

Name: _____
 Period: _____ Date: _____

Birthday Moons

It's Just a Phase You're Going Through...

Question: Can you find out what the moon will look like on the evening of your next birthday? Yes, you can! Here's how:

Materials:

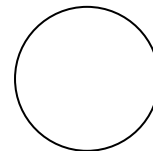
- Internet Access
- Pencil and worksheet
- Calendar

Procedure:

1. Begin your adventure by going to the [Moon Phase Images](http://tycho.usno.navy.mil/vphase.html) website. This site enables you to time-travel to see how the Moon would appear for almost any date in the past, present, and future. Find the site by google-ing "birthday moons" or by going to: <http://tycho.usno.navy.mil/vphase.html>

2. For your next birthday, select the correct field settings (see sample settings) and click the "Show Phase" button. (Note: If you haven't had a birthday yet this year, your next one will be in 2014. For most of us, our "next" birthday will be in 2015.)

Your Birthday Moon



3. Complete the form to the right: Using a pencil, fill in your birth date and **sketch exactly how the Moon will appear** on your birthday by shading in the dark portion of the Moon. (Be careful to show ANY dark portion as shown on the website. If the moon is going to be full, write that in the right margin.)

4. There are eight named Moon phases (see your notes). **Tell which named Moon phase most closely resembles your birthday moon:** _____

Date: _____
(mm/dd/yy)

5. After sketching your birthday moon, **complete the data table below** by finding out how the Moon will appear **every three days** for the next 30 days after your birthday. To do this, press the "Back" button on your Web browser. Change the field settings for "Day" and if necessary, "Month". All the other settings should remain the same. Repeat the process until you have completed the data table.

Data Table:

<p><i>3 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>	<p><i>6 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>	<p><i>9 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>	<p><i>12 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>	<p><i>15 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>
<p><i>18 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>	<p><i>21 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>	<p><i>24 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>	<p><i>27 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>	<p><i>30 days after your Birthday Moon...</i></p> <div style="text-align: center;"> Date: _____ (mm/dd/yy) </div>

(Before you leave the website, use it to answer question #1 on the reverse side of this sheet!)

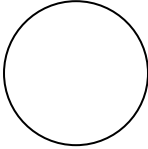
Activity Questions:

1. Do you see a pattern? Predict what the Moon would look like 33 days after your birthday. (Draw it in the box!→)

Use the internet to verify your prediction.

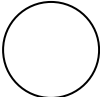
Were you correct? (circle one) Yes No

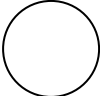
33 days after your
Birthday Moon...

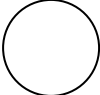


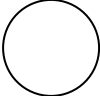
Date: _____
(mm/dd/yy)

2. Find four **different** phases of the moon that appear in your data table on the other side of this paper. Draw the phase, tell the date, and write the name of those phases.

 Date: _____ Name of Phase: _____

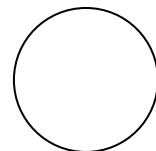
 Date: _____ Name of Phase: _____

 Date: _____ Name of Phase: _____

 Date: _____ Name of Phase: _____

3. From the front side of this sheet, sketch exactly how the moon will appear on your next birthday. Tell the name of the phase that it will most closely resemble.

Your Birthday Moon



Phase: _____

Then, **draw a diagram** that shows the location of the Moon as it relates to the Sun and Earth on the day of your birthday.

(HINT: You need to **add the moon in its correct location** to show where it would be to produce the phase that is visible on your birthday. Use the diagram in your notes to help you!)

