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ARCHIBALD GEIKIE

SCIENCE PRIMERS. PHYSICAL GEOGRAPHY

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IV.

PHYSICAL GEOGRAPHY.

Science Primers.

PHYSICAL GEOGRAPHY.

BY

ARCHIBALD GEIKIE, LL.D., F.R.S.,

Director of the Geological Survey of Scotland, and Murchison-Professor of Geology and Mineralogy in the University of Edinburgh.

WITH ILLUSTRATIONS.

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INTRODUCTION.

1. Let us suppose that it is summer-time, that you are in the country, and that you have fixed upon a certain day for a holiday ramble. Some of you are going to gather wildflowers, some to collect pebbles, and some without any very definite aim beyond the love of the holiday and of any sport or adventure which it may bring with it. Soon after sunrise on the eventful day you are awake, and great is your delight to find the sky clear and the sun shining warmly. It is arranged, however, that you do not start until after breakfast-time, and meanwhile you busy yourselves in getting ready all the baskets and sticks and other gear of which you are to make use during the day. But the brightness of the morning begins to get dimmed. The few clouds which were to be seen at first have grown large, and seem evidently gathering together for a storm. And sure enough, ere breakfast is well over, the first ominous big drops are seen falling. You cling to the hope that it is only a shower which will soon be over,

and you go on with the preparations for the journey notwithstanding. But the rain shows no symptom of soon ceasing. The big drops come down thicker and faster; little pools of water begin to form in the hollows of the road, and the window-panes are now streaming with rain. With sad hearts you have to give up all hope of holding your excursion to-day.

2. It is no doubt very tantalizing to be disappointed in this way when the promised pleasure was on the very point of becoming yours. But let us see if we cannot derive some compensation even from the bad weather. Late in the afternoon the sky clears a little, and the rain ceases. You are glad to get outside again, and so we all sally forth for a walk. Streams of muddy water are still coursing along the sloping roadway. If you will let me be your guide, I would advise that we should take our walk by the neighbouring river. We wend our way by wet paths and green lanes, where every hedgerow is still dripping with moisture, until we gain the bridge, and see the river right beneath us. What a change this one day's heavy rain has made! Yesterday you could almost count the stones in the channel, so small and clear was the current. But look at it now! The water fills the channel from bank to bank, and rolls along swiftly. We can watch it for a little from the bridge. As it rushes past, innumerable leaves and twigs are seen floating on its surface. Now and then a larger branch, or even a whole tree-trunk, comes down, tossing and rolling about on the flood. Sheaves of straw or hay, planks of wood, pieces of wooden fence, sometimes a poor duck, unable to struggle against the current, roll past us and show how the river has risen above

its banks and done damage to the farms higher up its course.

3. We linger for a while on the bridge, watching this unceasing tumultuous rush of water and the constant variety of objects which it carries down the channel. You think it was perhaps almost worth while to lose your holiday for the sake of seeing so grand a sight as this angry and swollen river, roaring and rushing with its full burden of dark water. Now, while the scene is still fresh before you, ask yourselves a few simple questions about it, and you will find perhaps additional reasons for not regretting the failure of the promised excursion.

4. In the first place, where does all this added mass of water in the river come from? You say it was the rain that brought it. Well, but how should it find its way into this broad channel? Why does not the rain run off the ground without making any river at all?

5. But, in the second place, where does the rain come from? In the early morning the sky was bright, then clouds appeared, and then came the rain, and you answer that it was the clouds which supplied the rain. But the clouds must have derived the water from some source. How is it that clouds gather rain, and let it descend upon the earth?

6. In the third place, what is it which causes the river to rush on in one direction more than another? When the water was low, and you could, perhaps, almost step across the channel on the stones and gravel, the current, small though it might be, was still quite perceptible. You saw that the water was moving along the channel always from the same quarter. And now when the channel is filled with this rolling torrent of