

periscope project

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I want to create a simple, inexpensive periscope with a height of about 1-1/2 feet with as wide a range of viewing as possible as a classroom project. I wanted to do this without the need for lenses to keep it as simple and inexpensive as possible. I'm already facing the need to encase the mirrors in acrylic or some other unbreakable sheeting for safety.

To get the view range I'm after using only mirrors requires a fairly large mirror, minimum of 6" diameter at the upper end. I was hoping to reduce that to just a few inches at the most.

How can lenses be used to reduce the size of the mirrors at that distance from each other? Using lenses could actually add to the fun and learning process, but if the lenses required would be too expensive, too difficult to mount, or require manual focusing if used by different individuals, I'll just stick with large mirrors, although depending on the degree of difficulty, it may still be worth the effort as a learning project.

Some distortion will not be a problem so precision construction will not be necessary.

Thanks,

Don