

ELEMENTARY SCIENCE SECTION**THIS EARTH OF OURS**

## HOW ROCKS ARE MADE



This earth of ours is like a huge story book. He who has keen and interested eyes can read many an enlightening tale to tell others or to keep for himself. Let us try to find out how rocks are made.

Under the seashores there are forming today thick beds of sand. The rivers bring the rock material down from the hills, and it is sorted and laid down. The moving water drops the heaviest particles near shore and carries the smaller ones farther out before letting them fall.

The hard water comes through limestone rocks adds lime in solution to the ocean water. All the shellfish of the sea, and the creatures with bony skeletons take in the bone-building, shell-making lime with their food. Generations of these inhabitants of the sea have died, and their shells and bones have accumulated and been transformed into thick beds of limestone on the ocean floor.

The fine dust that is blown into the ocean from the land, and that makes river water muddy accumulates on the sea bottom as banks of mud, which by the burden of later deposits is converted

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**OUR INSECT FRIENDS AND FOES**

## THE PRAYING MANTIS



Let us wander a little farther into insect land. There is romance among these small neighbors that is as thrilling as the adventures of Robinson Crusoe in his far-away island. Of course, we know that some insects are among our most powerful enemies, but there are others that are man's greatest helpers.

We shall begin with an insect which appears to be the most pious of all its kind and bows itself upon its knees as though in prayer. The praying mantis. They are creatures of mystery reverence, fear. They are meek, slow-moving, with oddly alert faces. But whether they are saints or villains, few people actually know. I shall lay the evidence before you and let you draw your own conclusions.

The praying mantis has a hinge in the middle of its body and the part in front of it has the appearance of a giraffe-like neck. When the hinge bends in the middle, the front part of the mantis sits up straight. It can turn its head about as can a human being and look from side to side. It is the only insect in the world that can do this. The front legs are very long, so

## YOUNG WRITERS

### A PUNISHMENT I DIDN'T DESERVE

One afternoon I came home very happy because I was able to recite well in all my subjects. As soon as I arrived I removed my shoes for Mother doesn't allow us to enter the house with dirty shoes. I saw my mother standing beside the door waiting for me. As I came in, my mother began beating me with her slippers. I cried bitterly for the beating was hard. With tears in my eyes, I asked her what my fault was. She said she saw me get the money from her money purse. I tried to explain to her that I did not get her money but she would not listen to me. She continued beating me and even went to the extent of pinching my thigh to satisfy her anger. To avoid further scandal and to forget the sad incident, I went out to play with some of my friends. No sooner had I left when my mother called me again. On my way I met my brother. He had plenty of candies and much money. I then asked him where he got the money and the candies, but he refused to answer. I wanted to box him but Mother was looking at us, so I controlled myself. I suspected he was the one who got the money.

In the evening he slept soundly. Soon he began to talk in his sleep. I awakened my mother. We heard him say that he got the money from her purse. Mother could not say a word but I saw in her face that she was sorry for me. She knew

### HOW ROCKS ARE MADE

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into clay. Sandstone is but the compressed sand-bank.

Sometimes the great heat and pressure cause the earth crust to crumble; streams of lava spring out through the fissures and pour streams of melted rock down the sides of the fold quite burying in many places the layers of limestone, sandstone, and clay. Between the strata of water-formed rocks there are often created chimney-like openings into which molten rock from below was forced, forming, when cool, veins and dikes of rock material, specimens of the substance of the earth's interior.

Tremendous pressure and heat, acting upon rocks saturated with water transform them into very different kinds of rock. Limestone subjected to these forces, is changed into marble. Clays are transformed into slates. Sandstone is changed into quartzite, the sand grains being melted so as to become no longer visible to the naked eye.

The word *sedimentary* is applied to rocks which were originally laid down under water, as sediment, brought by running water, or by wind, or by the decay of organic substances. *Stratified* rocks are those which are arranged in layers. *Aqueous* rocks are those which are formed under water. Rocks that are made out of fragments of other rocks torn down by the agencies of erosion are called

she had given me the punishment I did not deserve.

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### GOOD MANNERS IN

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Besides being able to talk and listen courteously, you should also be able to contribute something readily to make a social group happy. If you are asked to sing, join a parlor game, tell a story, crack a joke, do it promptly. Don't wait to be coaxed like a stupid child. Your refusal is ungracious and is a sign of bad manners.

Don't monopolize the conversation. If you are requested to talk or to give your comment, be brief, merry and bright. Don't talk about yourself—of your achievements, of your fine ancestors, wonderful doings, etc. Propriety as well as common sense dictates that it is better to wait for someone to speak of our achievements.

Listening politely and talking courteously are some of the earmarks of a well-bred boy and girl. The way you talk and listen are not the sole qualities that will make you a gentleman or a gentlewoman; but they proclaim what you are. They help win a welcome everywhere; they are the letters of perpetual recommendation.

*Fragmental*. Volcanic eruptions bring material from the earth's interior.

The story of rock formation tells how fire and water, and the two combined, have made, and made over, again and again, the substance of the earth's crust. Rocks are constantly being formed, the changes that have been going on since the world began are still in progress. We can see them all about us on any and every day of our lives.