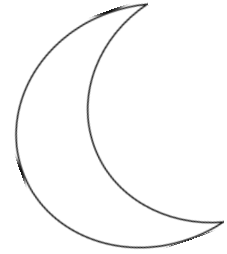


Name \_\_\_\_\_

**Birthday Moons**



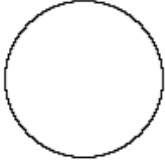
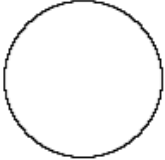
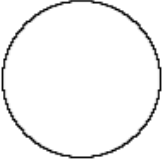
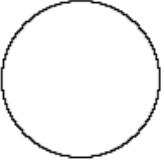
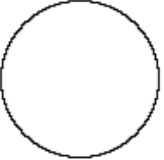
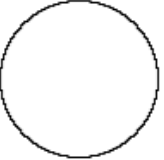
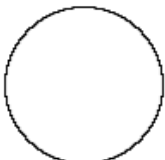
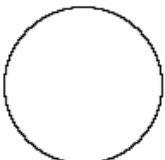
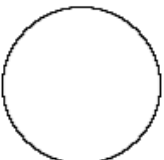
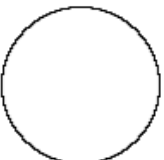
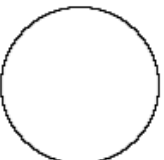
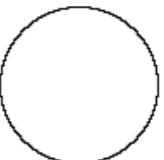
**Purpose:** To explore the pattern in the changing shape of the moon

**Materials:** device with internet access pencil

**What to do:**

1. In the data section, write the date of your birthday in the first box.
2. Go to the website provided by your teacher (<http://stardate.org/nightsky/moon>)
3. Find your birthdate for THIS YEAR.
4. Using a pencil, shade in the moon in the first box exactly as it appears on your birthday.
5. In the second box, shade in the moon to show how it will appear 3 days after your birthday.
6. Continue shading in the appearance of the moon every three days after your birthday for the next 30 days.
7. **Leave the last cell empty for now.**

**Data:**

Your birthday moon  Date _____	3 days after your birthday moon  Date _____	6 days after your birthday moon  Date _____	9 days after your birthday moon  Date _____	12 days after your birthday moon  Date _____	15 days after your birthday moon  Date _____
18 days after your birthday moon  Date _____	21 days after your birthday moon  Date _____	24 days after your birthday moon  Date _____	27 days after your birthday moon  Date _____	30 days after your birthday moon  Date _____	 Date _____

**Data Analysis:**

Describe the pattern you see in the diagrams.

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What can you INFER from your observations?

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PREDICT the moon phase 33 days after your birthday. Shade it in the last spot on the diagram. Use the website to check your prediction.

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**Questions:**

1. Do you think that the Moon will look the same on your birthday next year? Explain your answer.  

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2. About how many days does it take for the Moon to go through a cycle of phases, in other words, how many days pass until the exact same Moon shape reappears?  

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3. Look at the diagram that is completely shaded Count ahead 15 days (you may have to go back to the beginning). What do you notice?  

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4. Count ahead another 15 days. Now what do you notice?  

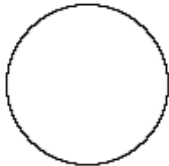
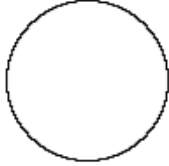
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5. What can you infer from the observations described in 3 and 4?  

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Check the moon phase on your birthday LAST YEAR. Sketch it below. Check the moon phase on your birthday NEXT YEAR. Sketch it below.

 Date _____	 Date _____
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6. Why does the moon phase on your birthday change from year to year?  

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