

Sunfish Science  
Investigation 5 study guide

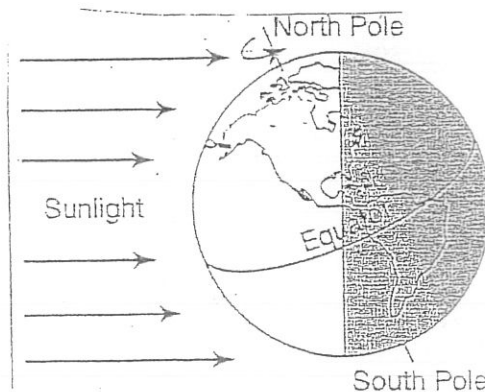
Name Key  
Page 22

- A. **Vocabulary** - you will need to know all the vocabulary terms on the chart on page 1. (copy attached)
- B. **Diagram** - you will need to be able to complete the seasons chart, page ~~21~~ <sup>22</sup> in your binder. (copy attached)
- C. **Content Questions:**

1. What happens when particles in a material **absorb solar energy**? (think about their motion)

They move faster and spread apart because they absorb solar energy.

Use the diagram to answer questions 2 -6



2. Which **season** is occurring in the Northern Hemisphere?

Summer

3. How many **hours of daylight** is the North Pole receiving?

24 hours

4. How many **hours of daylight** is the South Pole receiving?

0 hours

5. How many **hours of daylight** is the equator receiving?

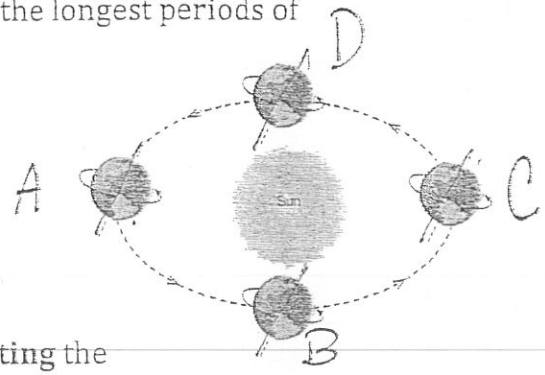
12 hours

6. **Explain** how hours of daylight affects the weather/climate?

Longer hours of daylight allow more solar energy to be absorbed by surfaces of Earth.

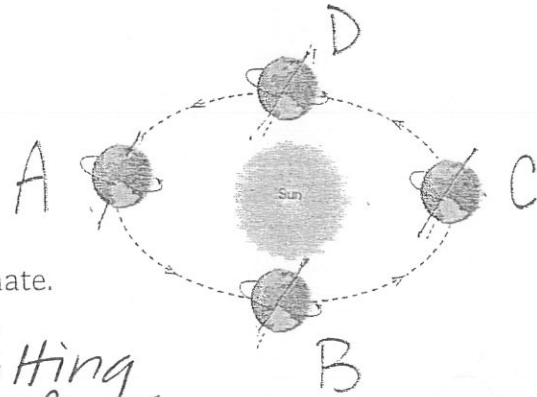
7. People living in the **Northern Hemisphere** have the longest periods of daylight at position \_\_\_\_\_ (A, B, C or D).

A



8. At position D, the Sun's most direct rays are hitting the \_\_\_\_\_.

Equator



9. Explain why solar angle affects weather and climate.

*Higher solar angle equals more direct rays equals more heat hitting Earth's surfaces.*

10. Explain how locations that are located higher usually have colder weather.

*The temperature decreases as altitude increases.*

11. What is one feature of landscape that absorbs a lot of solar energy?

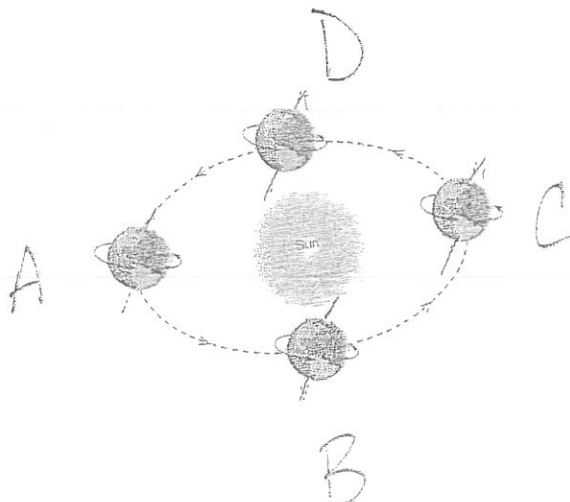
*~~water~~, soil, sand, pavement*

12. What is one feature of landscape that reflects a lot of solar energy?

*ice, snow*

13. The Northern Hemisphere is having summer at position (A, B, C or D)?

A



14. Use the words below to complete the paragraph.

climate      curvature      horizon      landscape

Many factors affect the climate of a region. Because of the curvature of Earth's surface, the sun sits low on the horizon at the North and South Poles. In addition, features of the polar landscape such as snow and ice, reflect the sun's energy, which further decreases temperatures at the poles.

15. Explain the difference between weather and climate.

Weather is the condition of Earth's atmosphere at a given time at a given place.  
Climate is the average condition of Earth's atmosphere over a long period of time.

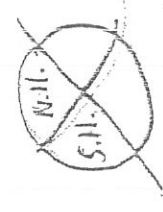
16. Which material will heat up faster? Sand or water?

Sand

17. List at least 5 factors that cause the very cold and harsh weather conditions at the poles.

- low solar angle
- snow/ice
- dry climate, no clouds
- windy
- high elevation (@ South Pole)
- 6 months of darkness

N.H. = Northern Hemisphere  
S.H. = Southern Hemisphere

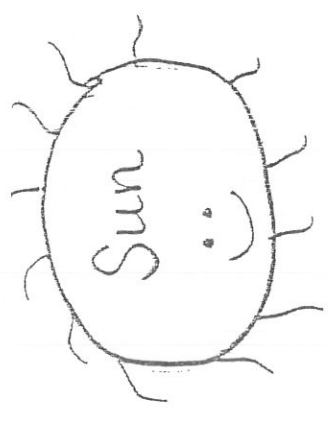


Season:  
N.H. winter  
S.H. summer

Northern Star

pg. 1

date March 20-21  
event spring equinox (in N.H.)



Season:  
N.H. summer  
S.H. winter

date June 20-21  
event summer solstice (in N.H.)

Season:  
N.H. winter  
S.H. summer

date Dec. 21  
event winter solstice (in N.H.)



Season:  
N.H. summer  
S.H. winter

date Sept 21  
event fall equinox (in N.H.)