"SCIENTIFIC METHOD."

On Friday evening, Feb. 12, according to announcement, Rev. G. P. Young, M.A., Professor of Mataphysics in Toronto University, and Chairman of the Central Board of Examiners, gave a lecture on the above subject, in the Music Hall, Strathroy. Mr. Glashan, Mr. Carson, and the other officers of the Teachers' Association deserve much credit for securing the lecturer's able services, The lecture was almost purely scientific in character, but was given in such a popular and instructive style, as to be easily understood by nearly all present. The chair was ably occupied by J. T. Wood, Esq., of Lobo, Vice-President of the Association. We give a brief synopsis of the lecture.

Professor Young on coming forward was received with hearty applause. After some opening remarks he referred in illustration of Scientific Method to the phenomenon of dew, the difference between it and other kinds of moisture, and to the connection between it and other kinds of phenomena. He would explain similar moisture to children by using cold water in a pitcher, or in the case of a dash of cold water on the outside of a window. To understand a phenomenon we must understand its cause, and now let us inquire what is the cause of dew? We now take the first step in scientific method, the *method of agreement.* We first inquire what is common to all circumstances in which the phenomenon makes its appearance. For instance, in regard to the cause of heat, let us examine the various causes of heat, percussion, combustion, friction &c., and we find they all agree in this common circumstance, they stop motion. In the same way let us inquire what is common to all the circumstances under which dew is produced. Let us take the simplest case that of the pitcher. The water affects the dew, how? Evidently only by means of the temperature, the water being cold. So it is with the cold water on the window, and the moisture on the wall. We always find dew colder than the air in contact with it. Here is one point of agreement, that dew is always colder than the surrounding atmosphere. The dew being colder, and being deposited on the object, are the two great facts here. We have found one point of agreement; there may be others, but this only gives us suggestions; it does not lead to positive conclusions. We have a surer method, the *method of direct difference* which leads to positive conclusions. For instance, a man is in perfect health; there is no cause why he should drop dead. Another man in perfect health drops dead because he is shot with a bullet through the brain; the difference between the two is the shooting of the ball. But as this method is sometimes very difficult to apply, there is another method called the *method of indirect difference.* In this method we eliminate every element which cannot be the cause until only one element is left; then that one element must be the cause. Applying this to the cause of dew, we find it depends on the influence of, 1st Substance, 2nd Surface, 3rd Texture. In regard to substance we find a remarkable difference, a *scale of intensity* soon making itself obvious. Metals conducting heat well are dewed imperfectly; glass, a poor conductor is dewed abundantly, dew thus depending on conducting power. In regard to surface, a rough black surface receives dew abundantly; the smooth polished surface does not. Hence follows the law that good radiators of heat dew abundantly, and poor radiators do not. In regard to texture, objects of loose texture dew abundantly, while those of close texture do not. We have now a mass of facts, and we inquire what causes we can eliminate, and what causes can not be eliminated. In all these cases, bad conduction, good radiation, and looseness of texture, all have one common effect, the lowering of the temperature of a body exposed to the surface of the air. We now find in all these cases that only one cause is left; all the rest have been eliminated; this is the lowering of the temperature. But after all this there is a possibility of some doubt, and we must still resort to what is called *verification*, and one of the methods of verification is *induction.* Suppose by induction we have established certain laws then we can draw deductions from them. For instance, it is