



# Make A D } Telescope

Imagine the universe with a u } o telescope!

## Materials Needed:

Paper towel tube, scissors, tape, decorating materials (colorful paper, stickers, sequins, etc.), Lens Caps Printak

\*You can make your own lens caps by drawing on a piece of paper or cutting out pictures from magazines. The visible image should be a circle about 1.75 inches (4.5 cm) in diameter, with a 0.5 inch (1.25 cm) border so it will fit over the end of the tube.



## Instructions:

Step 1 Decorate a paper towel tube for your telescope. Use colorful paper, marker, stickers, sequins, or whatever you have available. Leave 1 inch (2.5 cm) clear of decorations at one end of the tube.



Step 2 Cut out each of the 6 lens caps. Cut along each dotted line.

Step 3 Fold the paper flaps to fit the lens cap over the top of the tube. Make sure the picture side faces into the tube! Tape the flaps together so that you can remove the lens cap and it keeps its fitted shape. Repeat for each lens cap.

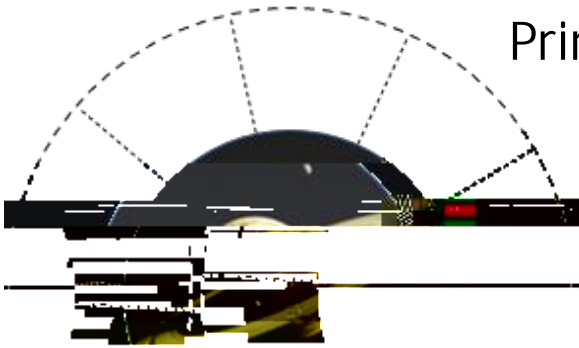


Step 4 Place a lens cap on the end of the tube. Look through the other end. The tube lets light in, which allows your eyes to see the picture.

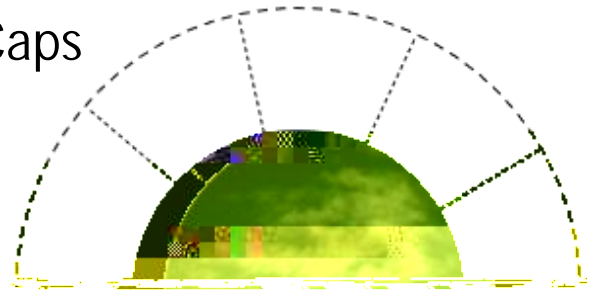
Explore outer space and wildlife oes with the different lenses!

Use the toy telescope without a lens and practice finding objects that are far away!

# Printable Lens Caps

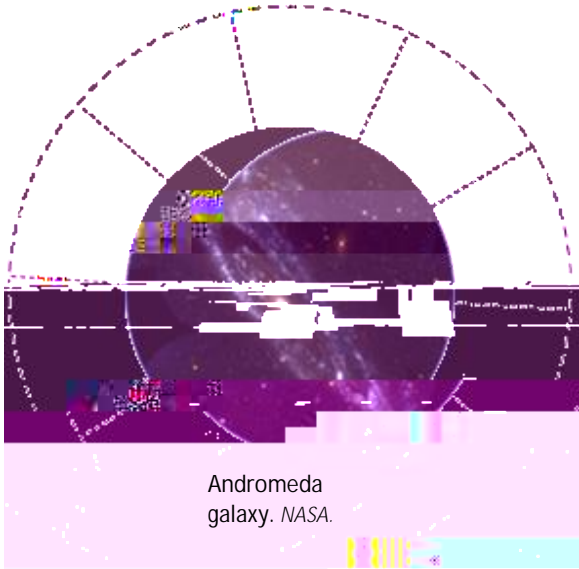


Saturn.  
Pixabay.



Moon in  
daytime.  
Wikimedia.

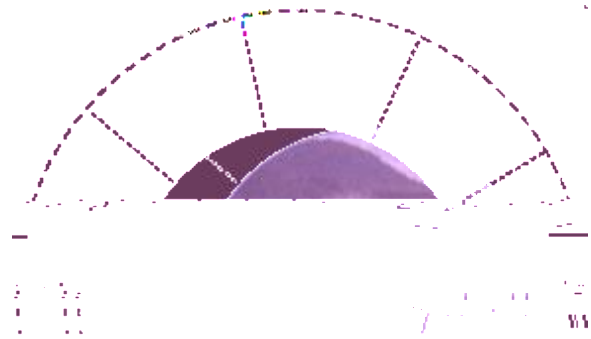
*Cut circles along  
the dotted lines.*



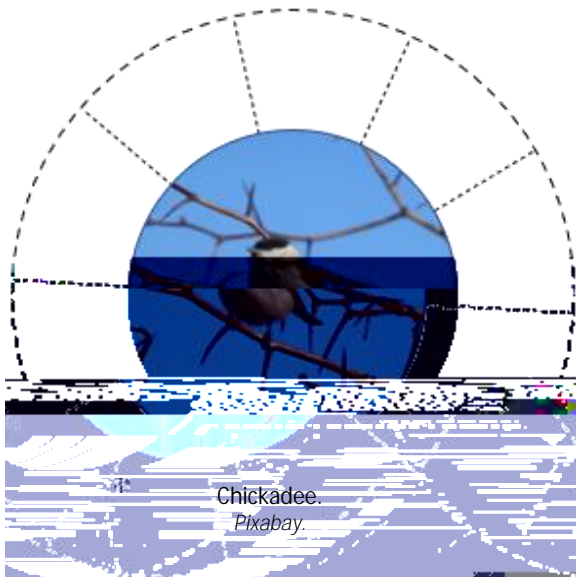
Andromeda  
galaxy. NASA.

*Fold edges over  
end of the paper  
towel tube. Tape  
in place.*

Star cluster.  
NASA.



Orcas.  
PickPic.



Chickadee.  
Pixabay.

# Discover Telescopes

## How Do Telescopes Work?

We are limited in how far we can see with just our eyes alone. As objects get farther away from us, they become smaller and darker. Our eyes cannot see small amounts of light that are far away. Telescopes concentrate light and magnify objects so that we can see them at a much farther distance.