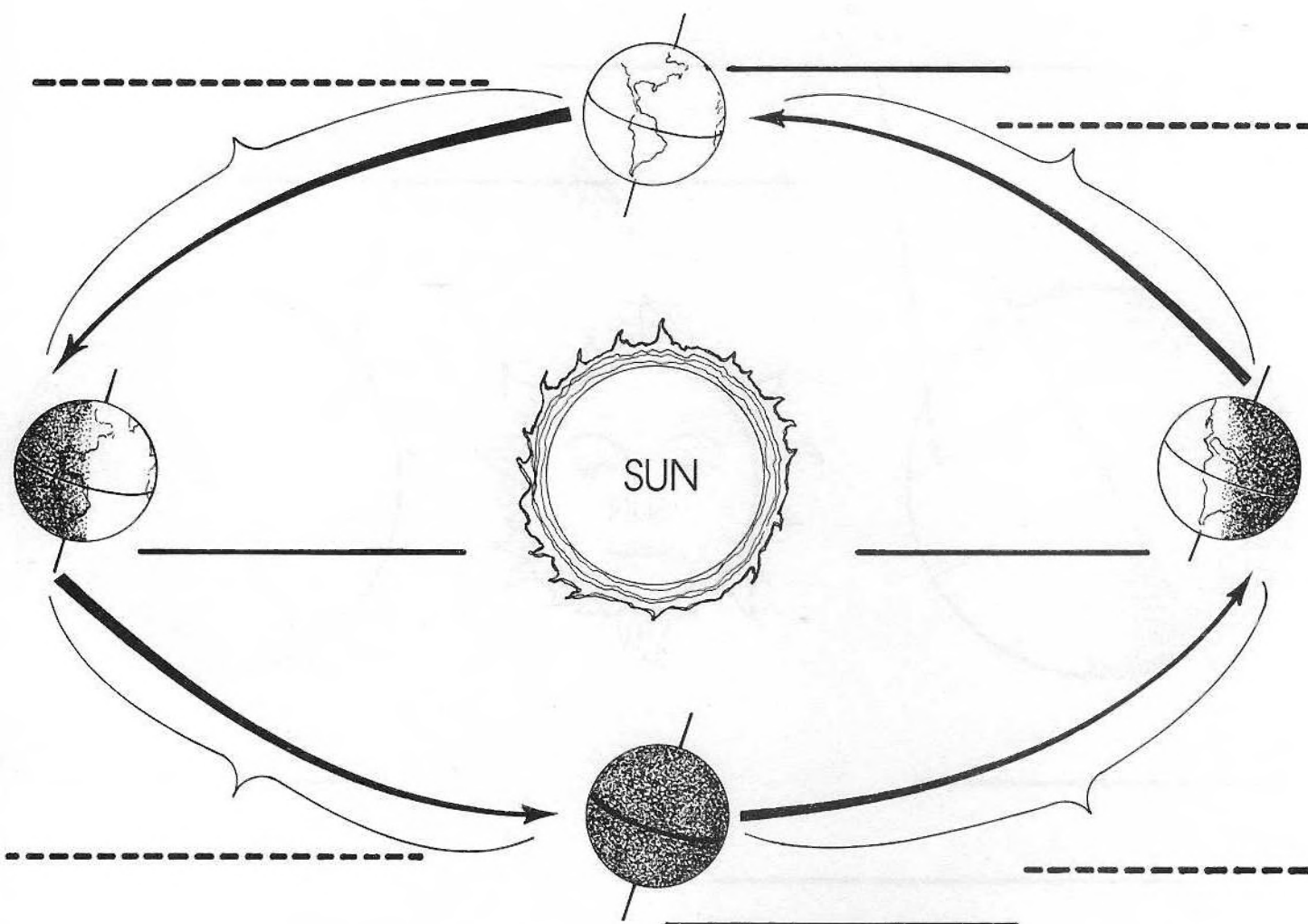


# The Seasons

Name \_\_\_\_\_

The diagram below shows the Earth's position in its orbit on four different dates. On the solid line label the equinox dates. On the dotted lines name the season for the Northern Hemisphere.



## WORD BANK

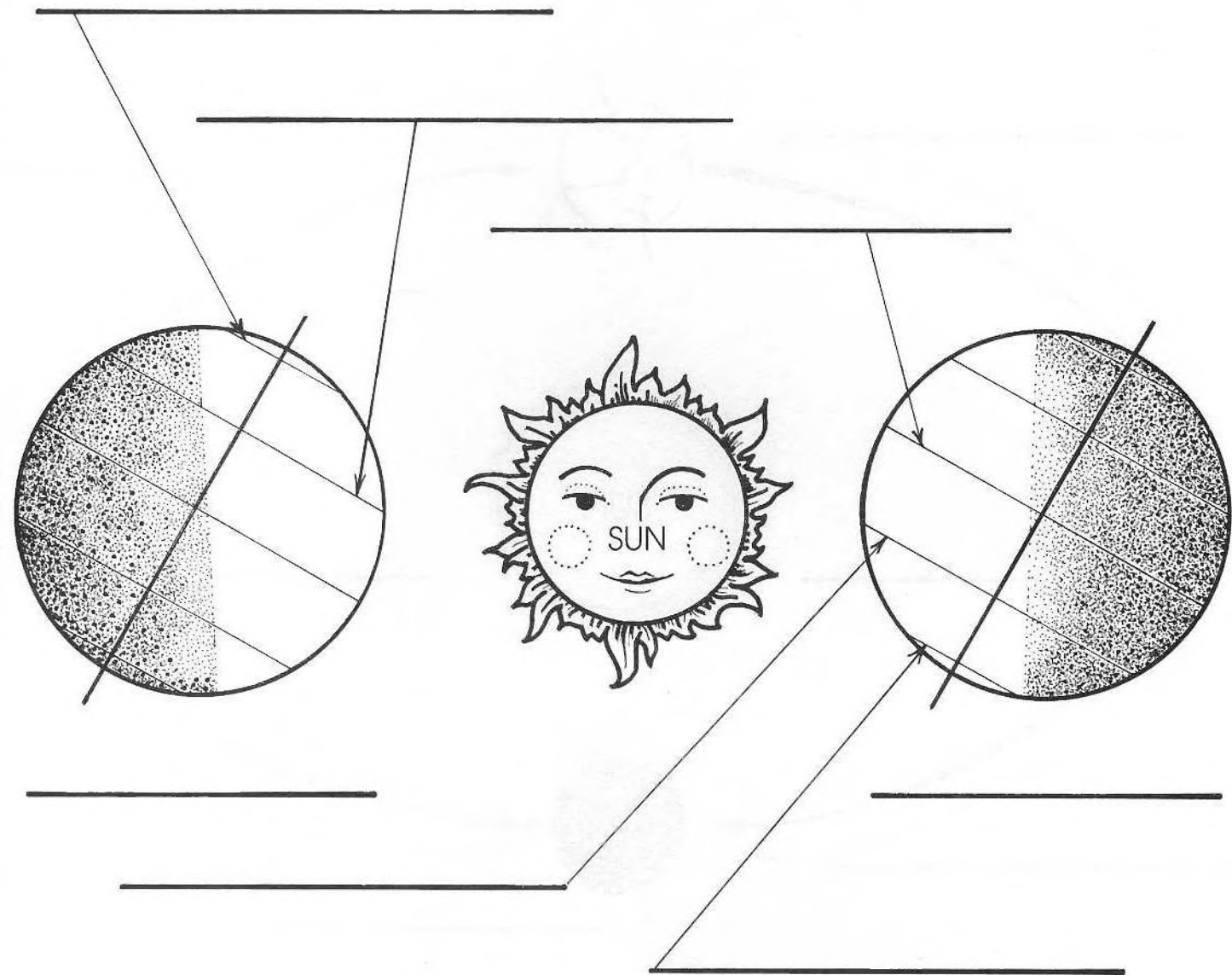
March 21  
September 22

December 22  
June 21

spring  
winter

fall  
summer

The illustration below shows the Earth's position in relation to the Sun for the summer and winter in the Northern Hemisphere. Label the seasons for the Northern Hemisphere, and name the imaginary lines of latitude on the Earth.



## WORD BANK

summer

Arctic Circle

Tropic of Capricorn

Equator

winter

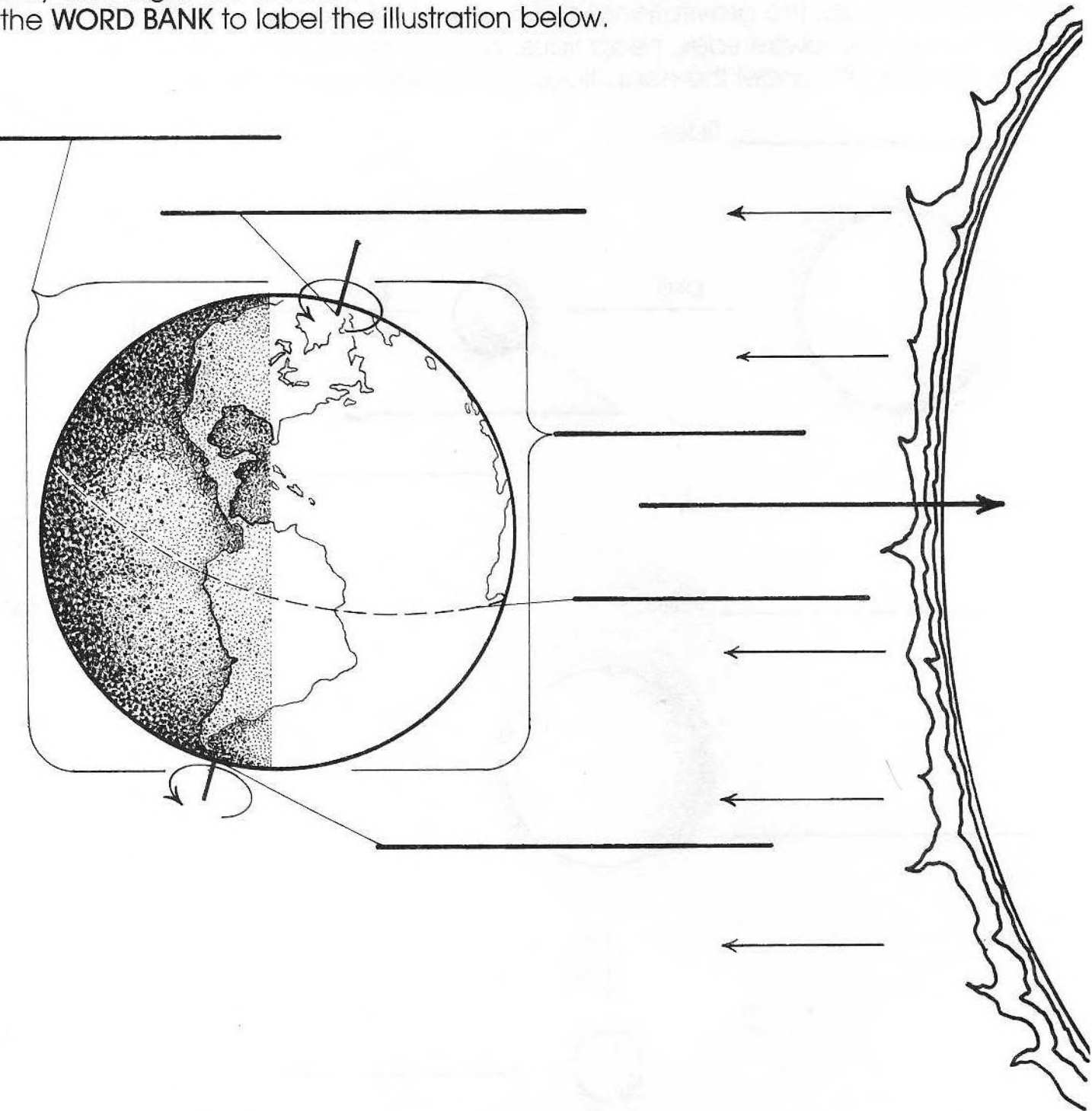
Antarctic Circle

Tropic of Cancer

Day and Night

Name \_\_\_\_\_

Day and night are the result of the Earth's rotation on its axis. Use the words from the **WORD BANK** to label the illustration below.



**WORD BANK**

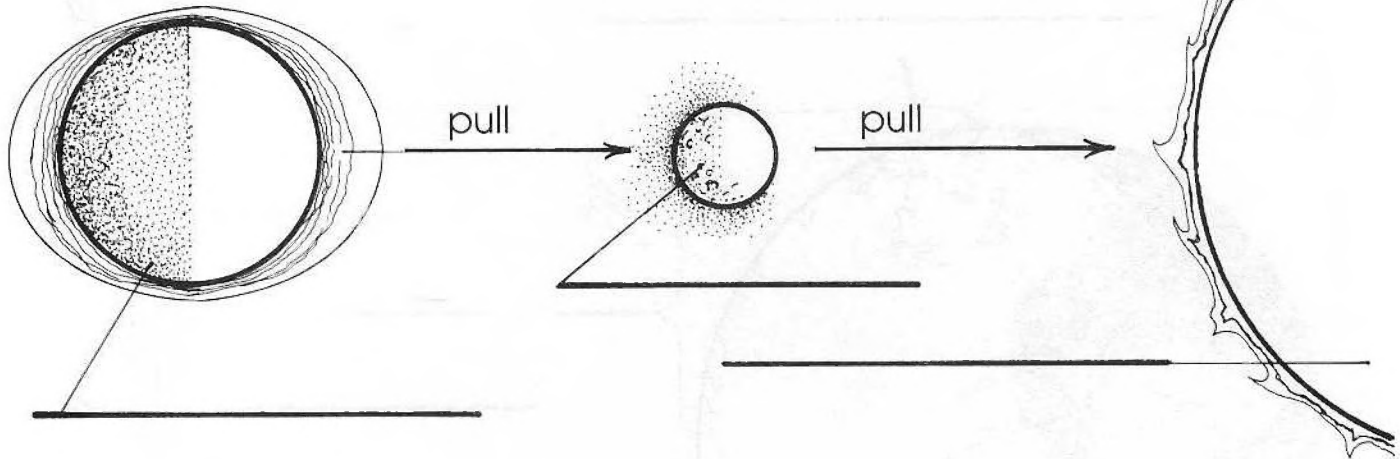
- |            |            |
|------------|------------|
| North Pole | South Pole |
| day        | sun        |
| Equator    | night      |

# High Tide

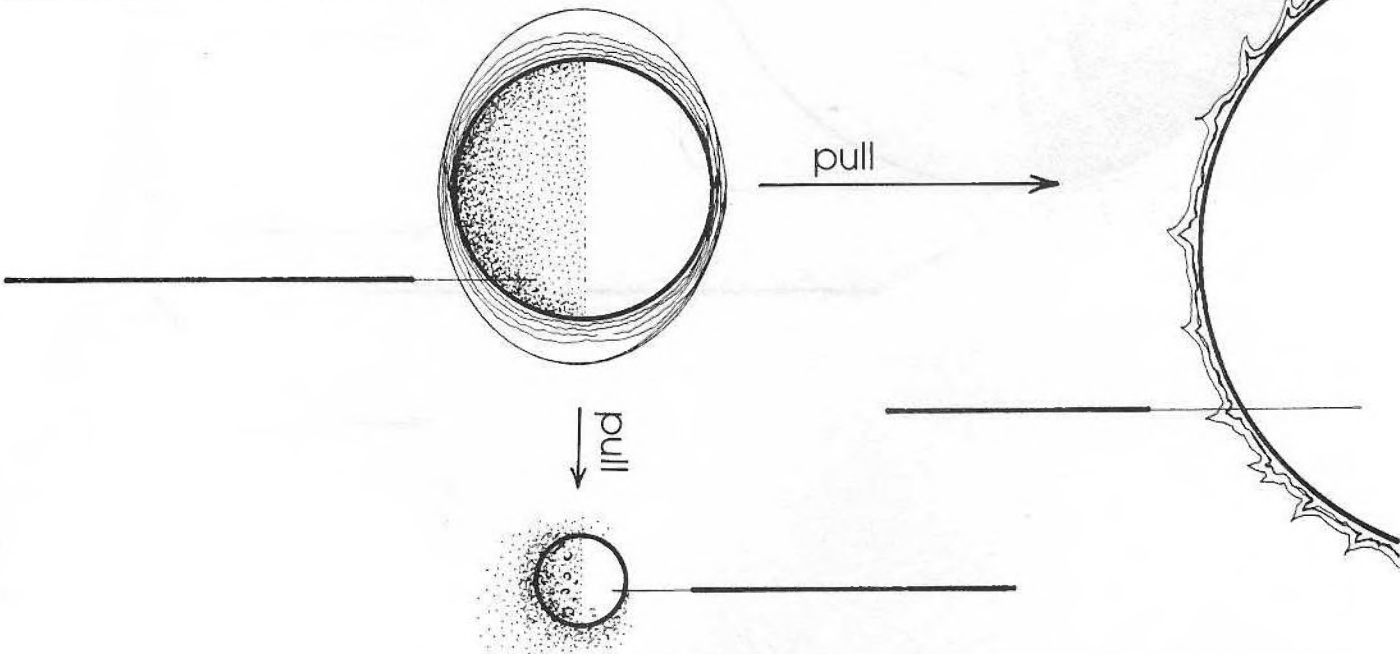
Name \_\_\_\_\_

The ocean tides are caused mostly by the moon's gravity. When the Sun, moon and Earth line up, the gravitational pull is greatest causing the highest tides, the spring tides. The lowest tides, neap tides, occur when the sun, Earth and moon form right angles. Label the neap tides, spring tides, sun, Earth and moon.

\_\_\_\_\_ tides



\_\_\_\_\_ tides



## WORD BANK

neap tides  
moon

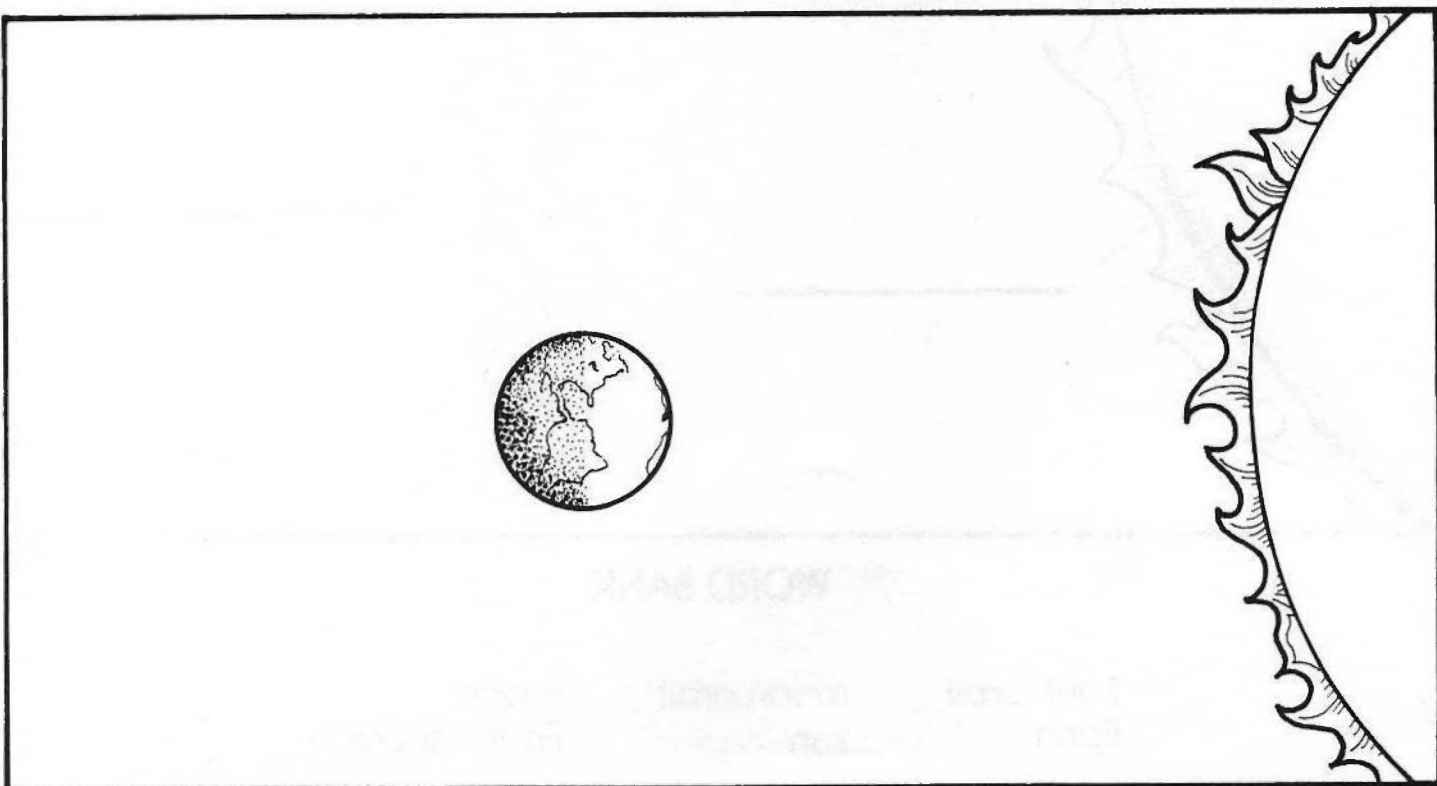
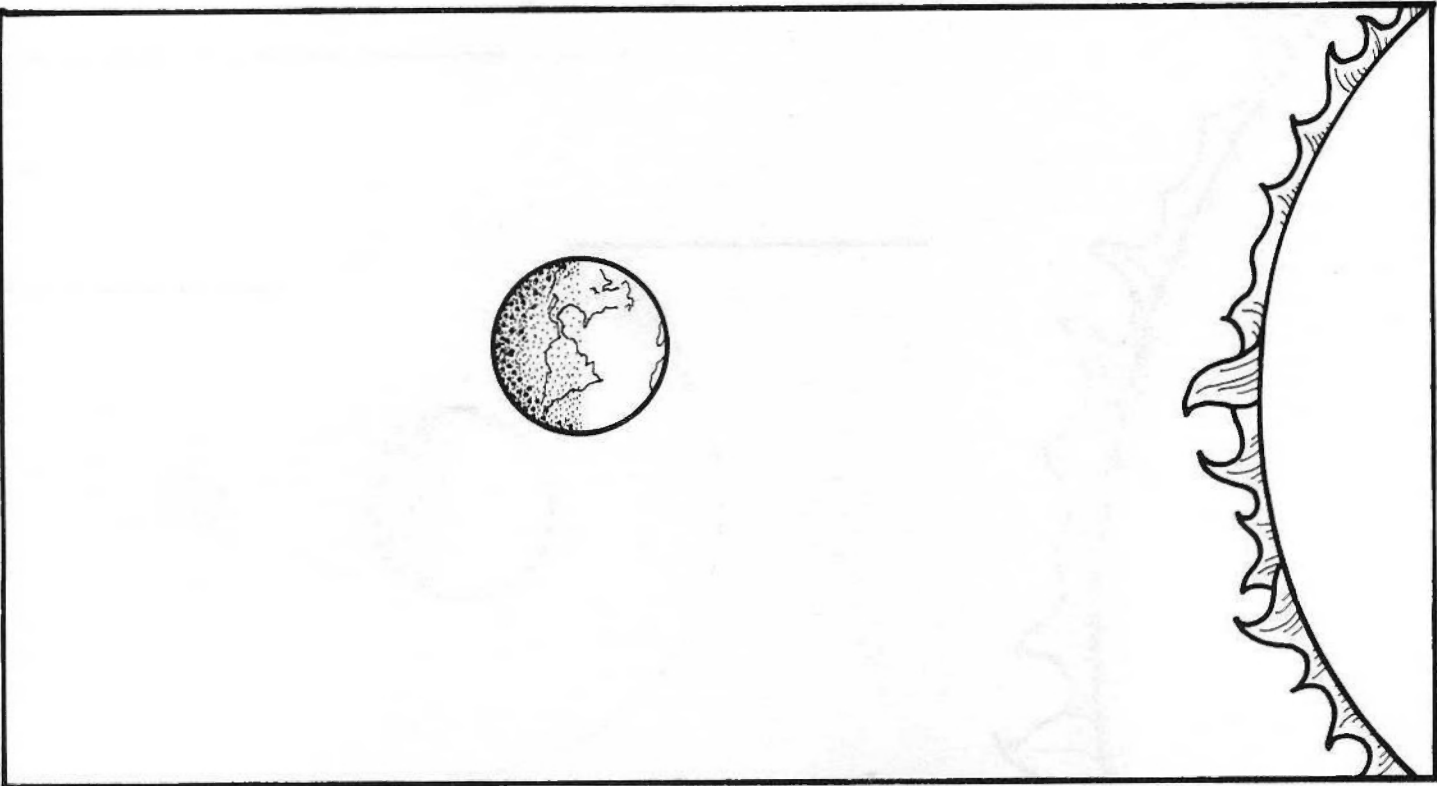
spring tides  
Earth

sun

Space Shadows

Name \_\_\_\_\_

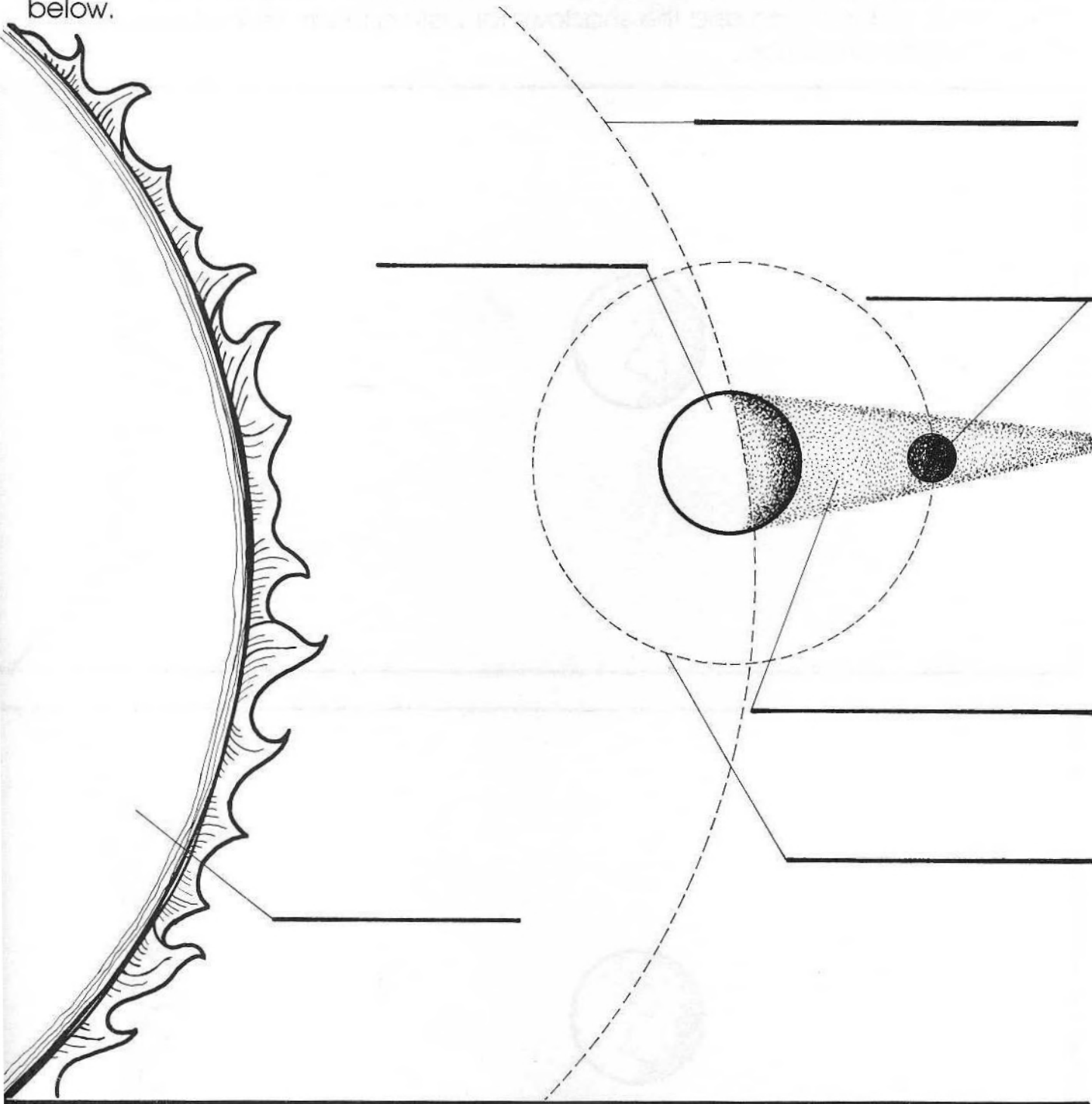
When the sun, moon and Earth are in the proper alignment, either the moon can cast a shadow on the Earth, or the Earth can cast a shadow on the moon. Draw the position of the moon and the shadows for both a lunar and solar eclipse. Label the type of eclipse.



# Earth Shadow

Name \_\_\_\_\_

When the sun, Earth and moon are in direct line, the moon moves into the Earth's shadow causing a lunar eclipse. Label the orbits and bodies in the illustration below.



## WORD BANK

Earth orbit  
Earth

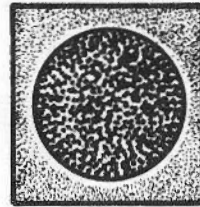
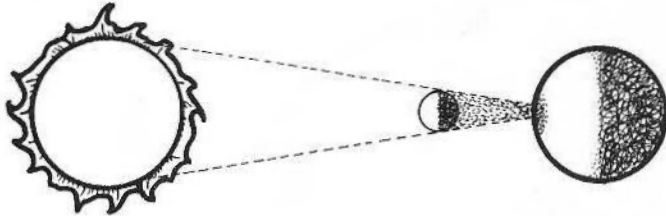
moon orbit  
sun

moon  
Earth's shadow

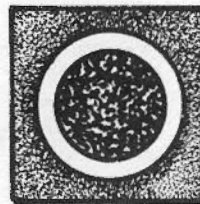
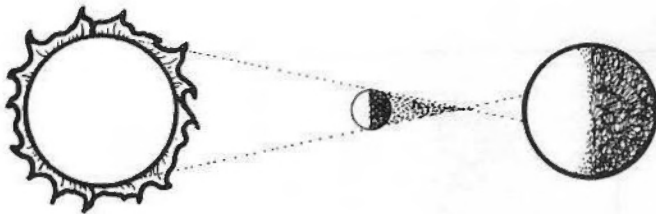
# Moon Shadows

Name \_\_\_\_\_

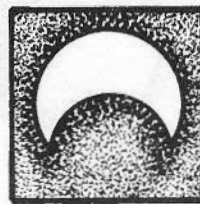
When the new moon is directly between the Earth and the sun, an eclipse of the sun occurs. The type of solar eclipse that occurs depends on how much sunlight the moon blocks from the view on Earth. Label the three kinds of solar eclipse. Label the moon, sun and Earth.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

## WORD BANK

total eclipse  
sun

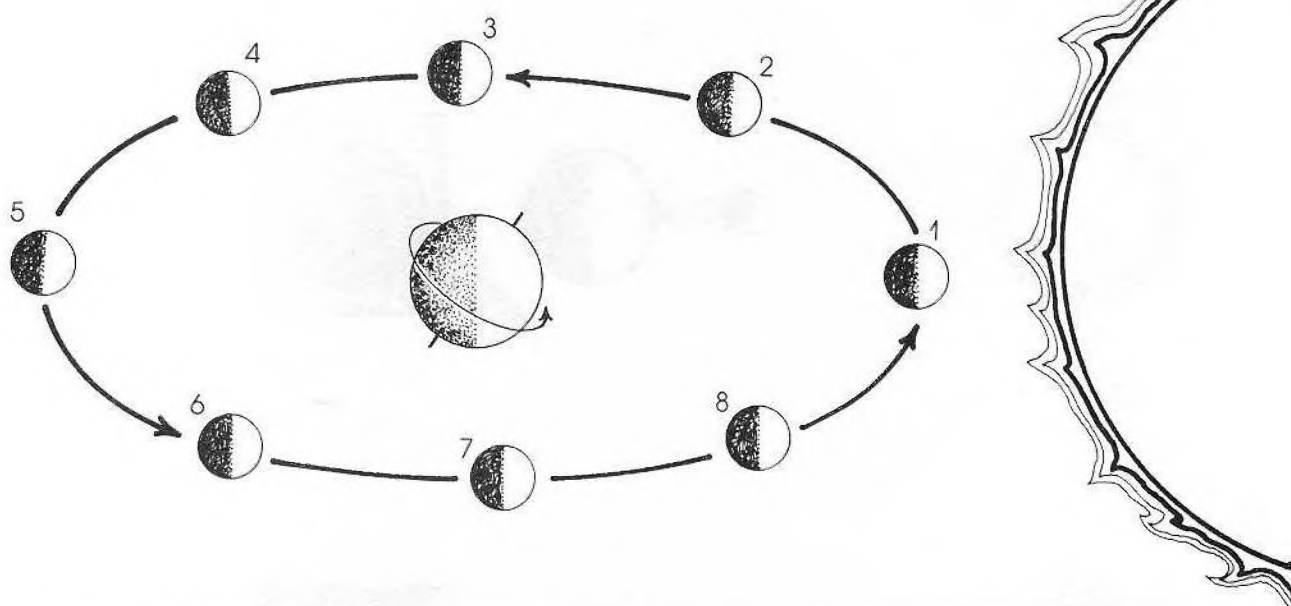
annular eclipse  
moon

partial eclipse  
Earth

Changing Faces

Name \_\_\_\_\_

As the moon revolves around the Earth, we can see different amounts of the moon's lighted part. Study the drawing of the moon's different phases and each phase as it would be seen from the Earth. Label each phase.



|                |                |                |                |
|----------------|----------------|----------------|----------------|
| 1<br><br>_____ | 2<br><br>_____ | 3<br><br>_____ | 4<br><br>_____ |
| 5<br><br>_____ | 6<br><br>_____ | 7<br><br>_____ | 8<br><br>_____ |

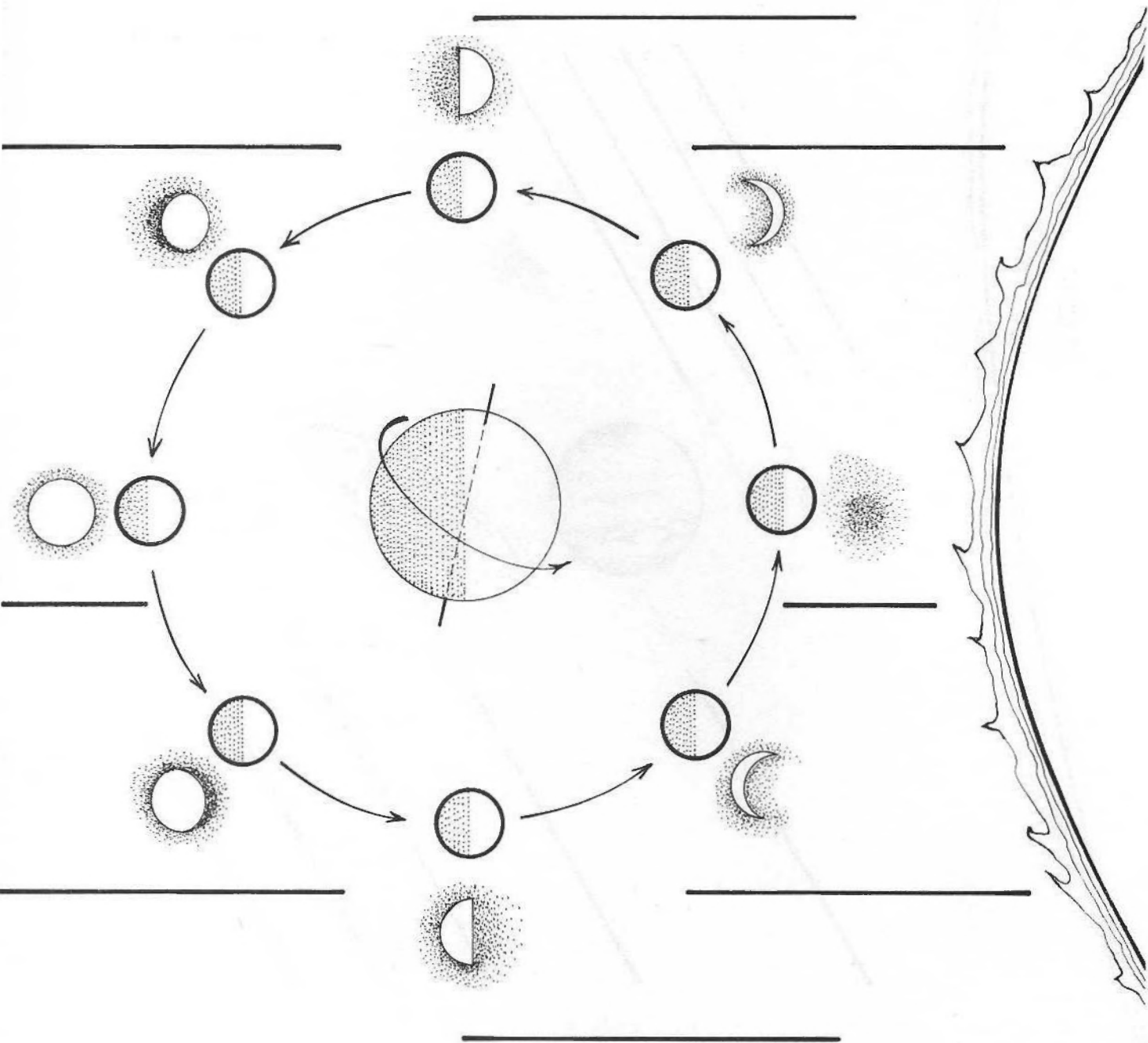
WORD BANK

- new moon  
waxing gibbous  
last quarter
- waxing crescent  
full moon  
waning crescent
- first quarter  
waning gibbous

# Waning and Waxing Moon

Name \_\_\_\_\_

Use the **WORD BANK** to label the different phases of the moon.



## WORD BANK

new  
waxing gibbous  
last quarter

waxing crescent  
full  
waning crescent

first quarter  
waning gibbous

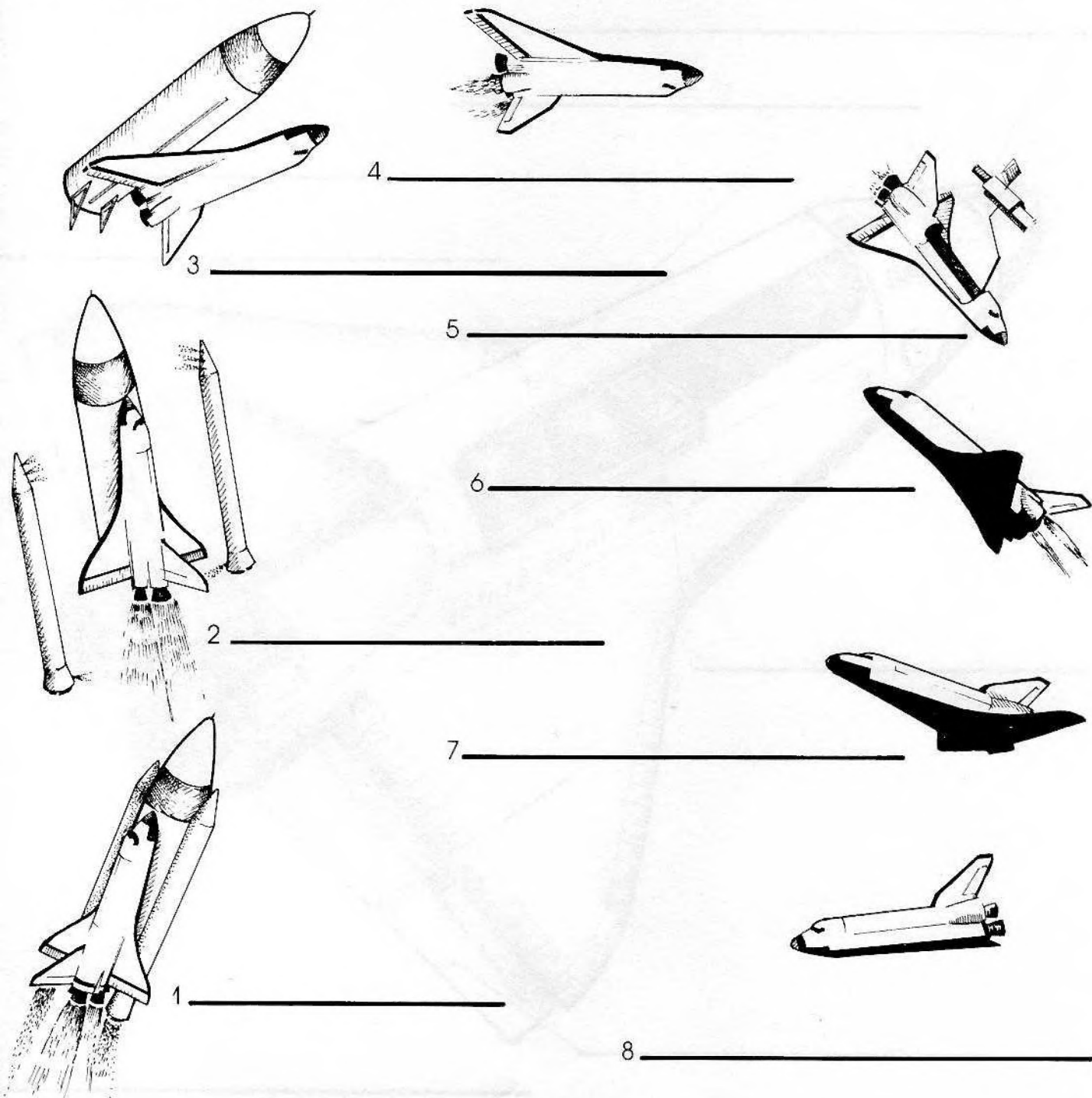
Name \_\_\_\_\_

|                                   |              |                        |
|-----------------------------------|--------------|------------------------|
| payload bay                       | main engines | rudder and speed brake |
| cockpit                           | elevon       | reaction control jets  |
| orbital maneuvering system engine |              |                        |

# The Flight of the Space Shuttle

Name \_\_\_\_\_

Label the different phases of the Space Shuttle's mission.

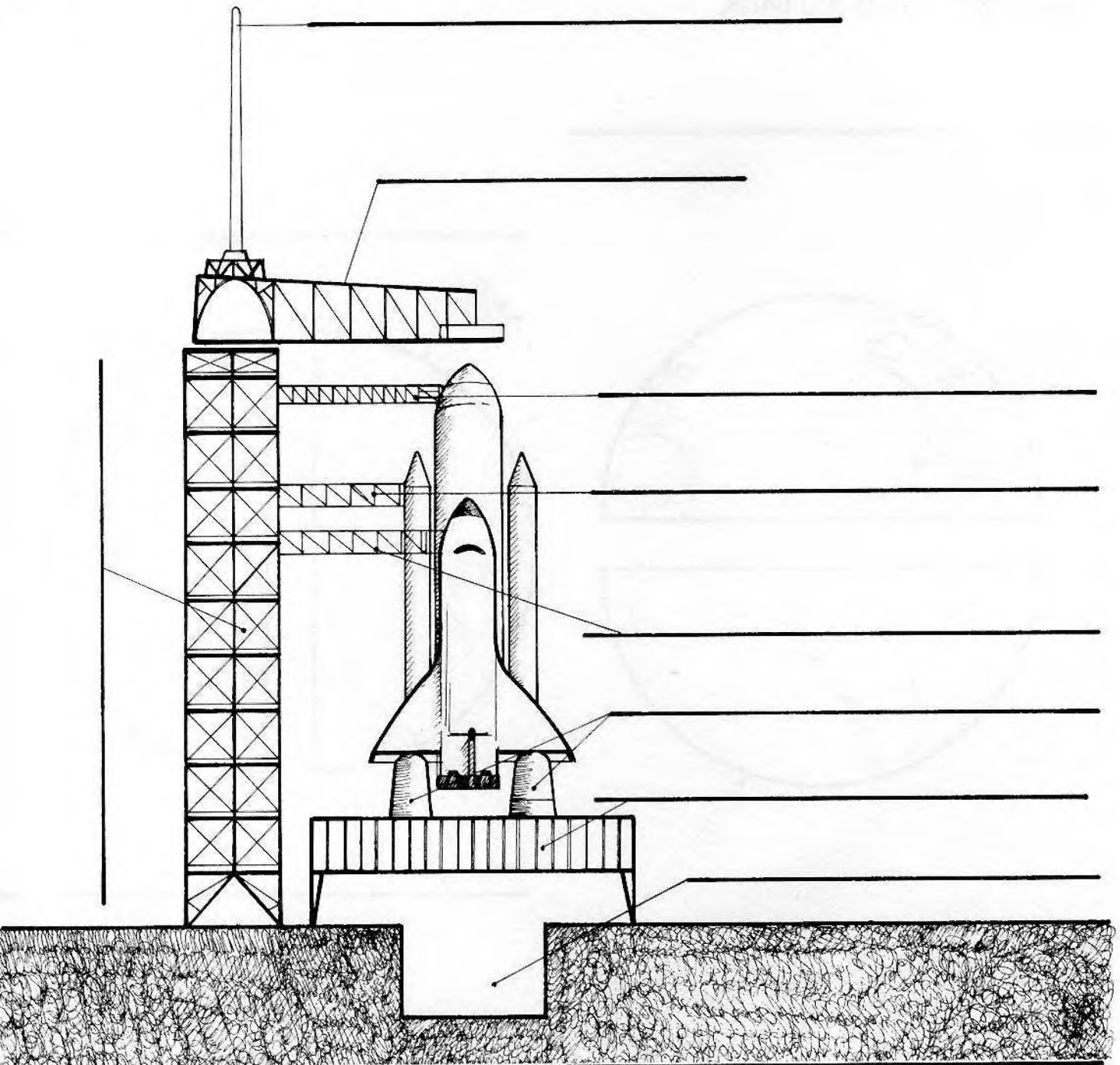


## WORD BANK

orbital activities  
reentry  
deorbit  
orbit insertion

landing  
solid rocket booster separation  
ascent  
external tank separation

Label the parts of the Space Shuttle's launch site using the words from the **WORD BANK**.



## WORD BANK

lightning mast  
service structure  
tail service masts

crane  
orbiter access arm  
launching pad platform

flame platform  
hydrogen venting arm  
oxygen venting arm