

Asylum; Rupert Brooke, *The Dead*, *The Great Lover*, *The Soldier*; Nathalia Crane, *My Husband*; Adelaide Crapsey, *The Warning*; H. D., *Oread*, *The Pool*; Walter de la Mare, *The Listeners*; Robert Frost, *Birches*, *Good-bye and Keep Cold*, *the Road Not Taken*, *Wild Grapes*; A. E. Housman, *From Far from Eve and Morning*; Orrick Johns, *Wild Plum*; Alfred Kreyborg, *The Tree*; Vachel Lindsay, *The Congo*, *The Leaden-Eyed*; John Masefield, *Sea-Fever*; Alfred Noyes, *The Highwayman*; Carl Sandburg, *Cool Tombs*, *Fish Cryer*, *Fog*, *Grass*; Alan Seegar, *I Have a Rendezvous with Death*; R. L. Stevenson, *Requiem*.

The point to be emphasized here is that the beginnings of a genuine artistic taste, both in creative power and in appreciation of the creative power of others, is probably lying undiscovered in every classroom in the country. The beginnings are represented concretely in the strivings to write which are kept as secret as first love, and which the schoolroom, because it is really love, rarely discovers. To find them and to touch them with delicate sympathy is the new work of the artist-teacher; and to encourage that first faint spark into a glow is one of the richest possibilities of the new education.

HUGHES MEARNS

BUILDING STONES

I. *What the Children Did*

- A. They made a survey of Harrisonburg to find what kinds of building stones were used.
- B. They made a table showing:
 1. The name of the stone, the part of the building for which it is generally used, and where it is found.
 2. The distribution of building stones in the United States.
- C. They made hectograph maps showing distribution of building stones in the United States.
- D. They gathered and identified samples of the following stones: limestone, sandstone, shale, marble, slate, and granite.
- E. They gave individual reports and discussed in class these topics:
 1. The history of the great ice sheet.
 2. The lasting effect of the great ice sheet on New England and the prairies.
 - (a) Upon manufacturing
 - (b) Upon farming
 - (c) Upon transportation
 3. The disintegration of rocks.
 - (a) Mechanical changes
 - (b) Chemical changes
 4. The value to man of the disintegration of rocks.
 5. The formation of limestone, marble, shale, slate, and granite.
- F. They took the following excursions:
 1. To a nearby stream to observe worn stones and banks.
 2. To a rocky cliff to observe furrows and the effect of plant roots upon rocks.
 3. To a cave to study stalactites and stalagmites.
 4. To see the cross-section of stratified rock.
- G. They performed these experiments:
 1. Pour hydrochloric acid on a piece of stone; if it is limestone or marble, the acid will cause a foam as soon as it touches the stone. Marble may be distinguished from limestone by its crystalline structure.
 2. Put a bottle full of water outside on a cold night. Tell what happens.
 3. Break open a limestone rock; compare the outside with the inside.
 4. Boil a gallon of lime water from a stream until it evaporates; or look on the inside of a teakettle which has been used a long time. Explain.
- H. They collected pictures of caverns, glaciers, volcanoes, Natural Bridge, Colora-

do Canyon, Government buildings, Washington's Monument, and Cleopatra's Needle.

- I. They summarized the study by discussing the Grand Canyon of the Colorado River under these heads:
 1. The Canyon as it was formed.
 2. The Canyon as Major Powell found it.
- J. They made a notebook for keeping:
 1. Observations made on excursions.
 2. Results of the experiments.
 3. Pictures collected.
 4. Summaries, outlines, and tables made by the class.

II. Information Gained

- A. The most used building stones in Harrisonburg are: blue limestone, Indiana limestone, river rock, sandstone, granite, marble, and slate.
- B. The most commonly used substitute for building stones in Harrisonburg are stucco, concrete, and brick.
- C. Building stones are distributed throughout the United States as follows:

THE OUTSTANDING REGIONS OF U. S. WHICH FURNISH STONES

Name of Stone Regions Where Found

Limestone	....	Valleys of Appalachian Highland South Central Plains Pacific Slope
Slate	.....	Appalachian Highland
Granite	.....	Appalachian Highland Western Highland Central Plains Pacific Slope
Sandstone	....	Atlantic Slope Valleys of Appalachian Highland Central Plains
Marble	.....	Pacific Slope Valleys of Appalachian Highland

- D. Rocks are formed by the following processes:
 1. Sedimentary rocks are formed by deposits of sediment in layers and changed to rocks under great pressure.
 2. Igneous rocks were once great masses of lava. By pressure and cooling this lava has changed to rocks.

- 3. Metamorphic rock may have been either sedimentary or igneous which has undergone a great change due to intense heat and pressure.
- E. Rocks may be identified in the following ways:
 1. Limestone and marble effervesce when put in contact with hydrochloric acid.
 2. Marble can be distinguished from limestone by its crystalline structure.
 3. Sandstone has quartz crystals in it; it is easily crushed.
 4. Shale is made of fine particles of mud in layers.
 5. Granite contains quartz, mica, and feldspar. It is very hard.
- F. The formation of the great ice sheet was a gradual process.
 1. Great snowfields were changed to ice by the melting and freezing of the top layers of snow.
 2. Very great pressure was added to these layers by more snow falling.
- G. The effect of the great ice sheet on New England and the prairies was lasting.
 1. The grinding of the glaciers as they gradually melted rounded the peaks of the Appalachian Highland. Top soil was moved to the valleys.
 2. The moving glaciers changed the courses of streams.
 3. Lakes were formed when the glaciers stopped—the larger the glacier and the more rocks it had dug up, the larger the lake.
 4. Deposits of marble and granite were exposed in New England, deposits of iron in Minnesota.
 5. Manufacturing in New England owes its progress largely to the waterfalls which were formed during the ice age.
 6. The Great Lakes, formed by glaciers, furnish cheap transportation

between the Central States and the East.

H. Rocks are continually being changed to soil. This is disintegration.

1. The wind sweeps the sand against exposed surfaces and wears particles away.
2. Rain beats away the softer parts of rocks.
3. Water seeps into the crevices of rocks and freezes; thus, the expansion of freezing water splits the rocks.
4. The continual contraction of the rocks by cold and expansion caused by the sun's heat make particles chip off.
5. Roots of trees push into the crevices of rocks and break them.
6. Acids from the roots of trees and other plants react on the rocks and break them.
7. Burrowing animals help to break the rocks.

I. Weathering agents are not always beneficial to man.

1. Stones in buildings are often softened and destroyed.
2. Iron rusts.

J. The Colorado River formed the Grand Canyon by many years' wear.

1. This river rises in Colorado and flows through Utah, Arizona, and California. It empties into the Gulf of California.
2. It flows across mountainous, plateau, and desert land.
3. The Grand Canyon is located in the plateau section of the Colorado River.
4. The Grand Canyon is 200 miles long, ten to twenty miles wide, and one mile deep.
5. Limestone, marble, slate, granite, and

sandstone are the kinds of rocks in the Canyon.

K. Major Powell found:

1. Cliff dwellings in the side of the Canyon occupied by Indians.
2. A very muddy river containing rapids and falls and fish living in it.

III. Abilities Selected for Emphasis

- A. In map-making accuracy in the location of places was of most importance for this class.
- B. In English the most important abilities were: (1) proper outline form for the summaries, (2) correct spelling, and (3) the use of the index in reference books.
- C. In art good page arrangement was the most needed improvement.

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Dormitories for non-resident students continue to be recognized as an essential part of the high school plant in a number of Montana schools. During the past two years, however, several dormitory homes were discontinued because of low enrollment and consequent increased per capita cost to students.