Your assignment is to read two issues of the Star Witness News. After reading your issues, answer the questions on the worksheet. All answers must be complete sentences. See Mr. Hill to get copies of The Star Witness News and worksheets.

Closing in on Saturn’s Rings
Hubble – A Lunar Prospecting Machine
Lunar Double Whammy
Mars – Up Close and Personal
No Spring Picnic on Neptune
New Horizons Spacecraft Gets a Boost From Jupiter
New Moons for Pluto
Xena, the Tenth Planet?

(Copies of the Star Witness News are available at the Star Witness News Archive.)
The Star Witness News – Mars – Up Close and Personal

1. How are the features on Mars similar to and different from features on Earth?

2. Study the two images of Mars showing nearly opposite sides of the planet. Describe the similarities and differences between the two images.

3. What was Hubble’s “date” with Mars?

4. What two factors combined to make these observations of Mars so special?
   a. 
   b. 

5. What do you think life on Earth will be like in 2287, when another close meeting with Mars occurs?
The Star Witness News ~ No Spring Picnic on Neptune

1. Describe Neptune’s springtime weather.

2. What causes seasonal changes on Neptune?

3. How long are Neptune’s seasons? Explain why they are so long.

4. Do other planets have seasons? Based on your knowledge of what causes seasons, decide whether the planets shown in the illustration at right might have seasons.

5. What is meant by “Neptune’s changing face”?
The Star Witness News – New Horizons
Spacecraft Gets a Boost From Jupiter

1. If you could talk to the New Horizons mission scientists, what questions would you ask them?

2. If it took only about a year for the New Horizons spacecraft to travel from Earth to Jupiter (passing Mars' orbit), why will it take eight years to get from Jupiter to Pluto (passing the orbits of Saturn, Uranus, and Neptune)? Note: The graphic of New Horizons' nine-year journey from Earth to Pluto may help you answer this question. Describe pictures taken by New Horizons at Jupiter (planet, moons, etc.)

3. How has Hubble supported the New Horizons mission?

4. New Horizons will not arrive at Pluto until July 2015. What will you be doing when the news is announced and the first pictures are released?

5. Define the following terms:
   a. Atmosphere -
   b. Kuiper Belt -
   c. Satellite -
The Star Witness News – New Moons For Pluto

1. Why is it hard for scientists to study Pluto?

2. Why do you think scientists planned the May 2005 Hubble observation?

3. Why do you think scientists planned the February 2006 Hubble observation?

4. Why do you think it will take such a long time for the New Horizons spacecraft to reach Pluto and the Kuiper Belt?

5. Scientists have found other objects in the Kuiper Belt. Many of them have a moon. Do you think these objects may have more than one moon?
The Star Witness News — Closing in on Saturn’s Rings

1. What do Cassini mission scientists hope to learn about Saturn’s rings in the next four years?

2. All the gas giant planets (Jupiter, Saturn, Uranus, and Neptune) have rings. Why is Saturn the only planet that is famous for its rings?

3. How did Galileo and Huygens increase our knowledge of Saturn?

4. What are the “keys” to the rings?

5. If you could ask a Cassini scientist several questions about Saturn, what would they be?
The Star Witness News – Xena, the Tenth Planet?

1. Explain how Xena and Pluto are similar to each other. How are they different from each other?

2. Why is Xena so bright?

3. If Xena were half as reflective, do you think astronomers would have found this icy body?

4. What were the problems Hubble had while trying to photograph Xena?

5. Xena was later named Eris. Did Eris become the tenth planet? Why or why not?
The Star Witness News – Lunar Double Whammy

1. Why does NASA want to look for water on the Moon?

2. If you had a chance to live on the Moon, what factors would you consider before making your decision to move there?

3. Explain what caused the “double whammy”?

4. Why is crashing into the Moon an “inexpensive experiment”?

5. What other probes have crashed into the Moon?
1. How is the story of the search for resources on the Moon similar to and different from the story of the pioneers who settled the American west?

2. What role did the Apollo missions play in the exploration of the Moon?

3. Why did scientists use the Hubble Space Telescope to observe the Moon?

4. In what ways was the use of the Hubble Space Telescope unusual?

5. Do you think it is important for astronauts to return to the Moon? Why or why not?