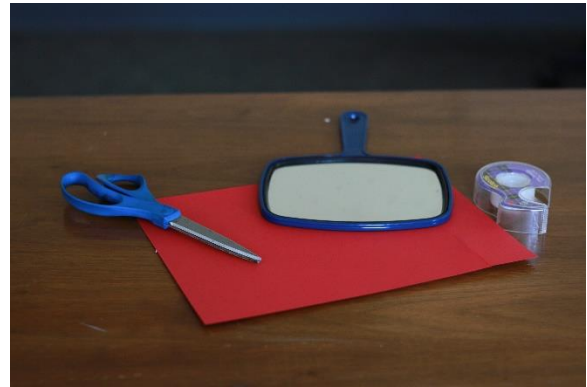


Pinhole Hand Mirror Projector

Built by Dana Browne

This design I learned from a friend, Jim Giammanco, who came up with it for projecting the sun into a classroom. You can place the mirror outside and project it inside onto a wall or whiteboard. Because you might project it a distance of many feet, the size of the "pinhole" can be $1/4$ inch or more, and does not have to be round. You need a flat mirror. Do not use a "makeup" mirror that magnifies your face.



1. Fold the paper in half, then again in quarters



2. After folding the paper in quarters, cut off the corner. Since the image will be projected about 10 feet, I am making a hole at least $1/4$ " across



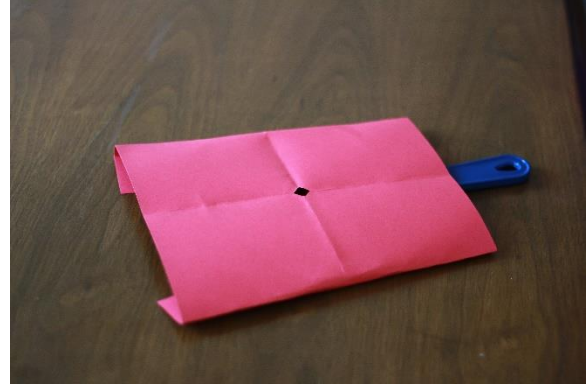
3. Unfold the paper and you have a diamond-shaped hole about $1/4$ " in diameter



4. Fold it over the mirror. Push the paper flat against the mirror.



5. Tape the paper to the mirror back to hold it in place.



6. Ready for use. You might need to push the paper against the mirror. In this case it seemed to work OK without that.

7. Mirror placed in sunlight. See the image of the sun on the ceiling?



8. Here's a closeup. It's an inch across. If projected across the room it would have been 3-4" across.

