## Super Graphing: Everyone Has a Part!

Materials and procedures:

1. Select a cartoon or graphic to fit your purpose. Enlarge it to fit an $8 \frac{1}{2}$ by 11 regular paper. Make at least 4 copies. (A sample is provided. I don't know the source.)
2. You need to make a grid on two copies of the cartoon, usually at every one-inch intervals, horizontally and vertically. (You will use one to cut up for students to enlarge and one to use for your own KEY to indicate where each piece will go on the composite drawing.)
3. A pack of index cards of one color other than white. You will cut the cartoon squares out and paste one of each of the index cards. Then write the grid number below that cartoon square, so the student will be able to find where to attach the square on the big composite.
4. Squares of white paper, pre-cut to the size you want a student to enlarge, probably 6 " by 6 ". You'll need enough for spaces without drawings too, and you can count how many spaces have drawings and how many will be blank. Students who don't like to draw can attach the white blanks to the needed spaces when the composite is being built.
5. A long (and possibly double thick) piece of butcher paper to provide the space for each square students will make for the composite cartoon. (If you use the sample with 6 -inch squares, it will be $21 / 2$ feet across and 5 feet long.) Add at least 6 inches on the top for doubling over as a heavier edge to staple or attach to a wall display.)
6. Glue to stick each square to the backing paper.
7. Pencils and erasers. (Dark pens if students want to darken their drawings.)

## Directions for making enlargements:

1. Have students take their 6 " square paper and fold it in half twice, making four quadrants on their blank paper.
2. Have students look at their little $1^{\prime \prime}$ square on the colored index card and carefully draw a light line halfway down and halfway across the one-inch piece of the cartoon on their index card.
3. Have students start looking at the center of each part of the small square and recreate it in the larger square. Go quarter by quarter, drawing from the center of each small quarter into the larger quarter on their white paper.

When finished, the students find a place to glue their square to the big poster.

Note: For those students who don't want to draw, give them the job of attaching the blank pieces where they belong on the background. (The directions should have been written on the back of each blank white square.)

Or have them help glue squares on the background as things are completed.

If there are leftover squares to draw, ask students who like to draw if they will add the additional squares. How WONDERFUL! Everyone's square is needed to reveal the final product!

What other projects would work by enlarging a small picture into a great enlargement?



