

pg 1

Science Olympiad A2  
Starry, Starry Night 2012

**Testing Format:**

1. 40 minutes
2. 50% multiple choice. Each team will be asked to provide an answer on a blank line next to the question (must write capital letters A, B, C, or D). *don't circle answer*
3. 50% fill-in-the-blank (one question may have more than one answer).  
Misspelled answers will be marked incorrect.
4. Five Bonus Questions at the end of the test, which shall be used for tiebreaker purposes only.
5. Each team will be given one test. Each team may bring pencils (no pen) and erasers, and no other items, to the test.
6. Team members may consult with each other by writing (no talking). A scratch piece of paper will be provided to each team.
7. Only one answer for each question will be accepted. In the event it is unclear what answer a team has chosen or what answer a team has written, the question will be marked wrong, so please have the students provide only one legible answer.
8. At the end of the testing period the tests will be collected from those teams who have not already turned in their tests. Students will be dismissed after all tests have been collected.

**Curriculum:**

***The students may be asked to identify the following celestial objects from photos or diagrams:***

1. Constellations (see below), no lines
2. Stars (see below)
3. Planets
4. The Moon and/or any of its phases
5. Total Solar Eclipse, Lunar Eclipse
6. A spiral galaxy, a nebula, a star cluster, and/or a comet

***The students will be asked to answer a series of written questions about important astronomical facts and concepts, which may include:***

1. Distinguish between motions of rotation and revolution.
2. State the effects produced by rotation and revolution of the Earth.
3. Demonstrate knowledge about units of time (day, month, year) and their astronomical basis.
4. Arrange a group of bodies according to their relative sizes from largest to smallest. *i.e. planets sm—lgest*
5. Arrange a group of objects according to their distance from either the Sun or the Earth.
6. Demonstrate knowledge about the seasons on Earth and their causes.
7. Be able to name and identify the phases of the Moon and state the factors that

produce them.

8. Demonstrate knowledge about the celestial sphere and the following points: zenith, horizon, four directions, celestial meridian, north celestial pole, and ecliptic.

9. Demonstrate knowledge about the members of the Solar System.

10. Demonstrate knowledge about solar and lunar eclipses and the conditions that produce them.

11. History and current events of astronomy.

*Teach a little of everything*

**How to Prepare for the Test:**

Teams should prepare for the test by looking through astronomy books and well-documented astronomy web sites. Have fun with the material!

**Scoring:**

All questions will be evaluated with equal weight. The team attaining the highest score will place highest. In the event of a tie, the 5 Bonus Questions will be used to evaluate a team's final score.

Each team will be given a time upon completion of their test. In the event of a tie in scoring (including Bonus Questions), the team with the best time of completion will place higher.

**Constellation & Stars or Clusters:**

<b>Constellation</b>	<b>Stars or Clusters*</b>
Aquila	Altair
Bootes	Arcturus
Canis Major	Sirius
Canis Minor	Procyon
Cassiopeia	
Cepheus	
Cygnus	Deneb
Draco	
Gemini	Castor
	Pollux
Leo	Regulus
Lyra	Vega
Orion	Betelgeuse
	Rigel
Pegasus	
Scorpio	Antares
Taurus	Aldebaran
	Pleiades (Seven Sisters)*
	Hyades*
Ursa Major	Merak
	Dubhe
Ursa Minor	Polaris
Virgo	Spica

*Around 60-70 questions on test*