Classroom Activity

Creating the Fibonacci Spiral

Materials

- sheet of quarter-inch grid paper
- ruler
- compass

Follow the directions and watch the spiral emerge. (Each successive square will have one edge with a length the sum of the two squares immediately preceding it.)

(1.) Draw a 1-inch square. Draw a second 1-inch square to its left, making sure the squares touch.

(2.) Draw a 2-inch square above the two 1-inch squares, touching the lower squares.

(3.) Draw a 3-inch square to the right of the three existing squares; its left side should touch the other squares.

(4.) Draw a 5-inch square below these squares.

(5.) Draw an 8-inch square to the left of the existing five squares.

(6.) Draw a 13-inch square above the six squares.

(7.) Use a compass to complete the drawing. Within each square of your drawing, draw an arc from one corner to the opposite corner. (Each arc will have a radius equal to the length of one side of its square.) Connect each arc to the next. To begin, place your pencil in the upper-right corner of the original 1-inch square and draw an arc toward the lower-left corner. In the second square, draw an arc from that point (the lower-right corner) to the upper-left corner of the second square. Continue drawing arcs in each square, starting each arc at the point where the last one ended.

(8.) You will create a logarithmic spiral. What forms in nature reflect this shape?