

## ★ Enrichment Activity 8



### “Happy New Year!” Chinese Style

In the United States, we measure years officially by recording how long it takes for the earth to revolve once around the sun. This method is called a solar calendar, and it corresponds accurately with the seasons of the year. However, in order

to calculate the solar year, a scientist needs instruments to measure the angle of the sun as it shines on the earth. Since many ancient cultures lacked these instruments, they relied on a lunar calendar instead.

**A** lunar calendar is based on the cycle of the moon’s phases, which can be observed without the use of scientific instruments. According to the traditional Chinese calendar, the year is made up of 12 lunar months. A lunar month is about 29.5 days long. This is the time it takes for the moon to pass through a complete cycle of phases, from full moon to new moon to full moon.

A year made up of 12 lunar months is shorter than a solar year. After a few years, lunar and solar calendars are out of synchronization. To correct this, a “leap month” is periodically added to the Chinese lunar calendar. Even so, Chinese holidays do not fall on the same solar-calendar dates each year. For example, Chinese New Year can occur anytime between January 21 and February 19 on the solar calendar. By contrast, New Year’s Day on the solar calendar is always January 1.

**DIRECTIONS:** Answer the questions below in the space provided.

1. What is the difference in length between a solar year (365 days) and a non-leap lunar year? \_\_\_\_\_  
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2. How long is an “average solar month,” one-twelfth of a solar year? \_\_\_\_\_  
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3. What is the difference between the length of an “average solar month” and the length of a lunar month? \_\_\_\_\_  
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4. Considering this difference, how many lunar months would pass before the lunar calendar was 30 days (approximately a lunar month) behind the solar calendar? Based on this, after how many lunar months should a leap month be added to the lunar calendar?  
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5. Although the Chinese calendar is still used for calculating the timing of holidays, the solar calendar is the official one used by government and commerce. Why do you think this is so?  
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