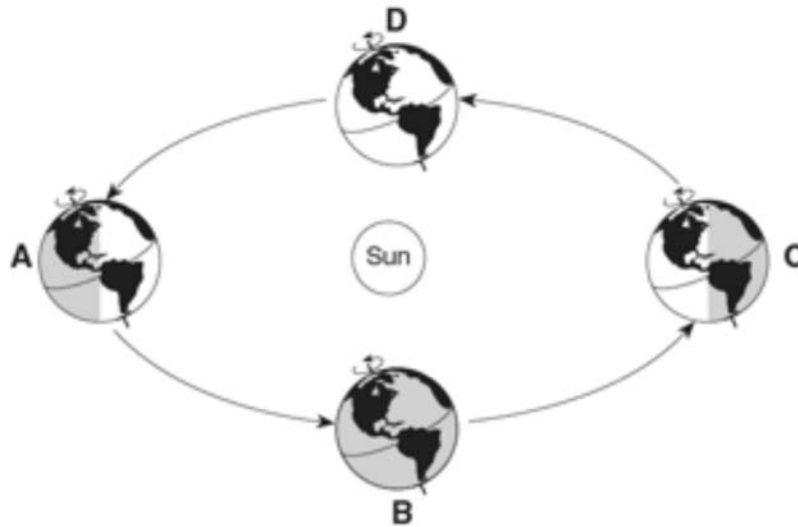
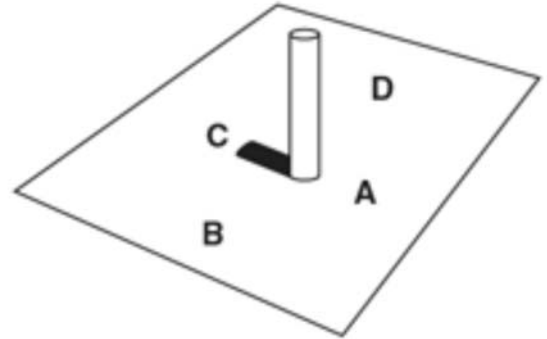
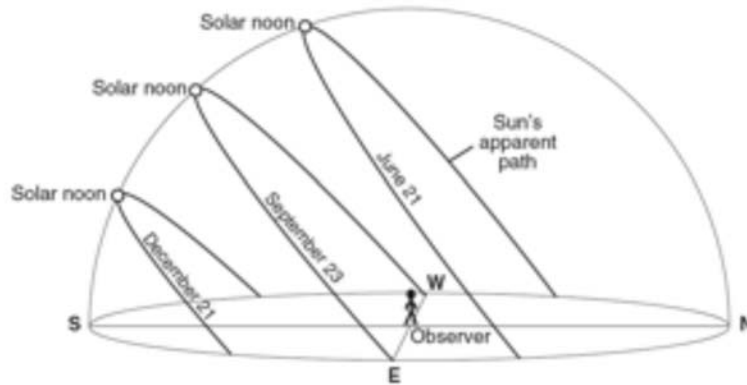


The Seasons



Description	Position	Description	Position
March 21st	B	South Pole-24 Hrs of Dark	C
June 21st	C	High Kinetic Energy	A
December 21st	A	Low Kinetic Energy	C
September 23rd	D	Earth Close to Sun	A
Northern Hemisphere Winter	A	Earth Far from Sun	C
Northern Hemisphere Spring	B	Southern Hemisphere Spring	D
North Hemisphere Summer	C	Southern Hemisphere Fall	B
Northern Hemisphere Fall	D	Southern Hemisphere Winter	C
Greatest Orbital Velocity	A	South Hemisphere Summer	A
Least Orbital Velocity	C	9 Hrs of Day in NYS	A
23 1/2 N-Zenith	C	12 Hrs of Day in NYS	D,B
0 (Equator)-Zenith	D,B	15 Hrs of Day in NYS	C
23 1/2 S-Zenith	A	Winter Solstice	A
North Pole-24 Hrs Day	C	Vernal Equinox	B
South Pole-24 Hrs Day	A	Autumnal Equinox	D
North Pole-24 Hrs Dark	A	Summer Solstice	C

Sun's Path in NYS

1. What direction does the sun rise in summer? NE
2. What direction does the sun rise in winter? SE
3. What direction does the sun rise in fall/spring? E
4. How long is the sun out in fall/spring? 12
5. How long is the sun out in winter? 9
6. How long is the sun out in summer? 15
7. What direction do you look to see the noon time sun? S
8. What direction do you look to see polaris? N
9. From sunrise to noon, what happens to the length of a shadow? SMALLER
10. From noon to sunset, what happens to the length of a shadow? LONGER
11. From sunrise to noon, what happens to the angle of insolation and intensity of insolation? INCREASES
12. From noon to sunset, what happens to the angle of insolation and intensity of insolation? DECREASES
13. What season does the sun have the greatest insolation? SUMMER
14. What season does the sun have the least insolation? WINTER
15. Does the sun ever reach the zenith in NYS? NO
16. What direction does the sun set during winter? SW
17. What direction does the sun set during fall/spring? W
18. What direction does the sun set during summer? NW
19. Does the sun physically move across the sky? NO Explain!
ROTATION
20. From season to season, how many degrees does the noon time sun shift in the sky? 23.5
21. Why is it so cold in NY during winter? TILT AWAY FROM SUN
22. Why is it so hot in NY during summer? TILT TOWARDS THE SUN
23. Why does the sun shift its position along the horizon with the changing seasons?
EARTH REVOLUTION
24. On the shadow diagram, what letter represents South? A