



KeplerChallenge(Grades 5 and 6)

Sample Package

1. Do not start writing the contest until told to do so.
2. The first five questions are for administration purposes only; they will not count towards your final score, but must be completed if you wish to be recognized as an official contestant.
3. The 35-question multiple-choice contest corresponds to Questions 6 to 40, all of which have five possible answers – A, B, C, D, and E – only one of which is correct. Completely fill in the Scantron box that corresponds to your solution for each question. If you are unsure of this coding system, speak to the supervising teacher.
4. You may use rulers, geometric tools, and paper for rough work. Calculators are recommended.
5. Diagrams are not drawn to scale, while most numerical figures are rounded for simplicity.
6. You will have a total of sixty minutes to complete the contest.

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1. In which of the following programs are you currently enrolled? (Indicate all that apply)
(A) Gifted (B) French Immersion (C) ESL (D) Other (E) None
2. What is your grade?
(A) 4 or below (B) 5 (C) 6
3. What is your age?
(A) 9 or below (B) 10 (C) 11 (D) 12 (E) 13 or above
4. Are you willing to have your name posted on our website at <www.spacesim.org>?
(A) Yes (B) No
5. Are you interested in participating in a simulated space mission or Elementary Education Program at our facilities?
(A) Yes (B) No (C) Maybe

Part A – Identify the planet, dwarf planet, moon, star, or region of the universe described.

Each question from 6 to 25 will feature various astronomic, scientific, geographic, historic, and cultural details pertaining to a common celestial object or domain. Students are to indicate the identity of the body being described.

6. The Great Red Spot is a prominent storm occurring on the surface of this gas giant, the fastest rotating and most immense planet in the Solar System, as well as the fifth furthest from the Sun.

- (A) Neptune (B) Jupiter (C) Venus (D) Saturn (E) Ganymede

7. Either a dwarf planet or a moon depending on the definition, this Kuiper belt object has more than half the diameter of Pluto and is gravitationally locked with it.

- (A) Charon (B) the Moon (C) Ceres (D) Pluto (E) Neptune

Part B – Use knowledge of astronomy, and thinking and analysis, to answer these questions.

Each question from 26 to 40 will provide a small amount of background material pertaining to a specific astronomic concept or entity. Using this information, as well as relevant knowledge of space science, students are to answer questions linked to the topic.

26. Many of the celestial bodies in the universe are named after mythological figures. With the exception of Earth, the titles for all the Solar System planets are derived from those of gods and goddesses of which civilization?

- (A) Greek (B) Mayan (C) Norse (D) Roman (E) Japanese

27. Recently, there has been great speculation as to the presence of liquid water on Mars. However, the average atmospheric temperature of the planet is -63°C , while the boiling point of water is 100°C and freezing point 0°C . Thus, if water were found on the surface of Mars, in what state of matter would it most likely be?

- (A) solid (B) liquid (C) gas (D) ice (E) plasma

Solutions:

6. (B)

7. (A)

8. (D)

9. (A)



**The Ottawa-Carleton Educational Space Simulation thanks you
for expressing interest in the 2007 Kepler Challenge!**

If you wish to register your school for this competition, fill out the attached form or print one off from our website at <www.spacesim.org>. We are looking forward to your participation!