



Monthly Challenge

December



Introduction:

As the months get cooler, the days get shorter and the nights get longer. That's because the Earth rotates on an axis and during the winter months the northern half of the Earth is tilted away from the Sun. Just as the Earth orbits the Sun, the Moon orbits the Earth. It takes 29.5 days for the Moon to make one full orbit around the Earth. During that time, the Moon appears in different phases or, shapes.

Challenge:

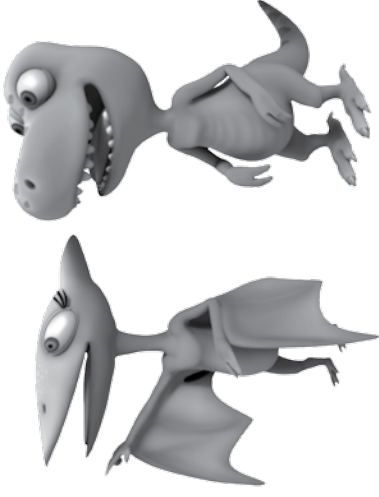
The long, dark, winter nights are perfect for gazing at the Moon! Go outside every night for one week and observe the Moon. Take care to note the shape of the Moon. Once you are back inside, use the Moon Phases worksheet to draw the Moon as you saw it. Repeat this activity every day for one week. At the end of the week, review your drawings and note any changes in the Moon's shape. Did the Moon appear to get bigger or smaller? A moon that gets fuller is called a waxing moon while a moon that gets smaller is called a waning moon. Label your sheet waxing or waning moon depending on its change in size over the week.

Extensions:

1. Just as the Sun rises and sets, so do the stars. Go out early in the evening and locate a constellation in the night sky. Take care to note where it is in the sky: Is it low and by the horizon? To the left of your home? Go back inside your home and wait an hour or two before you return outside. Look for the constellation you located earlier, is it in the same spot in the night sky, or has it appeared to move? It may look like the stars are moving but it is the Earth spinning on its axis that causes us to see different constellations at different times of the night.
2. Though people tend to wind down in the evening, the night hours are still a very active time. You can hear both natural and man-made sounds all through the night. Close your eyes and listen closely, what do you hear? A cricket chirping? The wind in the trees? A train horn in the distance? How are sounds at night different from sounds during the daytime?

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Observe the Moon every day for one week and draw its shape in the correct box below.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

This week the Moon was a waxing / waning moon.

Circle one.