Frame, rime, and lame, and asked the children to put them with the word they were most like, tame or time.

Case 4. Saw and Was—These words have so little “personality” that it is essential that the child who has confused them be given some helping device. This teacher taught the class the “s” sound. She then produced a list of familiar words some having an initial “s,” some a final “s,” and some neither. She asked the children first to find words beginning with the “s” sound, then those ending with it. This took all the phonics time for a day or two, but the majority of the class mastered both words.

After an interval of teaching, the teacher should recheck each child on the first block of words, keeping a record as before. At the same sitting, she should also check him on the next block. The results are transferred to the table, new totals are found, another period of teaching follows and so on, until the class achieves mastery of the basic vocabulary.

Although this scheme has been simplified as much as possible, it will take considerable time to initiate it. But as the teacher sees the class come to the mastery level in sight vocabulary and child after child begin to do independent reading, she is apt to think it time very wisely expended.

Katherine M. Anthony.

APPLE FARMING IN THE SHENANDOAH VALLEY

A Fourth Grade Unit in Social Studies

I. The Outcomes

A. The Understandings or General Ideas for Permanent Learning
1. The apple is called the king of fruits, because it is so widely used.
2. The seedlings are budded or grafted in order to produce better fruit.
3. The trees should be transplanted carefully in a well-chosen place.
4. The apple tree requires much care, especially during the annual fruit bearing period.
5. The fruit must be carefully prepared for market.

B. The Abilities and Related Skills
1. Writing business letters.
   a. For information.
   b. For permission to visit places of business.
2. Using books.
   a. Using table of contents and index.
   b. Doing selective reading.
3. Using maps.
   a. Finding distances.
   b. Locating places.
   c. Tracing routes.
4. Doing construction work.
   a. Selecting good color combinations.
   b. Pasting neatly.
   c. Learning good spacing.

C. The Attitudes
1. A spirit of cooperation fostered by the group work and by the contacts with local apple growers and packers.
2. Appreciation of the apple industry in their own community.

II. The Jobs

A. They will answer the following large thought questions:
1. Why is the apple called the king of fruits?
2. Why are the seeds budded or grafted?
3. What are the successive steps for transplanting nursery trees?
4. Why do growers cultivate the soil of the orchard?
5. Why do growers spray apple trees?
6. Why do growers prune apple trees?
7. Why do growers thin apple orchards?
8. Why do growers pick apples at a certain time?
9. What things are done to the apples at the packing house?
10. How are ventilating cars made? Observe one until you can explain step by step how it is made.

B. They will use their outline maps:
   1. To trace all shipping routes for Valley of Virginia apples.
   2. To color the best apple producing areas in the United States.
   3. To locate great apple packing and shipping cities.
   4. To locate capitals of states producing large quantities of apples, in order to write to state chambers of commerce for information.
   5. To locate cities which are in the center of apple producing areas.

C. They will visit:
   1. An orchard.
   2. A packing house.
   3. A cold storage plant.
   4. A vinegar plant.
   5. A cannery.

   They will conduct each trip as follows:
   (a) Decide what to look for.
   (b) Decide how the trip shall be taken.
   (c) Report on their findings.

   In these reports they will:
   (1) Use single phase topics.
   (2) Ask questions at close of report.
   (3) Summarize—state most important point in report.

D. They will make a filing cabinet, in which they will place all loose materials collected, so that they may be used by incoming classes.

E. They will write letters
   1. Asking for information on apple farming.
   2. Asking permission to visit places of business.
   3. Thanking business men for their courtesy.

F. They will observe and do budding and grafting.

G. They will read

1. Poems
   a. The Tree—Elson Reader, Book IV.
   b. The Bluebird—Elson Reader, Book IV.
   d. In Praise of Johnny Appleseed—This Singing World.

2. Stories
   a. The Apple of Discord—Children’s Literature, Curry and Clippinger.
   b. The Quest of Medusa’s Head—Old Greek Stories, James Baldwin.
   c. Old Appleseed John—Elson Reader, Book III.

H. They will collect and label apples grown in the community.

I. They will make charts to show:
   1. How trees are planted in the orchard.
   2. Types of apple tree enemies and how identified and destroyed.
   3. Increase in apple production in the Valley of Virginia during a period of ten years.

III. Subject Matter or the Assimilative Material for Each Understanding

A. The apple is called the king of fruits because it is so widely used.
   1. Age of the apple.
   2. Number of varieties.
   3. Adaptability of the plant.
   5. Quantities grown in various parts of the world.

B. The seedlings are budded or grafted in order to produce better fruit.
   1. Grafting.
      a. Stock.
         (a) Make tongue cut in stock and cion.
         (2) Lock tongues.
b. Branch.
   (1) Cut limb off square and split.
   (2) Cut cion wedge-shaped.
   (3) Place cion in split, making sure bark of each touches.
   (4) Cover with grafting wax.
c. Root.
   (1) Make tongue cut in root and cion.
   (2) Fasten and tie with waxed cotton.

2. Budding.
b. Set the bud under the bark.
c. Tie with waxed cotton.

C. The trees should be transplanted carefully in a well-chosen place.

1. Time.
a. When tree is from one to two years old.
b. In the fall in Southern states.

2. Site.
a. Rolling land.

3. Distance:—From thirty to forty feet apart, depending on the soil, variety of tree, and system of pruning.

D. The apple tree requires much care, especially during the fruit-bearing period.

1. Cultivating.
a. Clean cultivation until bearing age.
b. Clover crop planted.

2. Pruning.
a. Value.
   (1) Shapes tree.
   (2) Prevents breaking of limbs.
   (3) Makes cultivating, spraying, and picking easier.
   (4) Removes diseased, dead, and injured limbs.
   (5) Develops fruit and healthy shoots.
   (1) Do in dormant season.
   (2) Cut back to half soon after planting.
   (3) Remove diseased, broken, injured, parallel, and crossing limbs.
   (4) Cut back new growth.
   (5) Cut side limbs close.

   For classification of enemies of the apple tree and spray calendar, see Spray Book in Stark Brothers' Guide to Profitable Orcharding.

4. Thinning.
a. Time.
   Immediately after the May or June drop.
b. Value.
   (1) Improves size, color, and uniformity of fruit.
   (2) Keeps up vigor of tree.
   (3) Prevents breaking of limbs.
   (4) Lessens disease and insect injury.

E. The fruit must be carefully prepared for market.

1. Picking.
a. When:
   (1) Firm in flesh.
   (2) Yellow in ground color.
   (3) Hold on tree is weak.
b. How.
   (1) Break no stems or spurs.
   (2) Use pointed ladders, stiff baskets, and canvas sacks.

2. Grading.
a. According to
   (1) Color.
   (2) Shape.
   (3) Texture.
   (4) Freedom from disease and injury.


4. Packing.
a. Pack firmly and neatly in boxes or barrels.
b. Wrap best apples in paper.

5. Storing.
a. Air-cooled storage.
b. Ice-cooled storage.

6. Shipping.
a. Rail—air-cooled and ice-cooled.
b. Water—ice-cooled.
c. Motor.

IV. Bibliography.

A. Teacher's references.

B. Children's references.

C. Bulletins and pamphlets.
1. United States Department of Agriculture, Washington, D. C.
a. Agricultural Year Book, 1926.
b. Agricultural Year Book, 1925.
c. Apple Orchard Renovation—No. 1284.
2. Virginia Department of Agriculture and Immigration, Richmond, Virginia.
3. Extension Division of Virginia Polytechnic Institute, F. A. Motz, Blacksburg, Va.
a. Apple Blotch—No. 1479.
b. Apple Scald—No. 1380.
c. Apple Scab—No. 1478.
e. Apples Growing East of the Mississippi—No. 1360.
YOU NEVER CAN TELL

The shore for some distance was dotted with castles, not unlike those which were built in the day when the good knights reigned; they were protected by well made stone walls; moats surrounded them and it was not uncommon to find a well in the castle yard. The castles were built by those who knew little of the cares of the world and who were innocent of all danger, whose bare legs were bruised and burned and scarred and scratched, it is true; but not from Ike threatening encounters.

Occasionally a mother would bestir herself from her chair to see what the fair builders were doing, but more often, "James, dear, don't go out too far this morning," would be all that broke the monotonous creak of the boards of the porch.

On this particular morning the castles were deserted. Once or twice a strong wave washed into the moats and over the walls, almost wrecking the castles completely. No childish laughter greeted this disaster; no strong hands were ready to build them up. The builders were otherwise engaged. Back from the water's edge sat one, while the other seven walked slowly up and down the shore as if in quest of some treasure, sometimes stooping to dig, sometimes wading into the water and reaching down, but seemingly without success.

"Frances is such a gentle child, she wouldn't hurt the tiniest creature," remarked Mrs. Mellor, who stopped her knitting long enough to see that the children were in sight.

"And Robert," said Mrs. Austin—"do you know last night he said that when he grew up he'd be a minister, and he won't be six until next month. Isn't it a relief to know that they are starting out on the right path?"

"This morning," said Mrs. Leeds, "when I was—"

Just then a shout arose. "I've got one; I've got one!" and seven little figures ran as fast as their bare feet would allow to the one sitting on the sand.

"Surely they must have found something very wonderful; let's go and see."

As the mothers approached their children, they beheld an unusual sight. There in the sand was a hole; around it eight semi-serious, but intensely interesting faces; in it a fish wriggling for its life.

"Mother, when you were a little girl, did you ever bury fishes?" asked Frances, as the mother looked on in astonishment. "I'm going to be the grandmother at this funeral."

MARY L. SEEGER

THESE EXAMINATIONS

Examination Master: "Does the question embarrass you?"

Pupil: "Not at all, sir; it is quite clear. It is the answer that bothers me."