

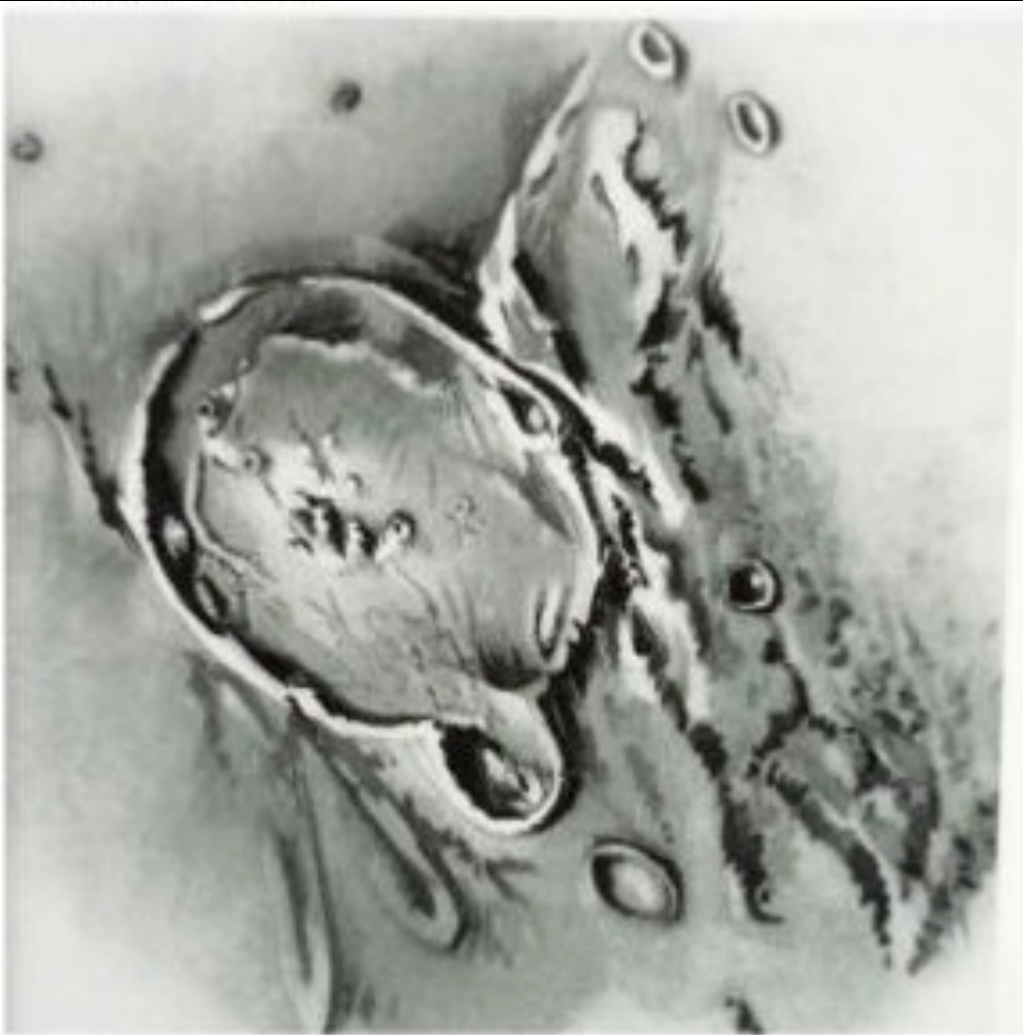


**Lunar Impressions:
Sketching the moon by the take-away method**

ASTRONOMICAL LEAGUE

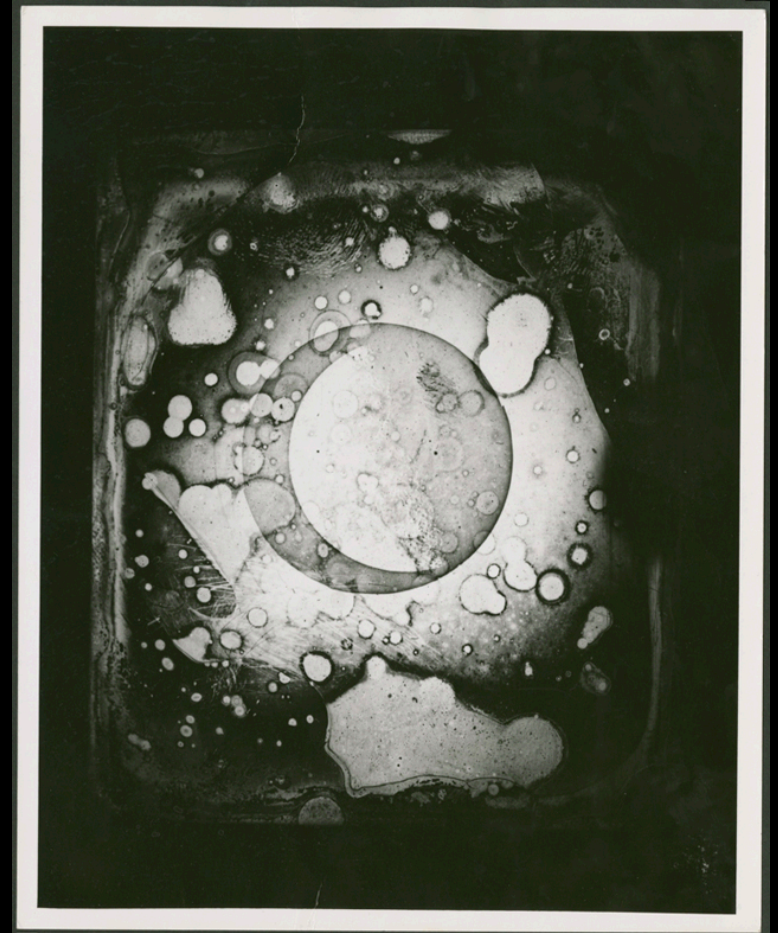
www.astroleague.org

Before astro-photography, sketching was the only way to record lunar features.



Lunar Crater Gassendi, 1852.

John Phillips, 'Notices of some parts of the Surface of the Moon', *Phil. Trans. R.S.*, 158 (1868), 333-46.



First photograph
of the moon: 1840;
Dr. JW Draper



**Sketching improves
your observing skills.
It increases the detail
of what you see.**

**After all, a crater is
more than just a bowl
shaped depression.**



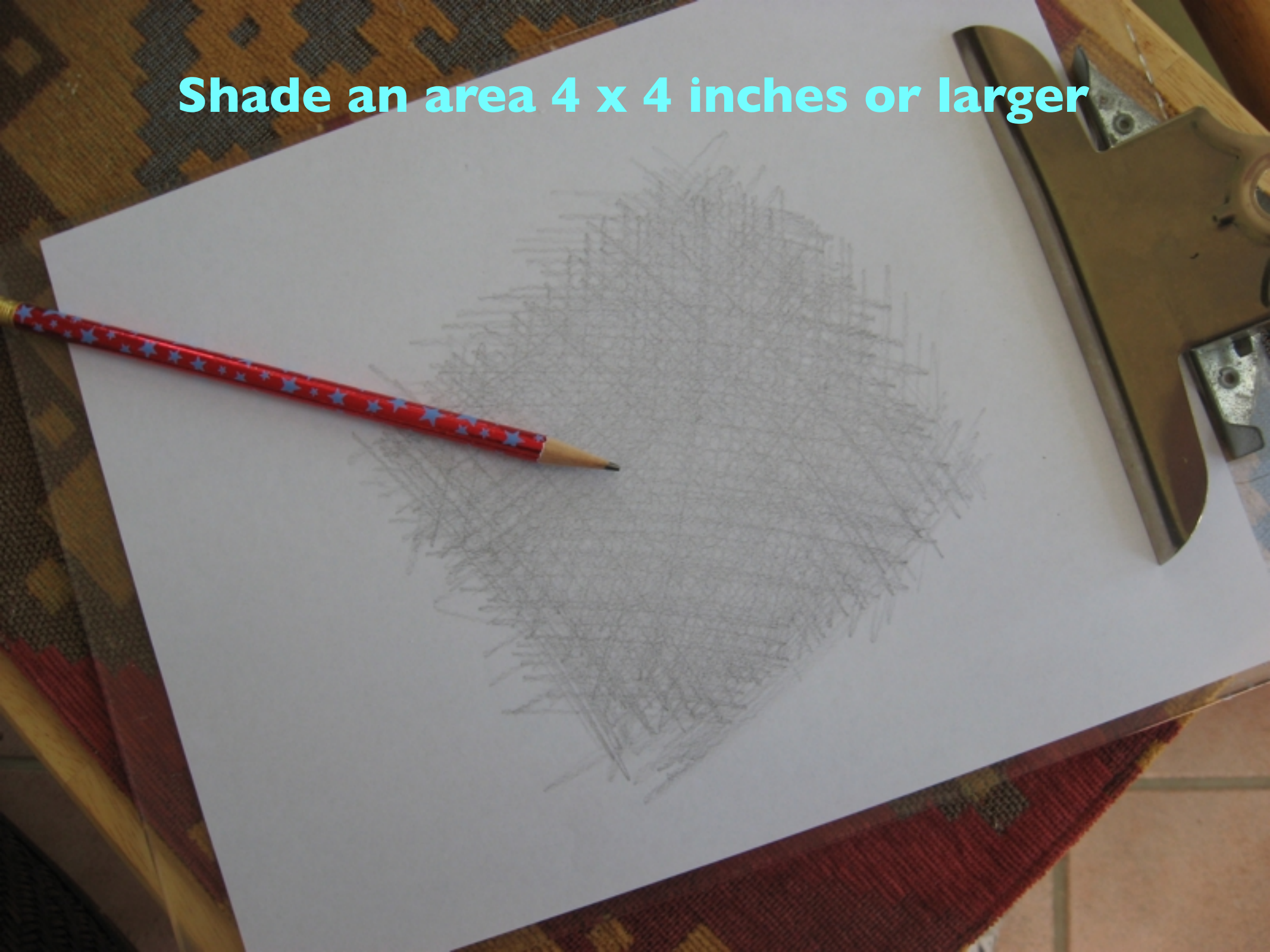
The real challenge is remembering what you see through the eyepiece, then transferring that mental image to paper — while doing it all in subdued light.

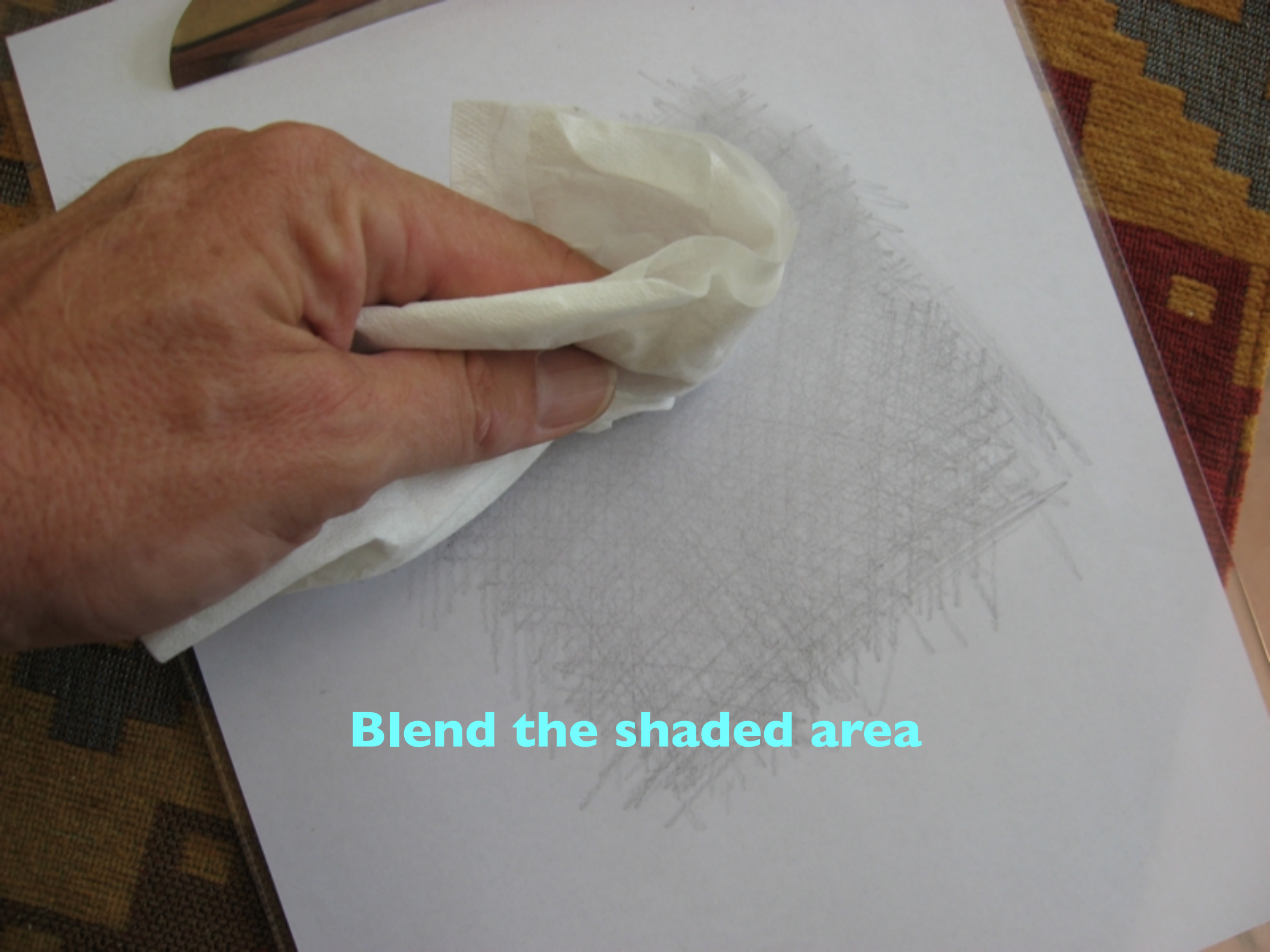
Your material needs are simple:

- Pencils — 2H, HB through 4B
- Blending Stumps (or tissues)
 - Eraser
 - Paper



Shade an area 4 x 4 inches or larger



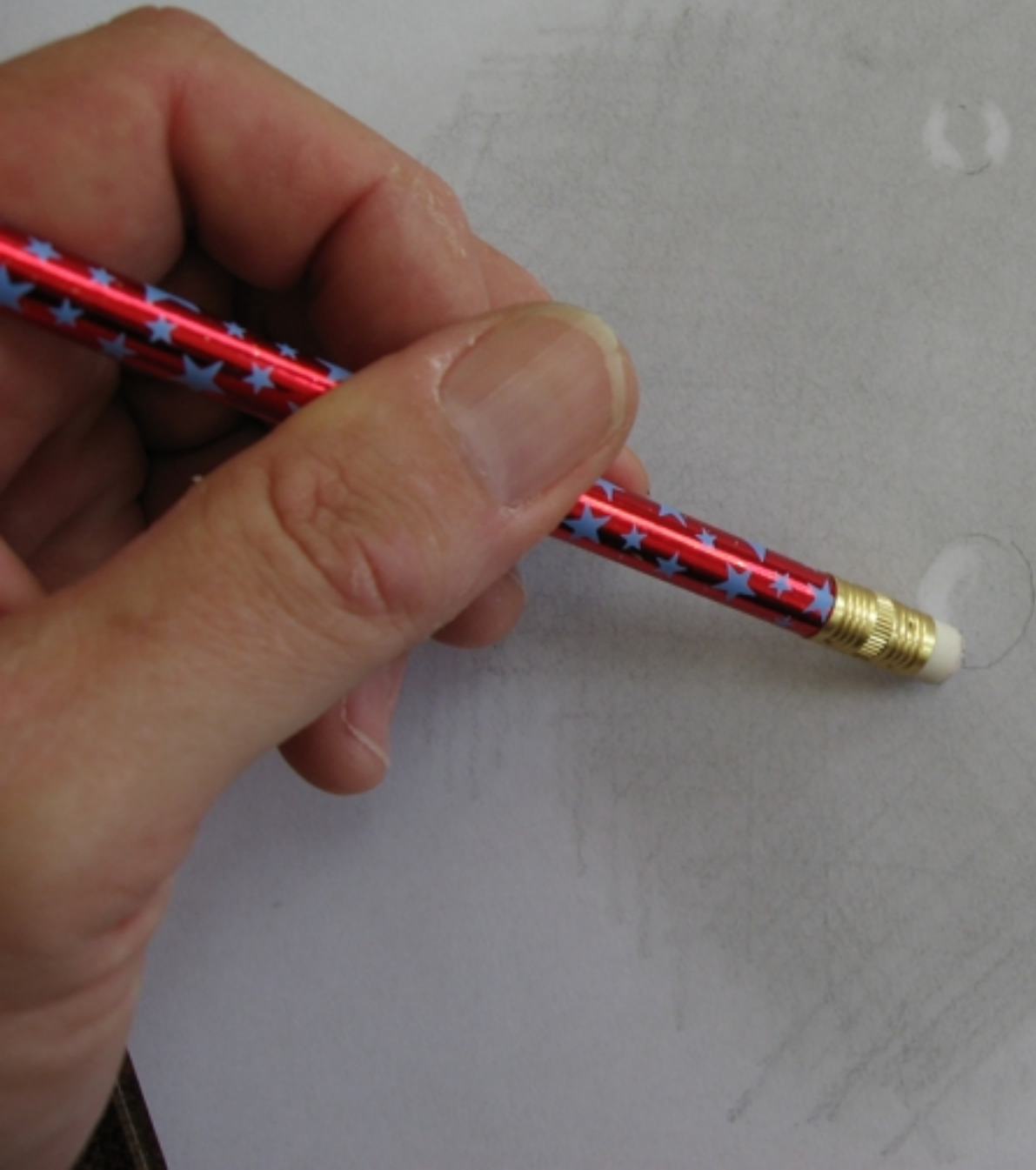


Blend the shaded area



Lightly trace the outline of the object

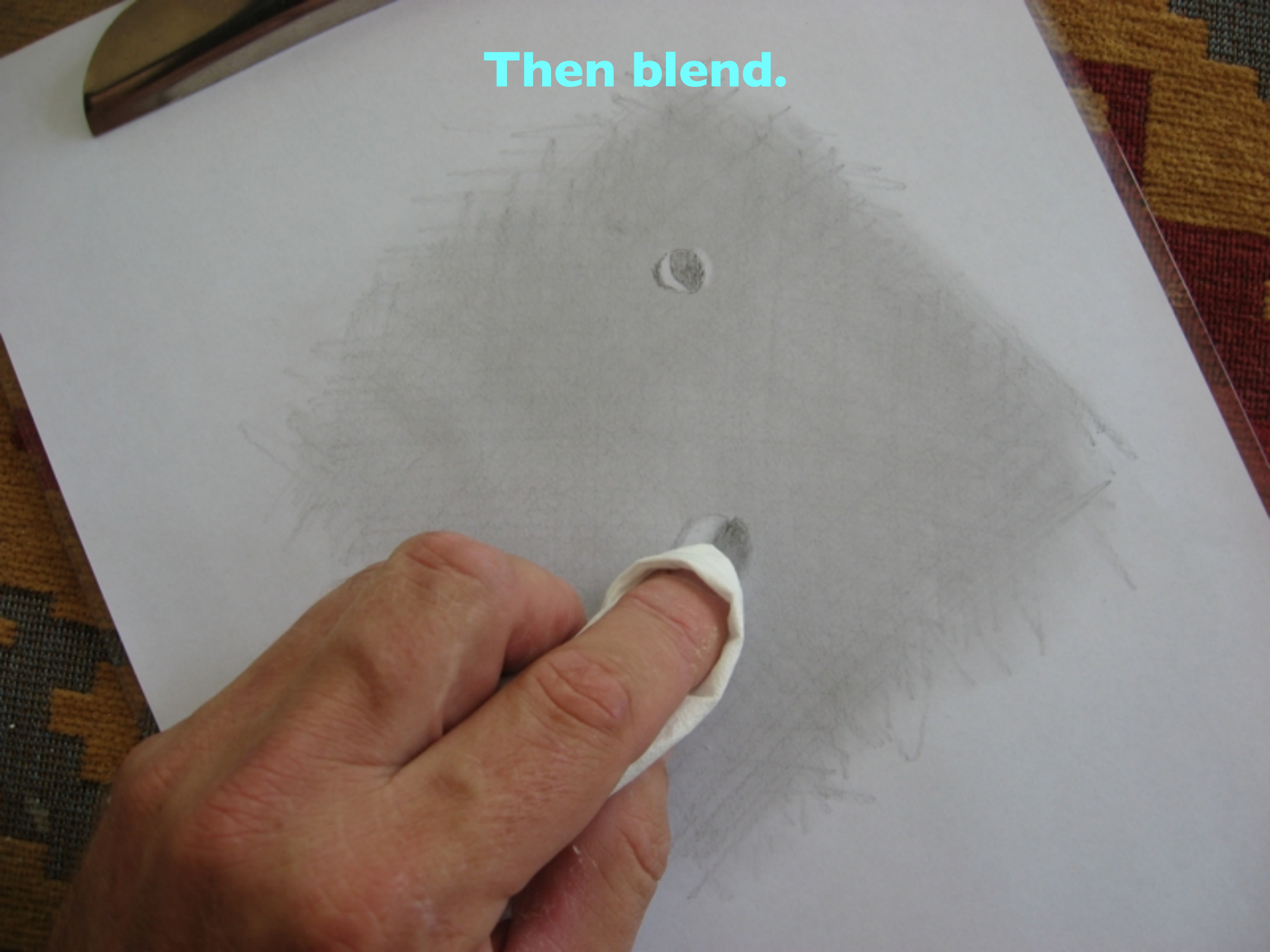
Erase the shaded areas that are too dark



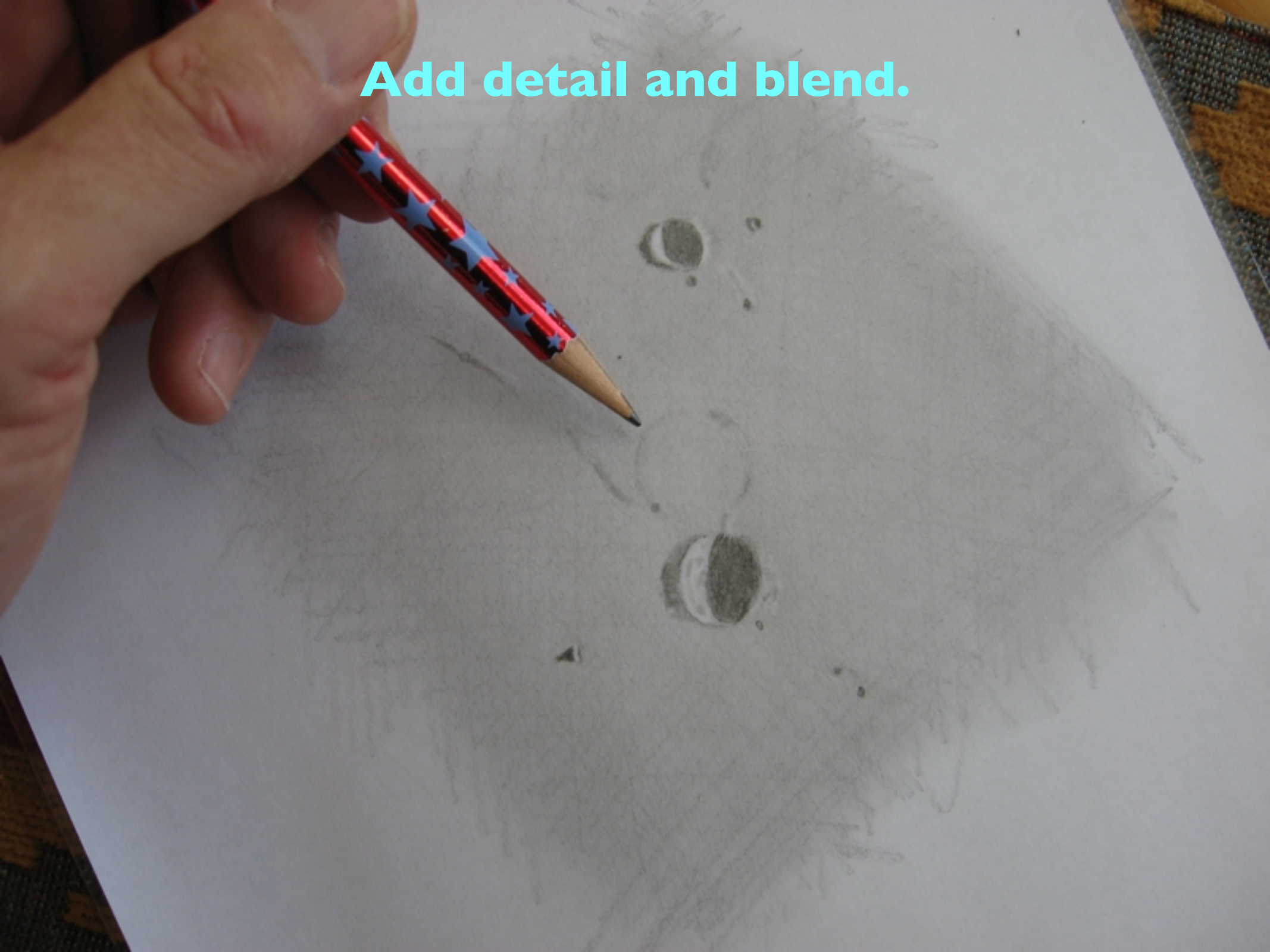
Add darker shade to those areas that need it.



Then blend.



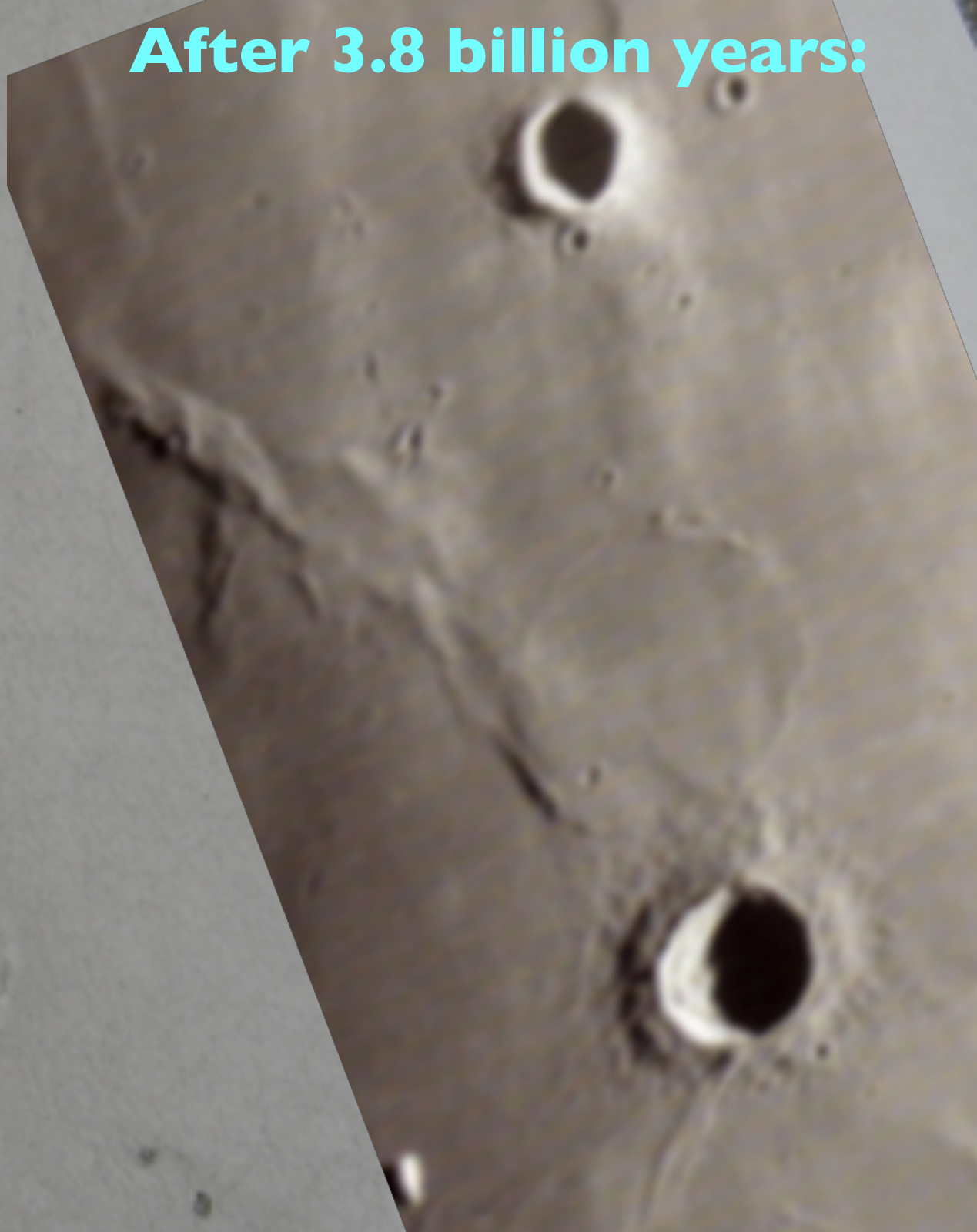
Add detail and blend.




After 15 minutes:



After 3.8 billion years:





Our target craters on an 11 day old moon:

← Lambert

← Pytheas

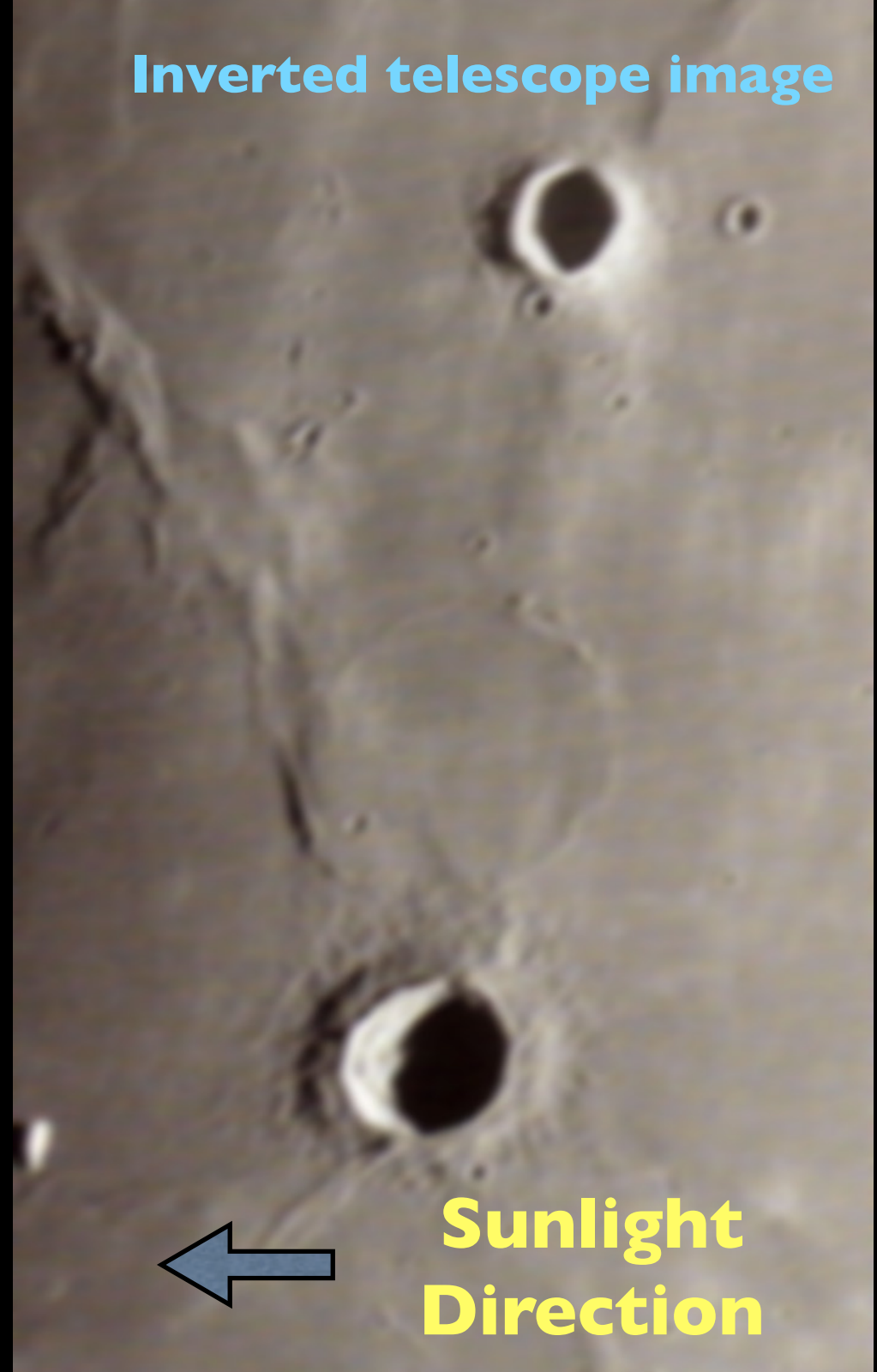
← Copernicus

Remember the steps:

1. Shade and Blend
2. Lightly Outline
3. Take Away (Erase)
4. Shade and Blend
5. Add detail and Blend

**Now,
it's your turn!**

Inverted telescope image



**Sunlight
Direction**