

THE STORY OF A GRAIN OF WHEAT.

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A grain of wheat is very small. It is much smaller than the smallest clay marble that I ever made or that I ever saw. In fact it is so small that a child is able to carry it from one place to another. Boy and girls greatly enjoy making clay marbles. They can become very much interested also in trying to make grains of wheat out of clay and water. Even with the greatest of care and the best of success, however, only artificial grains of wheat can be made in this way. No person, either

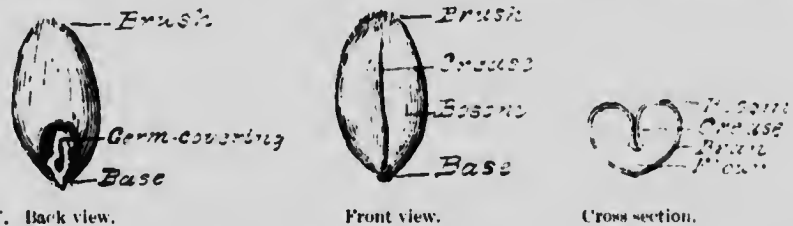


Fig. 17. Back view.

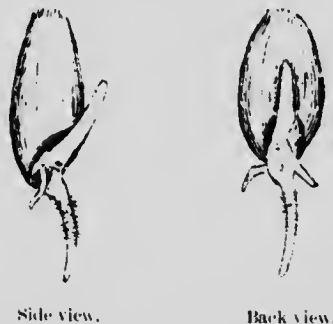
Front view.

Cross section.

young or old, can make a real grain of wheat; yet a real wheat grain is of much greater value and is of far greater interest for the boys and the girls to examine and to study than even the prettiest artificial grain of wheat which was ever made. Allow me to tell you a few of the many interesting things about a genuine living grain of wheat.

An average grain of wheat is about one-quarter of an inch in length, and one-half as wide as it is long. The hairy end is known as the brush and the opposite end is usually called the base. Along the front side is a well defined crease or furrow extending the entire length of the grain. This crease should be narrow and not very deep. The portion on either

side of the crease is called the bosom, which should be large, plump, and rather smooth. The backs of some grains are curved and those of others are actually humped. Most grains have a slightly wavy appearance along the central part of the back, but some are so plump that the wavy appearance is scarcely noticeable. There is still another part to be mentioned, and that is the rough portion near the base and at the back of the grain. This is the covering to the embryo, or germ, or seed proper. The embryo itself can be readily examined if you first soak the grain of wheat in water for about a day, and then



Side view.

Back view.

Fig. 18. Grain of wheat sprouting, four days in ground.

carefully remove this covering. A grain of wheat is made up of three principal parts,—the bran, or skin; the endosperm, or flour; and the embryo, or germ. The grain should be plump, the skin thin and nearly smooth, and the germ fairly prominent.