

telescopes

Astronomy Homework - Telescopes

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Please complete the assignment on a separate sheet of paper and staple this sheet to the front of your completed homework. A 5 point deduction will result if this procedure is not followed.

Definitions:

- 1 Telescope
- 2 Reflection
- 3 Refraction
- 4 Resolution
- 5 Diffraction
- 6 Magnification
- 7 Interferometer
- 8 Aperture
- 9 Chromatic aberration
- 10 CCD

Q1 What advantages does the Hubble Space Telescope have over ground-based telescopes? List some disadvantages.

Q2 What are the advantages of studying objects at various wavelengths of radiation?

Q3 The next great observatory will have telescopes that can observe from the radio part of the spectrum through to ultraviolet light. You have been given the choice of locating this observatory on a high mountain peak on Earth, in orbit around the Earth, or on the far side of the Moon. Justify the best site for this observatory. Don't worry about the cost only the most ideal observing location.

Q4 What do you think the next generation of telescopes will be? What can't be done now that needs to be done? Where will this be done from (Earth or space)? Will the cost be worth it?