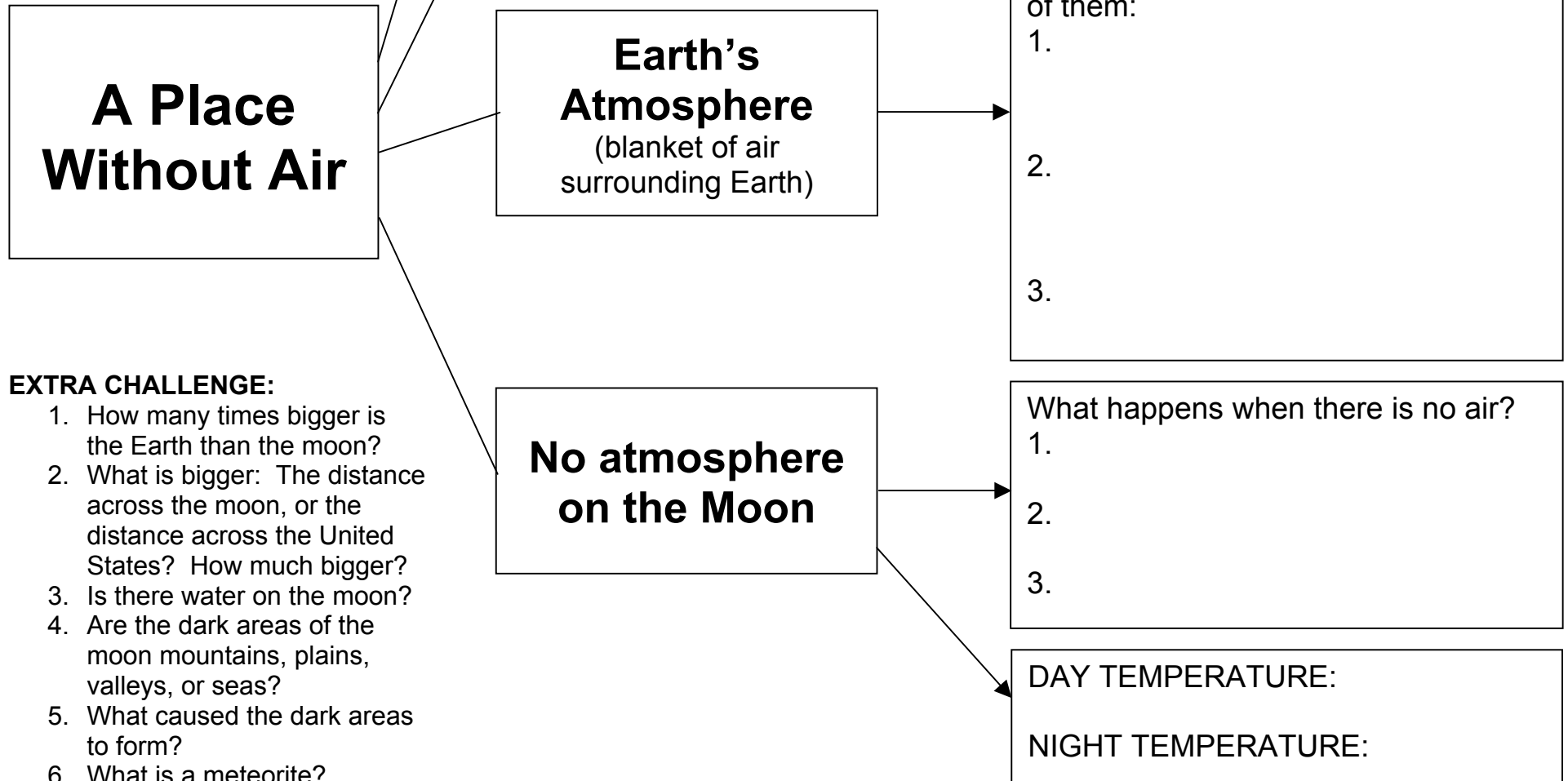


# The Moon

Read pages B10 – B13 in Science book, and use this graphic organizer to take notes.



## EXTRA CHALLENGE:

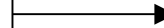
1. How many times bigger is the Earth than the moon?
2. What is bigger: The distance across the moon, or the distance across the United States? How much bigger?
3. Is there water on the moon?
4. Are the dark areas of the moon mountains, plains, valleys, or seas?
5. What caused the dark areas to form?
6. What is a meteorite?

# Learning About Space

Read pages B14 – B17 in Science book, and use this graphic organizer to take notes.

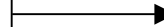
## Learning About Space

**Astronomer**



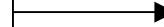
**Definition**

**Astro**  
(prefix)

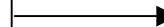


LOOK IN DICTIONARY:  
  
What is another word that starts with ASTRO? \_\_\_\_\_

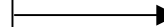
**Telescope**



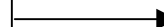
**Space Probe**



**Lunar**  
(Luna = moon in Latin)



**Solar**  
(Sol = sun in Latin)



LOOK ON PAGE 29:

### EXTRA CHALLENGE:

1. How does a telescope work?
2. Where is the Hubble Space Telescope? Give an example of how powerful it is.
3. Look on page 194 of your Social Studies book and read about **satellites**. What is a satellite?
4. Give 2 examples of what a Space Probe can do.
5. What is the problem with studying the sun? What is the solution?

# On the Moon

Read pages B21 – B23 in Science book, and use this graphic organizer to take notes.

## Spacesuits and Getting Around on the Moon

### EXTRA CHALLENGE:

1. Why does a spacesuit weigh more on Earth than it does on the Moon? How many spacesuits would it take on the moon to weigh the same as one spacesuit on Earth?
2. Can a person jump higher on the Moon or on Earth? How much higher? Why?
3. Why is Earth's gravity stronger than the Moon's gravity?
4. How many years ago did the first people walk on the moon?

**Astronaut**

**Spacesuit**

**Gravity**

**Mass**

**Neil Armstrong & Buzz Aldrin**

## Definition

How does a spacesuit help the astronaut?

DEFINITION:

EXAMPLE:

# The Sun

Read pages B27 – B28 in Science book, and use this graphic organizer to take notes.

**Sun Power**

**The Sun**

What is it?

**Star**

DEFINITION:

**Plants**

What does the Sun help plants to do?

**We depend on the Sun for 3 things.**

1.

2.

3.

## EXTRA CHALLENGE:

1. How long does it take light to travel from the sun to our eyes?
2. How many Earths could fit inside the Sun?
3. If the Sun is not the largest star, why does it look like it is the biggest to us?
4. What are two forms of energy given off by the Sun?
5. How much hotter is the Sun's temperature than the temperature outside today?
6. Why do we depend on the Sun for our food?

## Length of Day

Read pages B38 – B41 in Science book, and use this graphic organizer to take notes.

# The Rotating Earth

**Rotation**

**to rotate**

**Axis**

**One rotation  
around Earth's  
axis**

**Polaris**

**Sundial**

## Definition

LOOK IN GLOSSARY (PAGE H28):

LOOK IN GLOSSARY (PAGE H17):

### EXTRA CHALLENGE:

1. Why does it look like the sun rises in the East and sets in the West?
2. Sailors and campers have followed the stars when they didn't have a map. How can the stars help them with directions?
3. How does a sundial work?
4. What would happen if the Earth did not rotate around its axis?

# Length of Year

Read pages in B46 – B47 in Science book, and use this graphic organizer to take notes.

## Earth Moves Around the Sun

**Revolves**

**Definition**  
LOOK IN GLOSSARY (PAGE H28):

**Orbit**

LOOK IN GLOSSARY (PAGE H26):

**One revolution of the Earth around the Sun**

**Constellation**

**Planet**

**Solar System**

### EXTRA CHALLENGE:

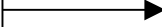
1. If one year = one revolution around the sun, which planet has the longest year? Which planet has the shortest year?
2. Why does it take Venus less time to get around the sun than it takes Neptune?
3. How many rotations does the Earth make around its axis in the time it takes to make one revolution around the Sun?

## Looking Back at Astronomy

Read pages B48 – B49 in Science book, and use this graphic organizer to take notes.

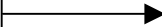
**Earth and Sun:  
Ideas  
Through  
Time**

**3000 B.C.**



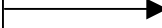
What did the Scientists believe?

**A.D. 145**



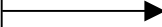
What did the Scientists believe?

**A.D. 497**



What did the Scientists believe?

**A.D. 1543**



What did the Scientists believe?

# View of the Moon

Read pages B52 – B56 in Science book, and use this graphic organizer to take notes.

## Your Changing View of the Moon

Length of time for Moon to Rotate once around its axis.

Length of time for Moon to Revolve once around the Earth

Phases

Full Moon

\_\_\_\_\_ Moon

Tides

# Definition

When the side of the moon facing the Earth receives no sunlight at all, it is impossible to see the moon.

DEFINITION:

WHAT CAUSES THE TIDES?

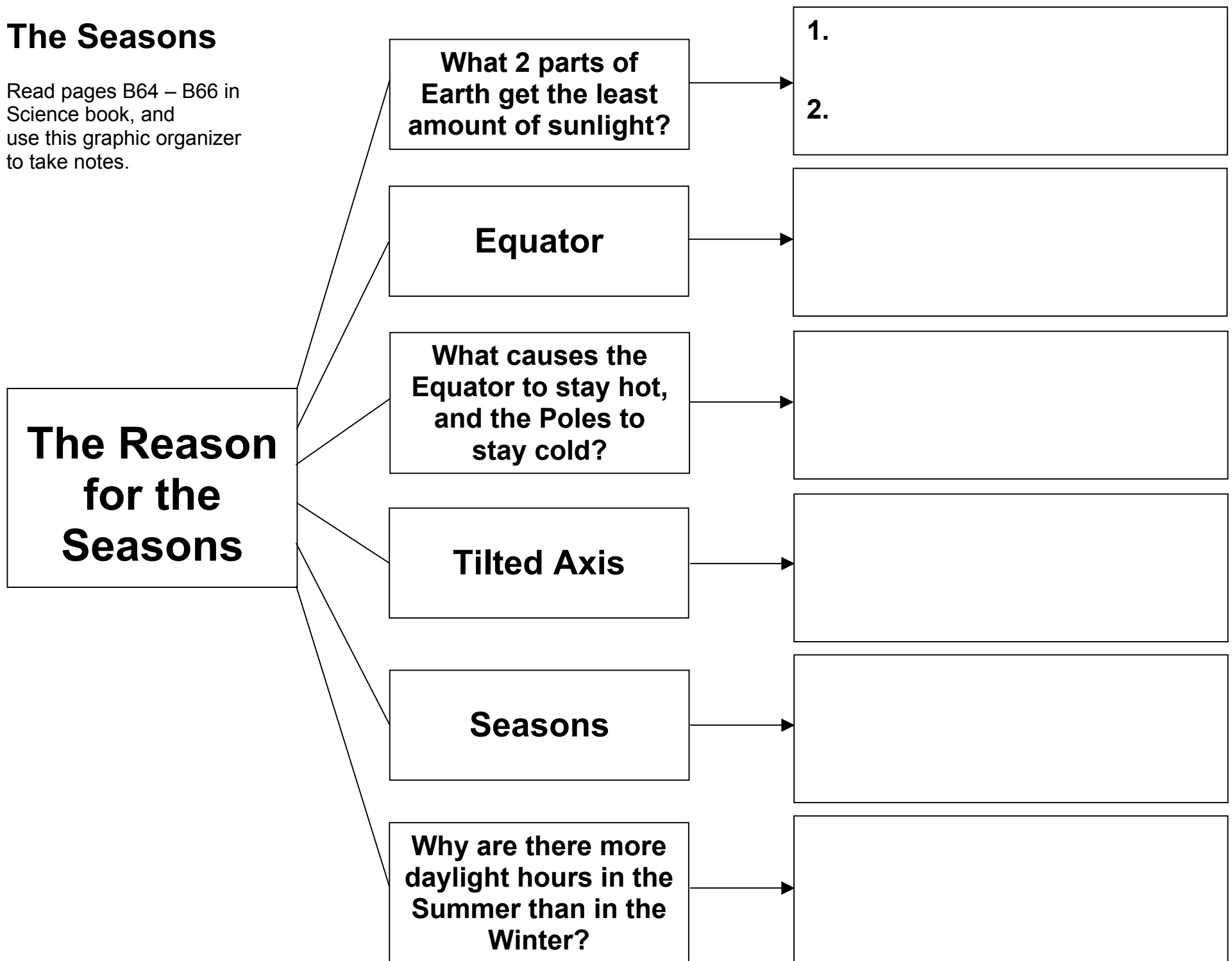
### EXTENDED CHALLENGE:

1. Why does the same side of the Moon always face the Earth?
2. Can people “dance by the light of the moon”? Explain.
3. How did the nursery rhyme about Jack and Jill get started?
4. Where did the words **lunacy** and **loony** come from? What do they mean? Why do these words sound a little like “luna”?
5. How does the location of the moon help us to know where on Earth is having **high tide**?
6. How many high tides and low tides does one place have each day? Why do you think this is?



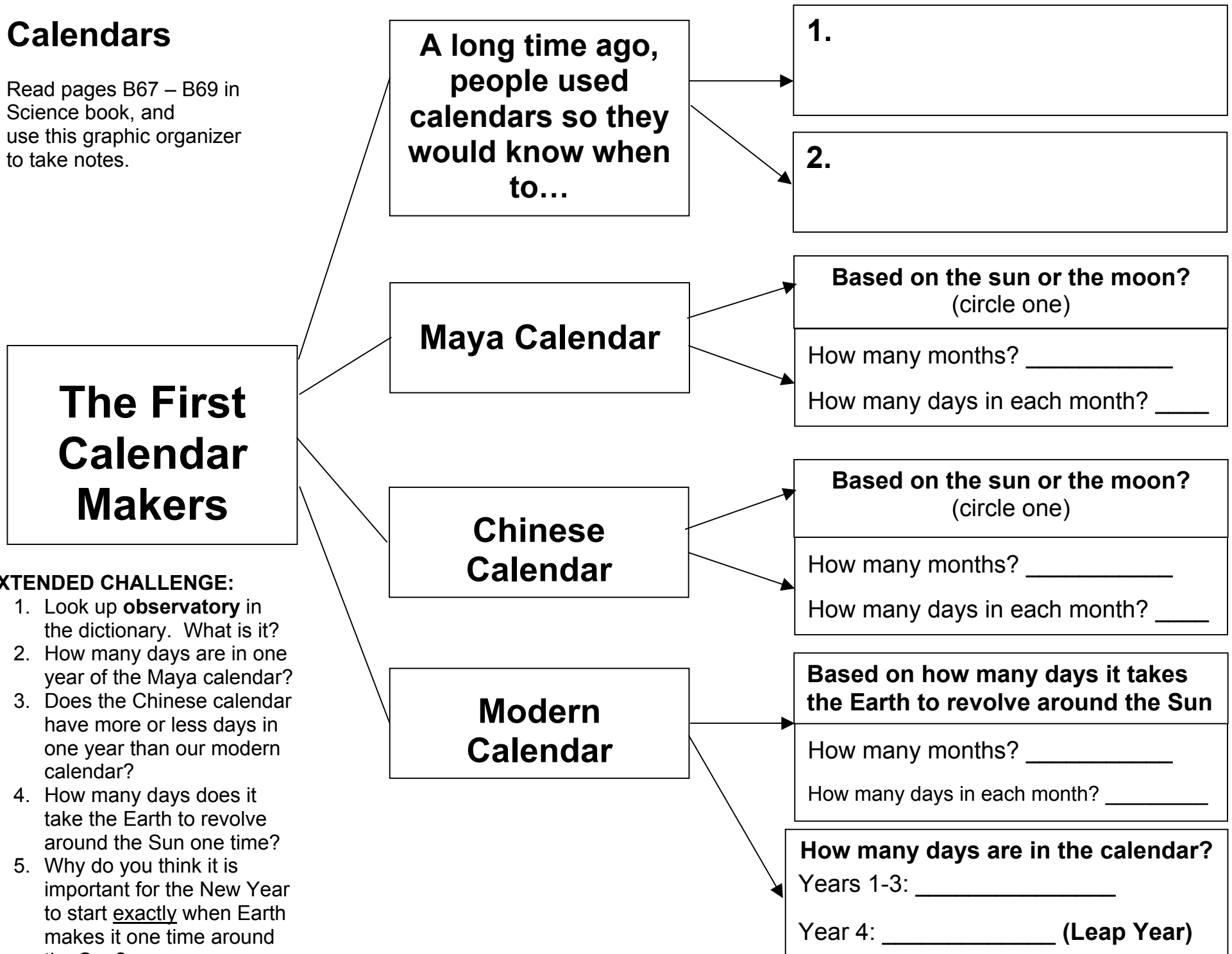
# The Seasons

Read pages B64 – B66 in Science book, and use this graphic organizer to take notes.



# Calendars

Read pages B67 – B69 in Science book, and use this graphic organizer to take notes.

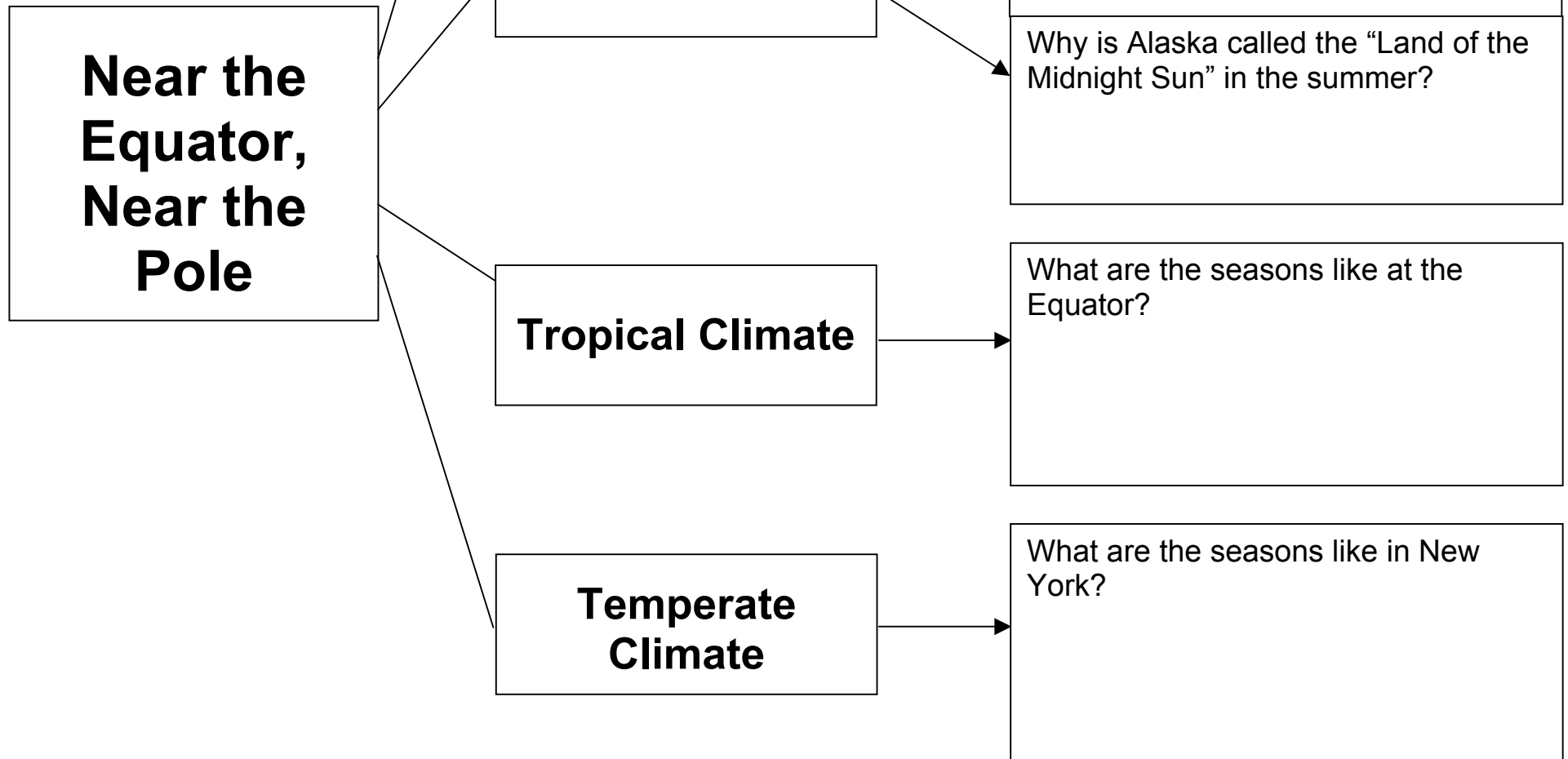


## EXTENDED CHALLENGE:

1. Look up **observatory** in the dictionary. What is it?
2. How many days are in one year of the Maya calendar?
3. Does the Chinese calendar have more or less days in one year than our modern calendar?
4. How many days does it take the Earth to revolve around the Sun one time?
5. Why do you think it is important for the New Year to start exactly when Earth makes it one time around the Sun?

# Climate: Poles vs. Equator

Read pages B70 – B71 in Science book, and use this graphic organizer to take notes.



# Eclipses

Read pages B74 – B76 in Science book, and use this graphic organizer to take notes.

**How an Eclipse Occurs**

A total \_\_\_\_\_ of the Sun

The sun “disappears” and a bright sunny day turns into darkness.

How some Asian cultures explained what happened to the Sun during an eclipse

How the Vikings explained why the moon turned red during an eclipse of the moon

**Solar Eclipse**  
(how scientists today explain it)

**Lunar Eclipse**  
(how scientists today explain it)