

Příklady úloh (V odstavcích 53–73 byl ponechán původní text, příklady úloh jsou zde <https://www.oecd.org/pisa/test>. Použijte prohlížeč Mozilla Firefox.)

Sample Items

53. In this section, three examples of science units are presented. The first is from PISA 2006, and is included to demonstrate the linkage between the 2006 and the 2015 framework. Questions from the unit are shown in the original paper based format and also how they might be transposed and presented on screen. The second example is a new onscreen unit illustrating the 2015 scientific literacy framework. The third example illustrates an interactive simulated scientific enquiry environment enabling assessment within a rich contextual setting.

Science example 1: Greenhouse

54. Science example 1 is titled GREENHOUSE and deals with the increase of the average temperature of the Earth's atmosphere. The stimulus material consists of a short text introducing the term "Greenhouse effect" and includes graphical information on the average temperature of the Earth's atmosphere and the carbon dioxide emission on the Earth over time.

55. The area of application is Environment Quality within a global setting.

SCIENCE EXAMPLE 1: GREENHOUSE

Read the texts and answer the questions that follow.

THE GREENHOUSE EFFECT: FACT OR FICTION?

Living things need energy to survive. The energy that sustains life on the Earth comes from the Sun, which radiates energy into space because it is so hot. A tiny proportion of this energy reaches the Earth.

The Earth's atmosphere acts like a protective blanket over the surface of our planet, preventing the variations in temperature that would exist in an airless world.

Most of the radiated energy coming from the Sun passes through the Earth's atmosphere. The Earth absorbs some of this energy, and some is reflected back from the Earth's surface. Part of this reflected energy is absorbed by the atmosphere.

As a result of this the average temperature above the Earth's surface is higher than it would be if there were no atmosphere. The Earth's atmosphere has the same effect as a greenhouse, hence the term greenhouse effect.

The greenhouse effect is said to have become more pronounced during the twentieth century.

It is a fact that the average temperature of the Earth's atmosphere has increased. In newspapers and periodicals the increased carbon dioxide emission is often stated as the main source of the temperature rise in the twentieth century.

A student named André becomes interested in the possible relationship between the average temperature of the Earth's atmosphere and the carbon dioxide emission on the Earth.

In a library he comes across the following two graphs.