

October

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PROGRAM FOR OCTOBER 21 -- The subject of this month's program will be "Rocks," to be presented by one of our honorary charter members, Dr. Harold Stonehouse. The topic is of primary concern to all of us in our hobby, and Dr. Stonehouse is eminently qualified to talk on this subject.

Those who have heard him speak before know that the subject matter is well presented and worth your time to come out and listen. This is an unusual opportunity for all of us to learn more about "rocks."

IDENTIFICATION - Simple Tests

We have covered six physical properties that can be readily observed. There are three others that can be determined by making a few simple tests that require very little equipment. These are the determination of the hardness of a mineral, the color of its streak, and whether or not it is magnetic.

Hardness is quite important in identification, and is usually spoken of in relation to the Mohs Scale of Hardness. This consists of ten minerals arranged from the softest to the hardest as follows:

- | | | |
|-------------|-------------|-------------|
| 1) Talc | 5) Apatite | 8) Topaz |
| 2) Gypsum | 6) Feldspar | 9) Corundum |
| 3) Calcite | 7) Quartz | 10) Diamond |
| 4) Fluorite | | |

Sets of these minerals can be purchased or you can make up your own set. Each mineral will scratch every other one that is softer but not those that are harder. There are sets of hardness pencils that can be bought to use in testing minerals, but actually you can determine the hardness closely enough by using things you have at hand. For this, the following table helps:

- 1) If a mineral can be scratched by your fingernail, it is Mohs 1 or 2.
- 2) If a mineral can be scratched by a copper penny, it is Mohs $2\frac{1}{2}$ or 3, or softer.
- 3) If a mineral can be scratched by a knife, it is Mohs $3\frac{1}{2}$ to 5, or softer.
- 4) If a mineral cannot be scratched by a knife, it is Mohs 6 or over.

Sometimes just finding out whether or not a mineral can be scratched with a knife is sufficient in determining between two otherwise similar looking ones. In testing for hardness, it is necessary to make sure that one mineral or tool has really scratched the other and not just left a little mark or ridge of its own powder. If a true scratch is made, you cannot rub it off with your fingers.

For the streak test you need some streak plates or a tile. When the mineral is rubbed over the surface, a little of it rubs off and leaves a streak. The color of this streak is a help in identifying some minerals, especially the ores. For instance in distinguishing between the two iron ores, hematite and magnetite, the red streak of hematite and the black one of magnetite are helpful.

A few minerals are attracted by a magnet and this is helpful in their identification. This is particularly true in distinguishing magnetite from other iron ores.

Frank and Eleanor Owens

After

OCTOBER MEETING -- Dr. Harold Stonehouse, an honorary charter member, and a long-time adviser of our club, was the guest speaker. In his talk on "Rocks," he dealt with the principal types of rocks, and the history of their formation. His slides portrayed the characteristics he described. We thank him for an expert's presentation that novices could understand.

Cider and doughnuts were served by the Welcome Committee following the program.