The "Stationary Star"

Your Challenge:
The Earth's spin makes the stars appear to change positions in the sky over the course of a night. In the whole sky, there is one star that appears to move less than any other during the night. Your challenge is to discover this star by using Sky Tonight.

Discovering:

1. Compare the 8PM and 5AM views for tonight for each compass direction (north, south, east, and west). Look for the star that is in about the same position at both times. Then draw this star and its constellation.

What is the star's name? _____

What pattern is it in? _____

What do the red lines do near there? _____

2. Pick another star pattern near this special star. Draw the position of this pattern around the special star at 8PM and then at 5AM.

8 PM 5 AM

How did the pattern move during the night?

How does it move over a full 24 hour period?

3. Pick a pattern low in the eastern sky at 8 PM. Draw how this pattern looks above the horizon. Look for that same pattern in the western sky at 5 AM and draw how it looks.

East at 8 PM West at 5 AM

How did this pattern move during the night?

How does this compare with the motion you described in question 2?

Making Science Sense: How could you use the stars as a clock if you were outside at night? Look at the North direction and hit "play". This is the changing sky view from one night to the next, but it also similar to the apparent motion of the stars through the night (see the "help" page). If the stars appear to move counterclockwise through the night, what direction must the Earth rotate to make them seem to move that way?