

soft, pure and impure water ; tests and methods of impure water ; tests and methods of purification of water.

Sources of heat : Experiments to show the effects of heat in the expansion of solids, liquids, and gases ; practical applications. Temperature ; thermometer, construction and graduation Methods of transmission of heat, conduction, convection, and radiation ; causes of winds and ocean currents ; ventilation.

*Form IV.*

NATURE STUDY.—Course of Form III. continued Animal life ; relation of fish, birds, and wild animals to man ; life histories of conspicuous and economic insects ; organs and functions.

Plant life ; study of organs of plants and their functions ; study of economic and wild plants from seed to fruit in the school garden, home garden, farm and forest ; weeds injurious to crops and methods of destroying them ; buds and twigs : wood, rings, grain, and bark, uses, etc.

Observing local minerals and rocks, their properties and uses ; experiments to show composition of soils and their relation to drainage, temperature, etc. ; varieties of soils adapted to different crops ; fertilizers, etc. Implements and tools used on the farm and in the household, mechanical principles applied in their construction.

The atmosphere ; its composition ; combustion, simple experiments, study of candle flame products ; changes produced in the air by respiration ; reciprocal relation of plants and animals as regards the atmosphere ; impurities in air.

Gravity ; air and liquid pressure, the barometer. Cohesion and adhesion. the nature of these forces ; phenomenon of solution and diffusion ; amorphous and crystalline forms of matter. Practical use of heat, steam, and electricity, in connection with the study of industries.

*Form V.*

ELEMENTARY SCIENCE.—An elementary course in Botany, Zoology, and Physics.

For the details of the course, see Appendix B., p. 82 of printed Regulations of the Education Department of the Province of Ontario.