

Using a Lens Stereoscope for the First Time

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Although it is not difficult to find various kinds of information on lens (pocket) stereoscopes, it is quite another matter to put this knowledge into effect when introducing students to use of the instrument. Many students have considerable difficulty “seeing” the three-dimensional image the first time they make the attempt, and a significant number are never able to succeed if they are left to their own devices.

Here is an effective procedure that enables almost anyone who wishes to see in three dimensions to do so, within just a few minutes. It amounts to an “eye pre-adjustment” effort and requires only the stereoscope, a table or similar flat horizontal surface, and a stereogram. I do not recommend a stereopair involving two separate photos, as this may introduce complications. Ideally, the stereogram should involve some surface exhibiting great relief; volcanic landforms work particularly well. The student begins by positioning the bottom of the stereogram about 25 cm from the edge of the table, and parallel to it. The instructor then opens and extends the stereoscope and places it over the stereogram, in a position such that the average person should be able to observe a three-dimensional image.

The student should then lean over the stereoscope so that his or her nose is positioned 30 to 40 cm directly above its midpoint, with eyes facing directly down at that midpoint. Next (and this is critical), the student should look with *both* eyes through only *one* of the two eyepieces of the stereoscope and focus on whatever happens to be visible in that part of the stereogram. There must be no squinting or tilting of the head while this is going on, and once this is accomplished, everything else within the field of view will be out of focus.

Having done this, the student should then, very slowly, lower his or her head toward the midpoint of the instrument, while keeping both eyes focused on the same initially-chosen point through the one eyepiece. The nose should remain positioned squarely above the center of the stereoscope. As soon as the student loses focus or drifts off center, he or she should start over. In most cases, the student will obtain the three-dimensional effect before making contact with the stereoscope. If not, he or she should relax for a moment and then start over.

Some students may require several attempts, but there is hardly anyone who cannot be helped to see

three-dimensionally in this way in less than five minutes. Neither glasses nor contact lenses seem to interfere with use of the procedure.

After a student has performed this operation several times, it becomes unnecessary to do so, as the

new manner of focusing is now familiar and three-dimensional viewing is an automatic response. However, students should be warned not to do too much viewing the first few times they use this method, as eyestrain may result.
