Name: Bonnie Miller

Grade Level/Subject: 2nd Grade Math - Addition, Place Value, Measuring and Geometric shapes. Do in September before or on the 26th.

Topic: Johnny Appleseed Walkabout

Objectives:

Standard 2: Number sense- The student will use numbers and number relationships to acquire basic facts.

2. Reading and Writing Numbers

a. Link place value concepts to the reading and writing of numbers.

3. Develop and use strategies of estimation

Standard 4: Geometry and Measurement – The student will use geometric properties and relationships to recognize and describe shapes and use appropriate units of measure in a variety of situations.

2. Measurement

a. Measure objects with nonstandard and standard units.

Could work for Standard 3: Number Operations and Computations, but totals will all be over 100. It involves the use of addition facts, solving 2 digit addition problems and completing addition number sentences.

Materials:

Book or internet version [there are several] of Johnny Appleseed
Make sure story includes where he was born and died.
US Map or Atlas for each group
Piece of string or yarn for each group
Ruler for each group
Pencil and Paper for each group or student
Apple slices for snacks during Closure.

Instruction:

1. Introduction: Johnny Appleseed walked how far??? Let's find out.
2. Instructional process: Read Johnny Appleseed to the students. Divide the students into groups. Each group should have a map, ruler and paper to record totals.

1. Ask them where was Johnny Appleseed born. Have students locate Leominster, MA on their map.
2. Some versions say that Johnny Appleseed spent time in Pittsburg. If this is included, have students locate the 2 points and estimate how far it is. Write that number in brackets after the town. Help students understand their scale by measuring the longest distance on the scale with yarn and visually showing and telling them how many miles it is. Also show them one about half of the full length. Repeat several times. Then measure the distance from Leominster to Pittsburg using a string or yarn. Straight line measurement works best for this activity. Using the yarn and scale included on the map have students figure out how far he had to walk. Record on paper.
3. Locate the other states – [some mention Ohio, Illinois & Kentucky – I included Indiana for the last point only]. Since it doesn't say where in those states he walked have each group either locate the approximate center of those states [Lower Level] or they can pick a town anywhere in each state. Measure the distance to the plotted points with the yarn. Use Scale to determine mileage. Write previous mileage plus new mileage in the form of a number sentence for each new point.

   Ex: A+B = C; C+D = E; E + F = G [compute in column form]

4. Ask the students where Johnny Appleseed died. Locate Ft. Wayne, Indiana. Measure from the last point plotted on their map. This is their final total.
5. Have students double check all number computations. Have a student from each group read their mileage number. Each group should have a different number. Write on the board. Discuss place value of each number.
6. Tell each group they are going on a vacation and they need to pick 3 locations to form a triangle. Identify shape of their triangle. Have them measure those distances. Write each one as a number sentence. Would they want to walk that far?

3. Closure: While enjoying the apple slices discuss if they think he really walked that far. Ask them how long do they think it took him to walk a mile. Remind them that he didn't wear shoes most of the time. Include in discussion how things were different between the time that Johnny Appleseed lived and current times. Have students brainstorm about food and clothing differences and the availability of each. Was the geography the same as it is now?

Assessment: Students turn in the measurement sheet for each group. Visual assessment by the teacher of each group to make sure all students in group are participating in estimating, locating, measuring and adding the mileage at all the points.

Modifications/Accommodations: For lower level students need to have locations marked off for them. Upper level students can chose any location in the states. Determining the miles on the scale may be difficult for LL learners and they may need some help, but is a great activity for UL learners.

For vacation portion they could use points close together to keep the numbers lower. Upper level can add one or two more sites to their Appletree states. Have them form the shape of a triangle. Identify the shape of their triangle.

Reflection: Some students need to mark locations on map with a colored X so they don't lose their place. Make sure they write each town on paper before they write estimation of miles. In larger classes the teacher may need to have pre-marked maps for all groups. Make sure all the students are participating. My students on approximately the same level, but all students should be able to do this activity.

As a reminder I showed them the scale measure with one end of a piece of yarn each time we changed locations, i.e. 2 ½ " = 200 miles, then showed them the length that he walked for that segment with the other end of the yarn. I held them about 10 " apart. The students then wrote their estimates.

Lower level learners may need help with the number computations on 2 -3 digit numbers. This activity works great in a Unit Lesson including Reading, Math, and Geography.