

# MOON PHASE HEADBAND

*Is the Moon out tonight?*

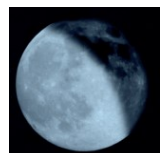
*Where will the Moon be in the sky tonight?*

*Where can I see the Moon in the daytime?*

These are questions people ask astronomers all the time. With this handy little paper headband project (inspired by the somewhat more stylish “Moon Hat” <https://starinastar.com/science-gifts/moon-hat/>) you can find where the Moon is located in the sky, or below the horizon, any time that you can see the Sun.

## HOW TO:

1. Measure around your head (you can wrap a piece of string).
2. Cut a strip of paper about 5cm longer than the string and about 7cm wide. You can use receipt paper or tape ordinary paper/card together.
3. Wrap the strip of paper around your head and mark where it overlaps. Draw the new Moon right next to the end (draw a filled in circle.) The new Moon will be at the front when you wear the headband.
4. About halfway between the new Moon and the overlap draw a circle to represent the full Moon. This will be at the back when you wear the headband.
5. Halfway between the new and full Moon images (where your left ear will be when you complete the headband), draw the first quarter Moon. It’s called first quarter because your left ear is one quarter of the way around your head anti-clockwise from your forehead! Draw a first quarter Moon like this:
6. Can you guess where the third quarter Moon will be? If you guessed over your right ear (three quarters of the way anti-clockwise around your head from your forehead) then you are right! Draw a third quarter Moon like this:



## NOW TO ADD THE MOONS BETWEEN THESE PHASES



7. Halfway between the new and first quarter Moon is the waxing crescent Moon.

9. Halfway between the full and third quarter Moon is the waning gibbous Moon.



8. Halfway between first quarter and the full Moon is the waxing gibbous Moon.

10. Halfway between the third quarter and the new Moon is the waning crescent Moon.



You can label each image that you drew so that you can remember them. Now you can tape the paper into a ring that fits around your head, with the new Moon on the front and the full Moon on the back and you are ready to go out and find the Moon.

### ***HOW TO USE IT***

You can find out what phase of the Moon is today by either using a calendar or by looking it up on the internet.

Put the headband on, go outside with a friend and point your forehead toward the Sun. (IMPORTANT: Do NOT stare into the Sun! It can harm your eyes. You can shade your eyes with your hand.)

Point the top of your head North and tilt it backward somewhat so that it's slanted at about a 45-degree angle.

The Moon will be approximately located in the area of the sky which today's Moon phase drawing is facing. Ask your friend to point in that direction. Now look for the Moon if it is above the horizon. Some Moons can't be seen in the daytime; the new Moon appears very near the Sun and the full Moon is in the complete opposite direction of the sky to the Sun.

If the phase of the Moon is somewhere between first quarter and full, and you are using the headband on a clear afternoon, you may see the Moon in the clear blue sky.

If the phase of the Moon is somewhere between full and third quarter, and you are using the headband in the morning, you may see the Moon in the daytime sky as well!