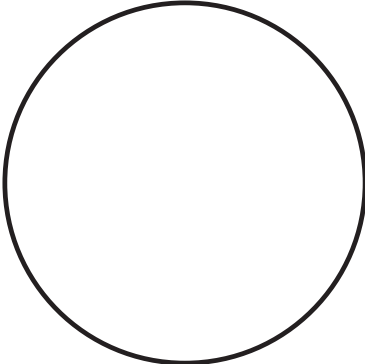
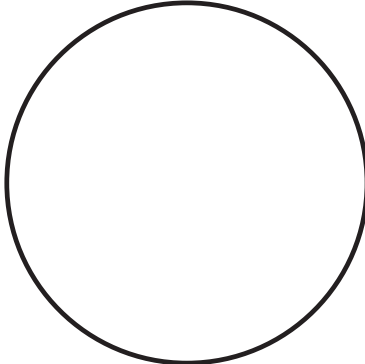


## Motion of the Stars: Apparent Motion at the North Pole.

**Instructions :**

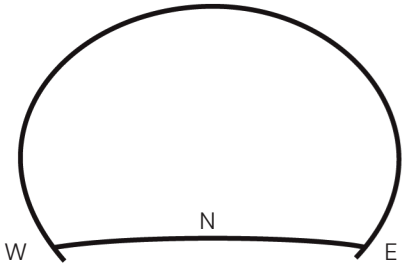
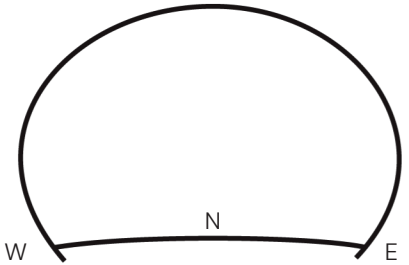
For each viewing direction, draw arrows in the **Prediction** section to show how you think the stars will appear to move over time. After observing the star motion in the planetarium, draw arrows in the **Results** section to show the actual apparent motion you observed.

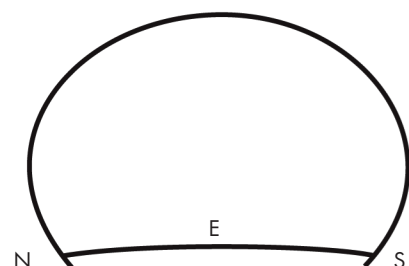
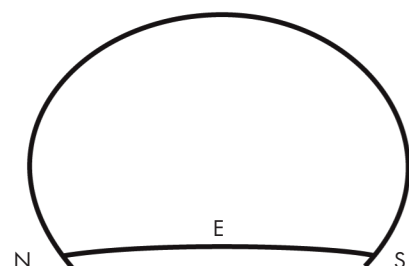
Prediction Looking Straight Up at the North Pole	Results Looking Straight Up at the North Pole
	

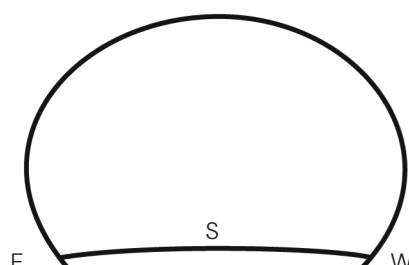
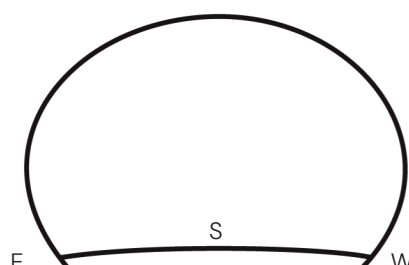
## Motion of the Stars: Apparent Motion at the Equator

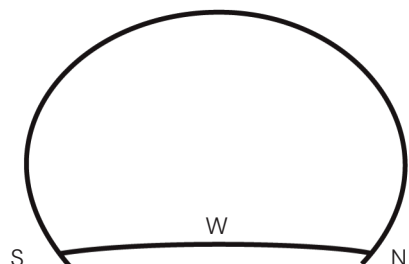
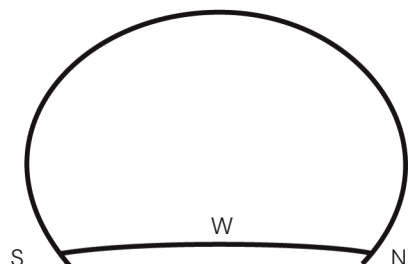
**Instructions :**

For each cardinal direction, first draw arrows in the **Prediction** section to show how you think the stars will appear to move over several hours. Then observe the accelerated star motion in the planetarium and draw arrows in the **Results** section to show the actual apparent motion you observed.

Prediction Looking North 	Results Looking North 
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Prediction Looking East 	Results Looking East 
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Prediction Looking South 	Results Looking South 
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Prediction Looking West 	Results Looking West 
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## Motion of the Stars: Follow-Up questions

### Instructions :

For each viewing direction, draw arrows in the **Prediction** section to show how you think the stars will appear to move over time. After observing the star motion in the planetarium, draw arrows in the **Results** section to show the actual apparent motion you observed.

1. In which direction did the stars appear to rise?
2. In which direction did the stars appear to set?
3. Which viewing directions showed stars moving in arcs around points near the horizon?
4. Compare the apparent motion of the stars when facing north, east, south, and west. How were the motion patterns similar and different?
5. How does the apparent motion of the stars at the equator differ from the apparent motion of the stars at the North Pole?

### 6. Complete the sentence:

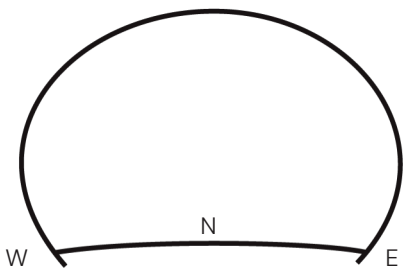
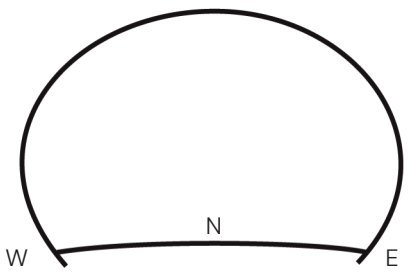
At the equator, stars appear to rise in the \_\_\_\_\_ and set in the \_\_\_\_\_.

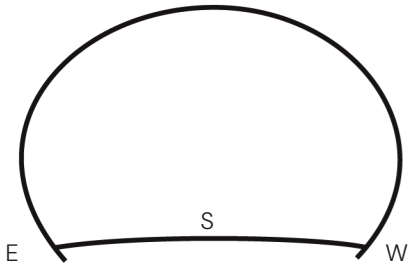
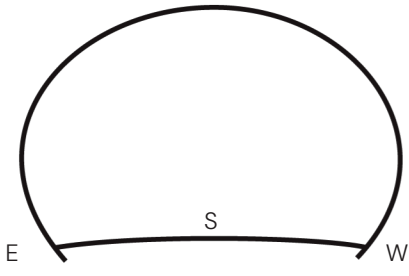
7. What causes the apparent motion of the stars across the sky?
8. Explain how Earth's rotation affects the way stars appear to move when viewed from the equator.

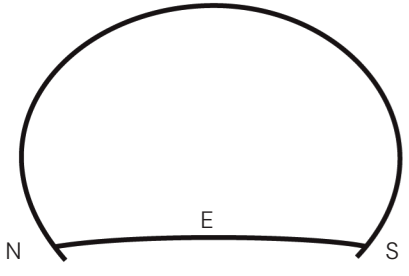
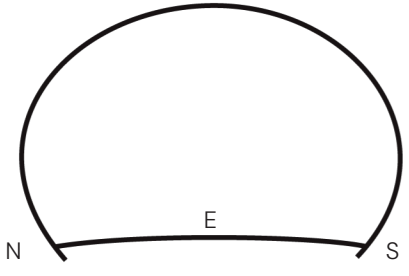
## Motion of the Stars: Apparent Motion at Your Latitude (extension)

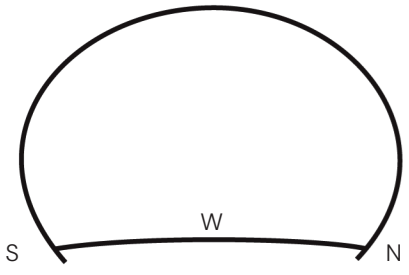
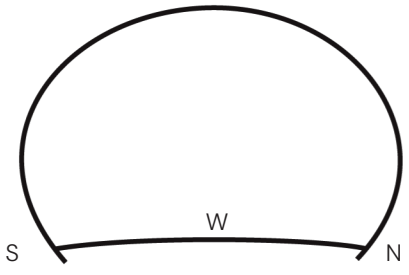
**Instructions :**

For each viewing direction, first draw arrows in the **Prediction** section to show how you think the stars will appear to move over several hours. After observing the accelerated star motion in the planetarium, draw arrows in the **Results** section to show the actual apparent motion you observed.

Prediction Looking North 	Results Looking North 
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Prediction Looking South 	Results Looking South 
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Prediction Looking East 	Results Looking East 
--	--

Prediction Looking West 	Results Looking West 
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