

Learn about: How reflection and refraction work in periscopes

Make your own Periscope

A periscope allows you to look over at objects or people from around a corner, or from a higher vantage point than normal. While modern submarines and other high-tech vehicles usually use a more complex system of prisms and lenses, the basic mirror periscope described below is easy to make at home, and provides a clear enough image that it was widely used for military purposes well into the twentieth century.



You will need:

- Large cereal box or an A4 size or larger piece of cardboard
- Glue stick or Masking tape
- Craft knife / Scissors
- Paint for decoration (Optional)
- 2 mirrors 2" by 2" (5cm x 5cm) or use aluminium foil
- [Periscope template](#)
(Click on me to download)

Making the periscope:

1. Print off the Periscope template and glue it onto the cardboard.
2. Once the glue has dried carefully cut out the template along the solid lines being careful not to cut off the end flaps.
3. Using the ruler as a guide, ask an adult to score down the dotted lines with the craft knife.
4. Fold all of the scored lines inwards. Folding over the ruler will help keep the folds straight.
5. Fold the periscope over to make a tube, glue and secure with masking tape if needed.
6. Glue the flaps at the end of the periscope down.
7. Glue and insert a mirror into each opening of the periscope.
8. The edges of the periscope can sometimes end up looking a bit untidy in the places where you scored it. You can tidy them up with a little masking tape if you like.
9. It's a good idea to paint your periscope in a neutral colour or something that will blend into its surroundings. So if you're using it in the garden, you may want to paint it green!
10. For the ultimate secret stakeout, you may want to consider camouflaging your periscope with a little of its surroundings, if you're outside think about sticking some leaves or twigs to it!

<https://www.cnhs.org/ourpages/auto/2018/5/9/54422247/Periscope.pdf>