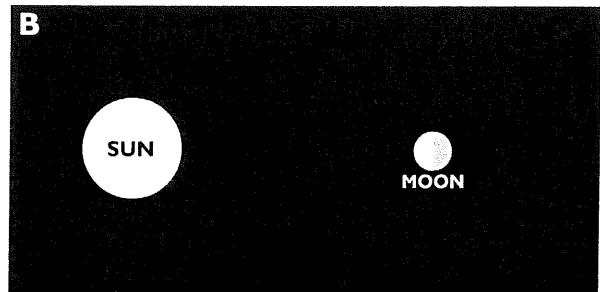
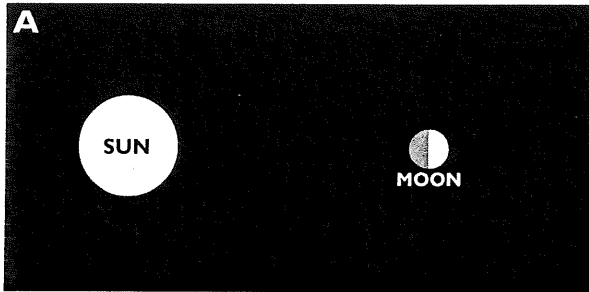


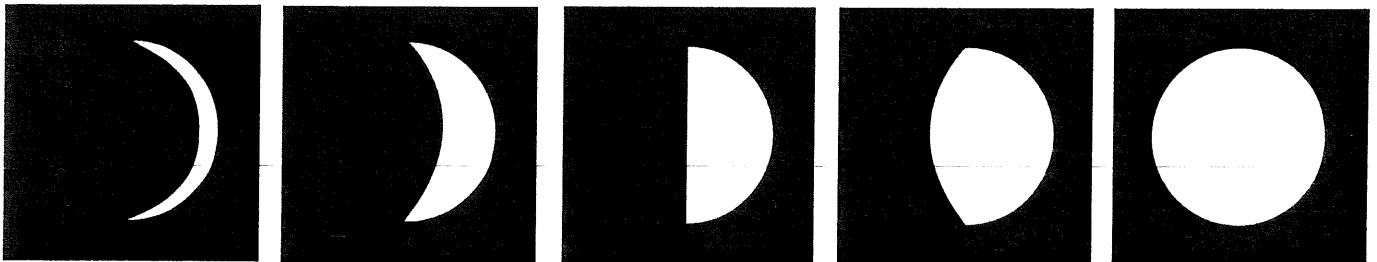
Pre-Unit 4 Questionnaire, Page 1

1. Which picture below is wrong: A or B? (Circle one.) *Drawings are not to scale.*

It is wrong because. . . _____



2. Here are some pictures of how the Moon looks at different times of the month.







Why does the Moon seem to change its shape during the month? (Circle A, B, C, or D.)

- A. The Moon gets smaller and bigger.
- B. Clouds block part of the Moon from our view.
- C. The Earth's shadow covers part of the Moon.
- D. We see the sunny side of the Moon from different directions.


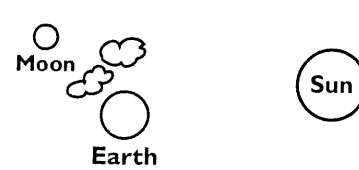


(Over)

Pre-Unit 4 Questionnaire, page 2

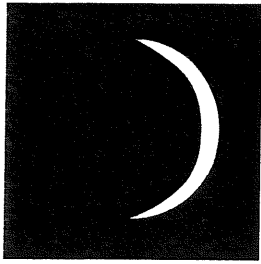
3. Why do we see an eclipse of the Sun? (Circle A, B, C, or D.) *Drawings are not to scale.*

<p>A Clouds go in front of the Sun.</p> 	<p>B The Moon goes between the Earth and the Sun.</p> 
<p>C The Sun is between the Earth and the Moon.</p> 	<p>D The Earth goes between the Moon and the Sun.</p> 

4. Why do we see an eclipse of the Moon? (Circle A, B, C, or D.) *Drawings are not to scale.*

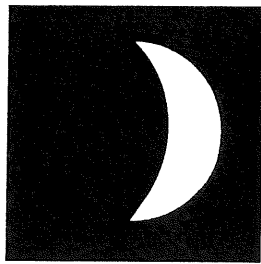
<p>A The Moon goes into the Earth's shadow.</p> 	<p>B Clouds go in front of the Moon.</p> 
<p>C The Moon goes between the Earth and the Sun.</p> 	<p>D The Sun is between the Earth and the Moon.</p> 

Moon Phase Explanations



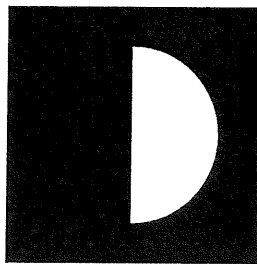
1

thin crescent



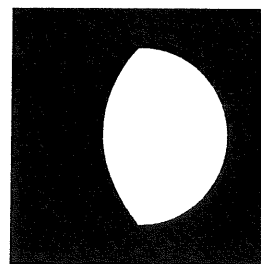
2

fatter crescent



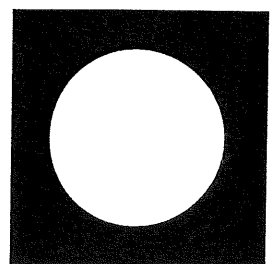
3

quarter



4

gibbous



5

full

What causes Moon phases to change during the month?

Explanation #1

“The Earth’s shadow covers part of the Moon.”

Do you agree or disagree?	Why? What is the <i>evidence</i> for or against this explanation?
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Explanation #2

“We see the sunny side of the Moon from different directions.”

Do you agree or disagree?	Why? What is the <i>evidence</i> for or against this explanation?
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Four Impossible Missions to the Moon and Sun

Whoever designed the four missions below does not understand Moon phases or eclipses. Write on the lines below what is wrong with each mission, and explain why it is wrong. There may be more than one thing wrong with each mission.

1. Our mission is to land on the Moon. We can't land during the new moon, because that's when the Moon is gone.

2. If we land when it is a crescent moon, we can explore the Moon very quickly, because it will be so small.

3. Each day while exploring on the Moon, we will pass into the Earth's shadow, and it will be night.

4. We will land on the Sun during an eclipse of the Sun, so it won't be so hot there.
