1. Answer the following questions:
   What is the earth’s nearest celestial neighbor? _____________________
   What is its distance from the earth? ______________________________
   What governs the tides? ________________________________
   What causes an eclipse? ________________________________
   What is a shooting star? ________________________________

2. Make a diagram showing relative positions and movements of the earth, sun, and moon. Show positions and area events for eclipses of the sun and moon. One may demonstrate by using an orange, walnut, and marble, or similar objects, to show positions and movements of the earth, sun, and moon when there is an eclipse of the sun and when there is an eclipse of the moon.

3. Make a diagram of our solar system

Name the planets in order from the sun.
1. ____________________  6. ____________________
2. ____________________  7. ____________________
3. ____________________  8. ____________________
4. ____________________  9. ____________________
5. ____________________
4. How fast does light travel? ________________________________
   How far does light travel in a year? _______________________

5. What is the difference between planets and fixed stars?
   _______________________________________________________
   Identify in the sky eight fixed stars.
   1. _______________________  5. _______________________
   2. _______________________  6. _______________________
   3. _______________________  7. _______________________
   4. _______________________  8. _______________________

6. What is a constellation? ________________________________
   _______________________________________________________
   Name and point out six.
   1. _______________________  4. _______________________
   2. _______________________  5. _______________________
   3. _______________________  6. _______________________
   Name two constellations visible throughout the year.
   1. _______________________  2. _______________________

7. For the Northern Hemisphere: draw a chart of the Big Dipper,
   Cassiopeia, and the North Star. For the Southern Hemisphere: draw a
   chart of the Southern Cross, Orion and Scorpio.

8. What is the Milky Way? Observe the Milky Way in the night sky.
   _______________________________________________________

9. What is the morning star and evening star?
   Morning star ________________________________
   Evening star ________________________________
   Why does it carry both names? ________________________________
   Observe the morning and evening star in the sky.

10. Explain zenith and nadir.
   Zenith ________________________________
   Nadir ________________________________
11. What is the aurora borealis? ________________________________
______________________________
______________________________

What causes it? ________________________________
______________________________
______________________________

12. Discuss the statement made by Ellen G. White in Early Writings, page 41, concerning the opening in Orion.

________________________________________
________________________________________
________________________________________
________________________________________
________________________________________
________________________________________
________________________________________
________________________________________
Stars, Advanced

1. Have the Star Honor.

2. How can you account for the apparent daily motion of the stars?

3. What are each of the following:
   - Planet _____________________________________________________
   - Meteor ____________________________________________________
   - Constellation _______________________________________________
   - Satellite ___________________________________________________
   - Meteorite __________________________________________________
   - Fixed star __________________________________________________
   - Comet _____________________________________________________
   - Nebula _____________________________________________________
   - Sunspot ___________________________________________________

Identify personally or from pictures an example of each.
4. Define the following terms:

- Celestial sphere
- Horizon
- Transit
- Celestial pole
- Right ascension
- Conjunction
- Celestial equator
- Declination
- Ecliptic

5. Explain the major difference between a refractor and reflector type of telescope.

- Refractor
- Reflector

Describe an equatorial telescope mounting
6. Into what colors is sunlight dispersed when passed through a prism?

In what way are colors of stars used to indicate their temperature?

7. What connection is there between the ecliptic and the vernal and autumnal equinoxes?

What dates are usually associated with the equinoxes?

8. Learn the 12 constellations called the signs of the zodiac. Know the history of the signs of the zodiac.

1. ______________________ 7. ______________________
2. ______________________ 8. ______________________
3. ______________________ 9. ______________________
4. ______________________ 10. ______________________
5. ______________________ 11. ______________________
6. ______________________ 12. ______________________

History ______________________

9. Identify by their name and point out in the sky the constellations that can be seen all night long on a clear night in your hemisphere.
10. Name five constellations that are visible between sunset and midnight in your hemisphere during:
   a. The summer months.
   b. The winter months.

11. At what time of year is the constellation Orion best seen? Locate and identify in the sky the three brightest stars of this constellation.
   Time of year ______________________________________________

12. How are the letters of the Greek alphabet used to name stars in a constellation?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

Give five illustrations of the use of the letters of the Greek alphabet in naming the stars of a constellation.

<table>
<thead>
<tr>
<th>Proper name</th>
<th>Constellation name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
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<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

13. List the 15 first-magnitude stars and observe the ones that appear in your area throughout the year.

| 1.          | 9.          |
| 2.          | 10.         |
| 3.          | 11.         |
| 4.          | 12.         |
| 5.          | 13.         |
| 7.          | 15.         |

14. With the use of a diagram, show the relative positions of the earth and moon during high and low tides.
15. Describe the peculiar individual characteristics of the planets in our solar system.

Mercury ___________________________________________________

Venus _____________________________________________________

Earth _____________________________________________________

Mars ______________________________________________________

Jupiter ____________________________________________________

Saturn ___________________________________________________

Uranus ____________________________________________________

Neptune ___________________________________________________

Pluto ______________________________________________________

Which ones cannot be seen without the aid of a telescope?

Which two planets are seen only near the hours of sunrise or sunset?
1. _______________________________ 2. _______________________________

16. Where and in what way does the Bible refer to Orion, the Pleiades, and Arcturus?

<table>
<thead>
<tr>
<th>Where</th>
<th>What way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orion</td>
<td></td>
</tr>
<tr>
<td>Pleiades</td>
<td></td>
</tr>
<tr>
<td>Arcturus</td>
<td></td>
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</tbody>
</table>