

## JAF01 Unit 1 Science and Technology Vocabulary, Space Food

**Task 1** Complete the table.

Science	Subject of study	Scientist
genetic engineering	manipulation of DNA	genetic engineer
molecular biology		
bioclimatology		
astrophysics		
cybernetics		
Information technology		
ergonomics		
genetics		
civil engineering		

**Task 2** Fill in the gaps with suitable words, the first letter of each word is given:

**Acoustics** studies the production and properties of s\_\_\_\_\_.

**Astrophysics** is the branch of astronomy that deals with the physics of the u\_\_\_\_\_, including the physical properties of celestial objects, as well as their interactions and behaviour.

**Cryogenics** is the study of extremely low t\_\_\_\_\_.

**Electrodynamics** analyses the relationship between electrical and magnetic f\_\_\_\_\_.

**Fluid physics** deals with the behaviour and movements of l\_\_\_\_\_ and gases.

**Geophysics** is the study of the E\_\_\_\_\_ and its atmosphere and waters by means of the principles of physics.

**Mechanics** deals with the behaviour of objects and systems in r\_\_\_\_\_ to various forces.

**Nuclear physics** is concerned with the structure and properties of the atomic nucleus, and with nuclear reactions and their a\_\_\_\_\_.

**Optics** is the study of the n\_\_\_\_\_ and behaviour of light.

**Particle physics**, also called high energy physics, analyses the behaviour and properties of e\_\_\_\_\_ particles.

**Plasma physics** is concerned with the study of highly ionized gases, that is gases that have been separated into positively and negatively c\_\_\_\_\_ particles.

**Quantum mechanics** explains the behaviour of matter and its interactions with energy on the scale of atoms and atomic particles

**Solid-state physics**, also called c\_\_\_\_\_ -m\_\_\_\_\_ physics, examines the physical properties of solid materials.

**Thermodynamics** is the study of heat and other forms of energy, and of the c\_\_\_\_\_ of energy from one form to another.

(adapted from <http://physics-online.freesevers.com/contents/branch.html>, [www.wikipedia.com](http://www.wikipedia.com), Tulajová, I. *Physics: A Reader – Intermediate level*)

**Task 3** Complete the sentences by forming a word from the root in brackets at the end of the sentence.

1. I came to the \_\_\_\_\_ that the theory was incorrect. (conclude)
2. Researchers must first make a careful \_\_\_\_\_ of the problem. (analyse)
3. Fleming was responsible for the \_\_\_\_\_ of penicillin. (discover)
4. The \_\_\_\_\_ of the Earth on its axis causes night and day. (rotate)
5. The \_\_\_\_\_ of these two gases can be dangerous. (combine)
6. The scientist carried out many \_\_\_\_\_. (experiment)
7. Joe is a systems \_\_\_\_\_ (analyse).
8. We owe a great deal to the \_\_\_\_\_ of the steam engine. (invent)
9. There was a violent \_\_\_\_\_ when the chemical was added. (react)
10. Scientists have to \_\_\_\_\_ (theory) and \_\_\_\_\_. (hypothesis)

(adapted from McCarthy, M., O'Dell, F. *Test Your English Vocabulary in Use*. Cambridge University Press, 2001)

#### **Task 4 Space Food**

*What do you know about space food? What do you imagine it tastes like?*

*Read the statements about how astronauts eat aboard the space shuttle and the space station. With your partner decide whether they are true or false.*

1. The kinds of food crewmembers eat aboard the space shuttle are not commercially available on grocery store shelves.
2. Crewmembers choose their menus and can repeat or not repeat days at their discretion.
3. Half of the food system is U.S. and half is Russian on an international space station.
4. Astronauts need more calories for energy during spaceflight than they need on the ground.
5. Vitamin C supplements are recommended for space travellers.
6. As the body adapts to weightlessness, many physiological changes occur, e.g. astronauts usually lose weight.
7. The food system on future long-duration missions to other planets will involve setting up gardens.
8. On the next mission there will be an astronaut whose sole job will be dedicated to food preparation.  
([www.spaceflight.nasa.gov/living/spacefood/index.html](http://www.spaceflight.nasa.gov/living/spacefood/index.html))

*How do think the following phrases relate to the topic of space food?*

- rehydratable food package
- shelf life
- food packaging disposal

#### **Task 5 Video**

[http://www.youtube.com/watch?v=frB6YDsPin8&feature=player\\_embedded](http://www.youtube.com/watch?v=frB6YDsPin8&feature=player_embedded)

*Check vocabulary:* to conduct research, to be slated, vehicle, galley, to propose a project, to sustain sth.

*Watch the video and answer the questions:*

1. What is Maya Cooper's job?
2. Why do they need a lot of time to prepare?
3. How does the Mars mission differ from other missions?
4. Where do the researchers get recipes from?
5. What is the difference between the NASA pizza and Earth pizzas?