properties of the minerals for themselves—they will be able to recognize them wherever they see them, with but little danger of making a mistake. And further, what has been done is in the line of progress. If any pupil should have the desire and the opportunity to extend his knowledge of minerals, he will employ the same, or similar methods and tests, as were used in his first lessons.

J. BRITTAIN.

For the REVIEW.

Some Questions on Ivanhoe.

1. When was Ivanhoe published? What was going on in the world then?

2. In what respect is Ivanhoe a *history*, and in what a *novel*?

3. How does Ivanhoe differ from Scott's previous novels? What were Scott's reasons for this?

4. What signs of haste or carelessness are there in the book? How may they be accounted for?

5. Is the heroine Rowena or Rebecca? Why do you think so? If Rebecca, why not marry her to the hero?

6. What are the different types of character introduced? Select one and write at large on it.

[Questions 1–6 are from the REVIEW, November, 1892.]

7. Does the story of Ivanhoe portray faithfully the state of society in England in the reign of Richard I? What constitutes its claim to the title Romance?

8. Describe briefly the interior of a Saxon dwelling of the better sort, with a short account of the mode of living.