



FIVE SECRETS IN A BOX

by
Catherine Brighton

Virginia loves her father and she loves to visit his study in the afternoon when he is resting. She is quickly captivated by the objects on his desk and the five special ones in a box.

She notices immediately two round pieces of glass and observes that one of them makes objects larger than they really are. She has discovered Galileo's magnifying glass. He put two of these glasses together in a tube and the tube became one of the first telescopes.

Let your students learn the proper way to use a magnifying lens and discover the details it reveals on a simple object such as a penny.

MATERIALS: Magnifying lens, penny, and other objects.

ACTIVITY: Learn to hold the magnifying lens properly. Hold it between your thumb and forefinger; place it in front of one eye by resting your thumb on your cheek. Move the object you are examining into focus *instead* of moving your body. Examine the penny; list the number of details that you can now see, but couldn't see with the naked eye.

TEACHER NOTES: Use the lens as an extension of your eye. It should be about the same distance from your eye as a pair of eyeglasses would be. Find Lincoln in the Lincoln Memorial on the tails side. On the heads side, find the initials of the artist on the edge of the shoulder of the bust.

SOURCE: Ralph Yulo, MIS Workshop for Middle School Science Teachers, Wellesley College, June 1986.

STANDARDS:

BSL: 1.1, 1.3, 1.4, 1.5, 1.11, 3.1, 6.2, 11.2, 12.1

NCTM: 4d

SCS: A1, A2, B1, B2, E2, E3, H2, H5

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