midsummer, when the larva has grown too large for its skin, by a muscular effort it breaks open the outer skin over the back of the thorax, and fastening its claws over anything firm it soon works its larger but softer body out. The body soon hardens. It has small wing pads now, and crawls along the bottom of the water, seizing insects for its food as before.

S.—And how does it come out as the glittering dragon-fly?

T.—The picture to the right in our sketch shows that. When mature, about the first of July, the pupa climbs up a grass or reed stem near the surface of the water; the skin over the thorax bursts open, as in our drawing; the head is first got out, then, by moving itself backward and forward, the whole body is set free. For an hour or so it remains as if stupefied by the great change. Its small, motionless flabby wings rapidly expand to their full size. A few tremulous quivers in the air at length show that they are full grown, dry and firm. In the next instant it darts off, all gleaming in its sapphire mail, like an arrow jewelled with flashes of sunlight and rainbow, the most fierce and knightly insect destroyer of its rival insect kinds.

S.—Oh, I have often got the husks or cast-off skins of the pupa of the dragon-fly sticking to stems of coarse grass growing in the water, but I didn't know what they were. They are quite firm and hollow, and can be mounted like insects on pins.

THE SCHOOL ROOM.

GEOGRAPHY IN CLAY.

Modelling in clay, besides being useful in developing and making definite the ideas of form in connection with elementary drawing, is also useful in the proper teaching of geography. A rough model of Nova Scotia, New Brunswick or Prince Edward Island, for instance, could be made out of the pliant clay on a light, smooth piece of board. The board represents the level of the sea. Then fix the contour of the province. Next bring out the mountain ranges, sloping them down to the brooks and river beds, so as to show how water falling on the general surface would be drained into the sea. Then place the towns at points where it is most convenient for people to settle so as to have the best chances for communicating with other parts of the world, by a good harbor, or by a river. Then note the principal industries in each commercial area, and the causes of the increase of population in towns and countries. Why do $town_s^{\sigma}$ grow in these spots and none on this mountain, or on this plain? Why did your own town grow at such a point instead of somewhere else? What effect would

railroads have?-they are as convenient for transportation as rivers or the sea. Do railroads tend to disturb the old balance of town populations? How? Do you know any illustrations? Have inland points a better or worse chance for growing into towns since the introduction of railways? Do mountain ranges determine the course of railways, and therefore of towns that may arise on their course? Can an inland town grow to be a great city? Only at some points. Why? Give an example. Under what circumstances can a village grow at a railway station? When there is local trade. What will cause local trade? The neighborhood of mines or of a good agricultural settlement, or manufactures. Which of these is most dependent, as a general rule, on the character of the soil? The first two. Is the last affected by the character of the land surface? Yes; the presence of water power in a stream, of raw products, or convenience as a centre of distribution.

Clay models of the continents would graphically illustrate and impress on the mind the causes of the distribution of population; the causes of physical phenomena, such as the cool chimates of table-lands, the limiting and separating effects of high mountains, rainy and rainless areas, the inundations in regions denuded of the forest, etc., etc.

CLAY FOR THE SCHOOL ROOM.

Where potter's clay can be had, it should be used. It can be kept moist by being covered in a wooden, or, still better, an earthenware vessel, with water when necessary. It should be well kneaded or wedged before being used. Wedging is done by moulding in the hand and forcibly throwing it against a wall or floor so as to make its texture uniform. It should be just so soft as not to stick to the fingers. When modelling a napkin should be at hand to clean the fingers when the work is done.

Where potter's clay is not to be had, take some of the toughest and lightest colored clay in the neighborhood. Free it from sand and gravel by mixing it thoroughly with water in a vessel until the liquid becomes slightly thick. Pour off the liquid into a second deeper and larger vessel, being careful to let it rest sufficiently to prevent the decantation of any sand or gravel. Treat the remainder in the same way, so long as a considerable amount of clay remains. Treat more clay in the same way until the larger vessel is full. Then stir the whole until all the previously subsided clay is in motion. Let it settle permanently. Pour off the supernatant water. Take the clay out and work it with the hand. If it is too moist evaporation in the air will soon help it. If sand is present it will be in the bottom and can be left.

128

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