It is recommended to choose the most interesting tasks from the 7 proposed ones (1 or 2 tasks for the 8^{th} grade and below, 2 or 3 tasks for 9^{th} grade and above). You may use the list of questions for each task as a plan for your answer, or you may answer only some of the questions. Contribute reasonable amount of examples and explanations to your answer.

1. As everyone knows stars shine its own light and planets shine reflected light. Does it ever happen that a star doesn't shine or a planet emits radiation? What is the difference between stars and planets?

2. Tropic line in the northern hemisphere (23.5 parallel of north latitude) is historically called the Tropic of Cancer, and in the south – the Tropic of Capricorn. When and why these names were established? Perhaps, because of animals found in these latitudes? Are these names are correct now in the 21st century?

3. How milk package weight (1000 g) would vary if it could go down to the center of the Earth? to the Space (on ISS)? to the Moon, other planets beyond Solar system, beyond the galaxy?

4. There are minerals occupying more volume than its original components (parts that formed these minerals). These minerals push aside surrounding rocks. Give at least 2 examples of such minerals and describe them (why they behave in this way, why are they interesting, how they can be found).

5. In 1973, the volcano erupted on the island Heymaey (Iceland), which is known by the fact that lava going to the city was stopped by sea water pumped out of the ocean. Describe the way the lava was stopped exactly does the water stopped lava? What other large volcanic eruptions do you know? How was public protected during these eruptions?

6. Can a compass be used to orientate always and everywhere in the world? What about other planets?

7. What is the substance of stars that you see in the sky?