

ILLINOIS STATE GEOLOGICAL SURVEY
Urbana, Illinois 61801

GEOGRAM 3
October 1975

GEOLOGY IN YOUR HOME

Myrna M. Killey

The weekend you had planned for the big field trip to go fossil-hunting—with a picnic, camping, and swimming thrown in—has dissolved into rain and, worse yet, the forecast is for more of the same. You are disappointed and bored. Have you ever thought of having a "geology field trip" in your own home? Although most people think of geology as a science relating to the out-of-doors and to rocks, mines, metallic ores, or oil, geologic materials actually occur in many of the things in and about your home. See how many you can discover.

First of all, as you look out of the window at the steadily pouring rain, you are looking through glass. The outer part of the light bulb in the lamp on the table is also glass. Did you know glass is derived from geologic materials? It is indeed. It is made by melting a mixture of several substances, principally very pure SAND, LIMESTONE, and SODA ASH.

The house itself may be made of bricks made from CLAY. The sidewalks and driveway may be concrete, made of STONE or GRAVEL, SAND, and CEMENT. The cement was made by fusing LIMESTONE and CLAY together and grinding the resulting clinker to a powder. Perhaps your driveway is asphalt. The asphaltic material comes from OIL pumped from deep in the earth, and it has been mixed with SAND and STONE to make the driveway. The granules on your composition roof could be crushed SLATE.

Your glance rests on the walls and ceiling. They are plaster, consisting of a product made from GYPSUM and perhaps lime made from LIMESTONE. The electric wiring in the walls is COPPER. Possibly you have tiles on the floor that were made from CLAY or SLATE.

Snack time! What geologic traces can you find in the kitchen? The sink may be stainless steel, an alloy made from IRON and other elements, or it may be monel metal from NICKEL, COPPER, and IRON. Your stove is IRON coated with enamel that is made from a mixture of substances, including SILICA and FELDSPAR. Some of your cooking utensils are ALUMINUM, others COPPER, and still others glass. There may also be an IRON skillet. Knives, forks, and spoons may be SILVER or STEEL. And your scouring powder may have ground SAND, VOLCANIC GLASS, or ground FELDSPAR as a major constituent. A vase holding flowers on the kitchen table is made from CLAY. Candles may be made of paraffin from PETROLEUM.

A fireplace abounds in geologic materials. It may be constructed of bricks made from CLAY, or of SANDSTONE, MARBLE, LIMESTONE, or even boulders of GRANITE or other rocks. All are geologic materials, as is the IRON of which the grate in the fireplace is made. Tongs and shovel may be made of brass, which is a mixture of COPPER and ZINC.

Before you end your geologic field trip around home, think of one other very major geologic material, the EARTH that surrounds your home and on which your house rests. Its major compounds are CLAY, SAND, and organic material.

So you see that your house surrounds you with a variety of GEOLOGIC MATERIALS, inside and out, that serve to beautify it and lend substance to it in many ways—not to mention providing you with an opportunity to entertain yourself and learn something on a rainy day!