

teacher's challenge

Explaining and predicting the Moon's phases correctly are one of the most prevalent misconceptions with which teachers of any grade or age level have to contend. It helps if the teacher doesn't have any misconceptions either! Try Wickenburg, AZ high school teacher Walt Thomas' four challenges.

Explain what is wrong in the following picture and how it could be corrected:

1.



5 PM Looking Southwest

The picture is wrong because: _____

To correct it: _____

2.



5 PM Looking Southwest

The picture is wrong because: _____

To correct it: _____

3.



NOON Looking Southwest

The picture is wrong because: _____

To correct it: _____

4.



MIDNIGHT Looking West

The picture is wrong because: _____

To correct it: _____

Answers on Page 15

Do you have a challenge? Send it to *The Classroom Astronomer* editor at editor@toteachthestars.net.



ANSWERS TO TEACHER'S CHALLENGE

1. The picture is wrong because: The wrong side of the moon is lit, or you can't see a waning crescent looking SW at 5:00 pm.

To correct it: The Sun and moon need to switch places for that time frame.

2. The picture is wrong because: The full face of the moon could not be lit up if it is next to the Sun.

To correct it: Change the phase to a waning crescent or eliminate the Sun image and make it 5AM.

3. The picture is wrong because: The wrong side of the moon is lit, or the Sun is in the wrong position for that moon phase.

To correct it: Switch Sun and moon or change time to 7:00 pm and drop the Sun image.

4. The picture is wrong because: The Moon's wrong side is lit up for setting at midnight.

To correct it: Make it a first quarter or change the time to 12:00 noon and drop the stars!

