

they give evidence of the agents that produced them. They are characterized by the same peculiarities of crystallization as the compounds more artificially formed, and their elements have been united by the agency of the same chymical attraction. All natural products are decomposable into the few principles described in the previous pages ; and although the forms and properties of their compounds are variable, they are not more so than might be anticipated from a knowledge of the almost unlimited interchange of combination.

When geological science was in its infancy, observers were accustomed to examine the mineralogical features of rocks with much more accuracy than is now considered necessary. The external characters of a rock are found to be of little assistance in determining its age, or, in other words, its relation to a series. This circumstance has tended to repress among geologists the study of mineralogy, and to give a new aspect to their pursuits. But, to say nothing of the necessity of the study in the examination of the more ancient masses, it may be doubted whether some acquaintance with their character and composition is not essential to a right explanation of the appearances by which they are distinguished. There are many persons who, from the habit of examining hand specimens, are generally able to distinguish not only rocks, but also the minerals of which they are composed. But although this knowledge is highly important, it is not all that is necessary ; for, to conduct a mineralogical examination with a chance of success, the chymical characters and composition of the constituents must be understood ; and without this information, not even a conjecture can be formed as to the circumstances under which many of the masses were produced.

COMPOSITION OF WATER.

Water is a compound substance, consisting of the two elements hydrogen and oxygen. Its most simple state, if we may so call it, is that of ice. When we say that ice is the most simple state of this substance, we mean that it is then free from the caloric of composition which unites with it when in a liquid or vaporous condition. A mass of ice at 32° Fahrenheit must absorb 140° of caloric or heat, that is, 140° inappreciable by the thermometer and the sensation of touch, before it can be liquefied.