Astronomy

# [Astronomy and the Solar System](http://astronomyandthesolarsystem-bac2009.webs.com/)

### NASA

PART ONE: READING                                                                                (15pts)

A.    Comprehension :                                                                                       (8pts)

Read the text carefully then do the activities.

NASA has successfully launched a rocket carrying a planet-hunting telescope. The powerful Kepler telescope will search for planets similar to the Earth. Scientists believe there are good chances of finding a planet like ours somewhere out there in the galaxy. There are billions and billions of stars in the heavens. If one planet is the right distance from one of these stars, then conditions might be right to support life. The planet’s atmosphere should neither be too hot nor too cold. The planet would also need water. The telescope is named after the German 17th-Century astronomer Johannes Kepler. It will spend more than three years looking for dark specks against the brightness of a hundred-thousand stars. These specks could be Earth-like planets.

The manager of the $600-million project Jim Fanson said: “We have a feeling like we're about to set sail across an ocean to discover a new world.” NASA’s space science boss Ed Weiler agreed that the mission was a “historical” landmark in space exploration. However, he couldn’t say whether or not the telescope would find another Earth. “It very possibly could tell us that Earths are very, very common...or that Earths are really, really, really rare - perhaps we're the only Earth,” he said. He told reporters how important Kepler’s journey was, saying: “It really attacks some basic human questions that have been asked since that first man or woman looked up at the sky and asked, ‘Are we alone?’ ”

                                                         Adapted from: [www.BreakingNewsEnglish.com](http://www.breakingnewsenglish.com/)

1-      What type of text is the reading passage? Choose the right answer.

a)      an article                    b)  a letter                       c) an advert

2-      Are the following statements TRUE, FALSE or NOT MENTIONED?

a-      NASA has launched a rocket in order to look for other planets similar to the Earth.

b-      One of the conditions of life in these planets is the existence of oxygen and nitrogen gases.

c-      This project requires a budget of $600 million.

d-     Ed Weiler confirmed that the telescope would find another Earth.

3-      Answer the following questions according to the text.

a-      Why has NASA launched the Kepler telescope?

b-      How long will the mission last?

c-      Is NASA’s space science boss certain about finding another Earth? Quote from the text to justify your answer.

d-     What does he think about Kepler’s journey?

4-      Reorder the following ideas according to their occurrence in the text.

a-      Experts’ point of view about the mission.

b-      Conditions to make life possible in other planets.

c-      NASA launching a rocket handling Kepler telescope.

d-     The period required for the mission.

5-      Choose an appropriate title to the text.

a)      NASA

b)      Space Exploration

c)      Looking for Other Planets

B.     Text Exploration                                                                      (7pts)

1-      Find in the text words whose definitions follow.

a)      To send a spacecraft or a rocket into the sky.  (§1)

b)      Very large balls of burning gases in space, which give off light and heat.  ( §2 )

2-      Complete the chart as shown in the example.

|  |  |  |
| --- | --- | --- |
| Verb | Noun | Adjective |
| Example: to explore  to believe  ................  to invent | exploration  ....................  support  .................... | exploratory  ....................  ...................  ................... |

3-      Rewrite sentence (b) so that it means the same as sentence (a).

1/  (a) Astronomers are carrying out new researches.

     (b) New researches................................................

2/  (a) “ The mission will last three years,” the reporter said.

     (b) The reporter said ...............................................................

4-      Classify the following words according to the pronunciation of their final “s”.

                          planets – stars – telescopes – chances

|  |  |  |
| --- | --- | --- |
| / s / | / z / | z /1/ |
|  |  |  |

5-      Fill in the gaps with only four words from the list below.

                         be – away – planet – alone – astronomy – universe

Are we.........1........? Probably not, just the size of the .......2.......... makes it unlikely. Alien life forms might not .......3...... too far away, either. This year, American astronomers discovered a ........4........ capable of sustain life just 50 light-years away.

PART TWO: WRITING                                                                          (5pts)

Choose only one topic.

Topic 01:

You are a member of the latest NASA space mission. Many people urge you to exploit the money allotted to space exploration in helping the poor countries and developing education in the world. Use the notes below to write a speech in which you convince them about the importance of space exploration.

-          Help / developing new technologies.

-          Solving further problems / overpopulation / pollution

-          Predicting catastrophes / natural disasters

-          Space engineering / deviating collisions

Topic 02:

You have been in a space flight aboard the spaceship carrying NASA’s staff. Write a paragraph in which you describe your journey and the sight of heavenly bodies you encountered along your trip.

Astronomy

### Part1 hungry people in the world. You attend an international summit about ‘Space Explo The Red Planet

PART 1. READING                                                                                      (15 points)

A.    COMPREHENSION                                                                               (8 points)

Read the text carefully and then do the activities.

The Red Planet

   The idea of life on Mars has fascinated us ever since the concept was popularized by H. G. Wells in his novel The War of the Worlds in 1898. But once we started probing the planet, we discovered nothing more than a dusty, frozen wasteland. Ten years ago, astronomers thought they knew all there was to know about Mars-and there was nothing to write home about. Our fantasies about coming face-to-face with strange extraterrestrial neighbours faded. It was concluded that the Red Planet was dead: no active volcanoes, no interesting geology, no flowing water and no life-end of story.

   But some key events since then have led to an exciting resurrection of the possibility of Martians, even if they are only microbes. We know that streams of water gush across the red plains. Mars giant volcanoes are merely dormant, and will erupt again.

   This year, Mars comes closer to Earth than it has done for 59,619 years. Last time it was this near, we were living in caves and the event most probably went unnoticed. But now we’re well equipped to make the most of the opportunity and are dispatching a number of new probes to investigate the planet. Among them is Britain’s very own Beagle 2 Lander, which will touch down on the rocky surface and carry out experiments specifically designed to answer the Big Question: Is there life on Mars?

                                      Adapted from Life on Mars, Focus Magazine, May 2003

1.      This document is

a) an article          b) an extract from a sci-fi novel            c) a scientific report

2.      Say whether the following statements are true or false.

a.      When the first probes landed on Mars, they only sent images of a desert.

b.      After the first probes, science fiction fans were disappointed.

c.       Mars comes very often close to earth.

d.     Beagle 2 Lander could give us information about whether or not life exists on Mars.

3.      What do the underlined words refer to in the text?

a)      they (§1)              b)  microbes (§2)            c) them (§3)          d) which (§3)

4.      Answer the following questions according to the text.

a.      How was the idea of life on Mars popularized?

b.      What could Beagle 2 Lander do?

B.     TEXT EXPLORATION                                                                      (7 points)

1.      Find in the text  a word closest in meaning to: to explore (§3)

2.      Find in the text a word whose definition is:

                                       spacecraft used for investigating (§3)

3.      Complete  sentence ‘b’ so that it means the same as sentence ‘a’.

a.      If I travel to the moon, I’ll take a lot of pictures.

b.      I ………………………………….provided that…………………………

4.      Combine the following sentences with the connectors provided.

a.    He said he had seen aliens with his own eyes. No one believed him. (although)

b.   I love science fiction books. My sister prefers detective stories. (whereas)

5.      Complete the following chart as shown in the example.

|  |  |  |
| --- | --- | --- |
| singular | plural | Verb |
| Example: a proof  ………………..  An analysis | Proofs  Beliefs  ………………….. | To prove  ……………………  ……………………. |

6.      Classify the following words according to the pronunciation of their final ‘ed’

                       fascinated, discovered, concluded, equipped

|  |  |  |
| --- | --- | --- |
| /t/ | /d/ | /id/ |
|  |  |  |

7.      Complete the following dialogue.

A: ……………………………………………………………………..?

 B: It’s a sci-fi book.

A: ………………………………………………………………………?

B: I’m passionately interested in fictional books.

A: ………………………………………………………………………?

B: Yes, the first chapter.

A: …………………………………………..if you were sent to space?

B: I’ll certainly enjoy the experience.

PART 2: WRITTEN EXPRESSION                                                       (5points)

                                Choose  ONE of the following topics.

Either Topic 1:

Do you think that life exists on other planets? Do you believe in extraterrestrials? Are you afraid of them? Use the following notes to write a paragraph of about (60 words)

-          A lot of books show this fascinating idea

-          scientific probabilities that there is life on other planets is very low.

-          To be scared/ not scared

-          come face to face with a ‘green’ creature

-          or witness some strange phenomenon.

 Or Topic 2:

Some people think that it is better to spend the money allotted to a space program on education; medical research and social problems. What do you think?

Astronomy

Part1. Reading                                                                                                                (15 pts)

a.   Comprehension                                                                                                ( 8pts)

Read the text carefully then do the activities.

Astronomy is the science that deals with the origin, evolution, composition, distance and motion of all bodies and scattered matter in the universe. It includes astrophysics, which discusses the physical properties and structure of all cosmic matter.

Until the invention of the telescope and the discovery of the law of motion and gravity in the 17th century, astronomy was primarily concerned with noting and predicting the position of the sun, moon and planets, initially for calendar and astrological purposes and later for navigational applications and scientific interest.

During the 20th century, astronomy has expanded to include astrophysics, the application of physical and chemical knowledge to an understanding of the nature of celestial objects and the physical processes that control their formation, evolution and emission of radiation.

Its great advances not with standing, astronomy is still subject to a major constraint, it is inherently an observational rather than an experimental science. All measurements must be performed at great distances from the objects of interest, with no control over such quantities as their temperature pressure or chemical composition.

1. Say whether the following statements are true or false.

a. The definition of astronomy is given in paragraph 1.

b. In the 17th century, astrophysics became a part of astronomy.

c. The telescope was invented in the 17th century.

d. Astronomy is an experimental science.

2. Answer the following question according to the text.

a. What does astronomy deal with?

b. What were the purposes of astronomy?

 3. In which paragraph is it mentioned that astronomy is just an observational science?

4. What type of text is the reading passage? Choose the right answer.

       a. narrative                       b. descriptive                          c. expository

Text exploration                                                                                                      (7pts)

1.                  Find in the text a word which means aims (§2)

2.                  Find in the text a word whose definition is: the force which attracts an object of any mass towards any other object of any mass (§2)

3.                  Find in the text a word opposite in meaning to: minor (§4)

4.                  Complete the chart as shown in the example.

|  |  |  |
| --- | --- | --- |
| Verb | Noun | Adjective |
| e.g, to observe | observation | observational |
|  |  | inventive |
|  | formation |  |

5.                  Combine the following using the connectors between brackets.

a.                  Astronomy is inherently an observational science. All measurements are performed at great distances. ( because)

b.                  The moon gives off light. The stars give off light. (both)

6.                  Classify the following words according to the pronunciation of their final –S.

advances – planets – deals – galaxies

|  |  |  |
| --- | --- | --- |
| /s/ | /z/ | /IZ/ |
|  |  |  |

7.                  Fill in the blanks so that the passage makes sense.

What is a star?

A star is a giant ball of gases held together …………… gravity. It makes heat and …………. Different stars produce different amounts of ………... The amount of energy given off determines the star's surface temperature and color. Red stars are cooler, yellow stars like our sun are a little ……………., and blue stars are the hottest.

Part2. Written expression                                                                                      (5pts)

Choose one of the following topics.

 Either topic1

Using the following notes, write a composition of about 100 words comparing the planet Earth and the other planets. Start like this: Unlike the other planets, our planet Earth ….

-                     Strategic location

-                     Classified as the third planet

-                     Neither far nor close to the sun

-                     Suitable gravity

-                     Oxygen availability, plants, trees, animals and people

-                     Convenient to live in

Or Topic 2. Imagine you represent an association that protects hungry people in the world. You attend an international summit about ‘Space Exploration’. You prepare a speech talking about the money spent in space exploration instead of helping the needy. Write your speech.