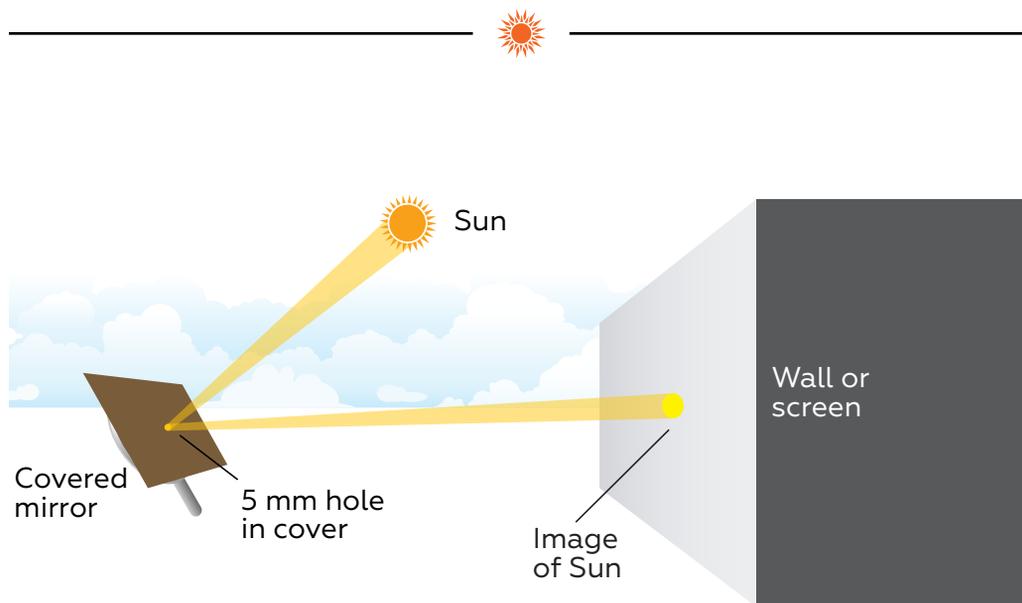


A Safe Way to Observe the Sun

PROJECTION USING A MIRROR



1. Get a small mirror (like a hand mirror) and make sure the surface is clean.
2. Cover the mirror with some cardboard in which you made a small hole (no bigger than 5 mm, or $\frac{1}{8}$ in.). The rest of the mirror should be completely covered by cardboard or paper.
3. Find a room that has a window in which you can see the Sun (so sunlight hits the window sill). Alternatively, you can be outside and have the Sun on one side of you and a wall that is in shadow on another side.
4. The trick is to hold the mirror so that you catch the sunlight and project it on a dark wall of the room or on a wall outside that is in shadow. This takes some practice, so don't get discouraged.
5. Another student can hold a white piece of paper or cardboard right where the Sun's image is on the wall so it can be seen more clearly.
6. You get the sharpest image when the hole through which the mirror shows is really small and the wall is farther away, but this also produces a fainter image, which can make it harder to see. It is good to experiment with different sized holes and distances to the wall to determine how to get the best results.
7. This method doesn't show you much detail, but it is useful during a partial eclipse to see the "bite" the Moon takes out of the Sun.
8. As a bonus, you can experiment to see whether the shape of the hole makes any difference to the image of the Sun on the wall.

Safety note:

Looking directly at the Sun is dangerous to your eyes, so don't try viewing the Sun without your teacher's guidance.