**Тема:**  «Фундаментальные открытия в науке»

**Цель:** Повторить грамматический материал, продолжить изучать лексическую тему «история науки».

**Задачи:** Отработать навык работы (в т.ч. перевода) с профессиональной лексикой по теме «электричество», повторить тематический материал, актуализировать имеющиеся знания.

**Специальность:** 13.02.09 Монтаж эксплуатации линий электропередачи, 13.02.11 Техническая эксплуатация и обслуживание электрического и электромеханического оборудования (по отраслям) (УГ 13.00.00)

1. **Learn the glossary**
2. **Read the text**
3. **Do the tasks**

**Glossary:**

scientific method

phenomenon

perform

outcome

messy (messier)

leap

to pioneer

demonstrate

statement

to fuse

to release

to collide

to expand

redshifting

**BIG-BANG-SURPRICE\***

*Speaking of the scientific method we think of a neat procedure you can follow to gain insight into some natural phenomenon about the Universe.* Fetch an idea, perform an experiment, and either validate or falsify the idea, depending on the outcome. The fact is, the real world is a lot messier than a neat, smooth idea. Sometimes, you perform an experiment, and you get a result that totally doesn’t match with what you were expecting. And sometimes, the correct explanation requires a leap of imagination that goes far beyond what any reasonable person would logically conclude. Today, the physical Universe is very well understood, but the story of how we got here is full of surprises. If we want to progress further, there are likely even more in store.

**The Universe began with a bang, but that discovery was a complete accident.** *The first statement is that The Universe we began with wouldn’t have only matter made of mere protons and electrons, but would consist of a mix of the light elements, fused together in the high-energy, early Universe.* And the second testament is that when the Universe cooled enough to form neutral atoms, that high-energy radiation would be released, and would travel in a straight line for all eternity until it collided with something, redshifting and losing energy as the Universe expanded.

In 1964, Arno Penzias and Bob Wilson accidentally discovered the Big Bang’s leftover glow. Working with a radio antenna at Bell Labs to study radar, they found uniform noise everywhere they looked on the sky. It wasn’t the Sun, or the galaxy, or Earth’s atmosphere… but they didn’t know what it was. So they cleaned out the inside of the antenna with mops, removing pigeons in the process, but still the noise persisted*. It was only when the results were shown to a physicist familiar with the Princeton group’s detailed predictions, and with the radiometer they were building to detect exactly this type of signal, that they recognized the significance of what they found. For the first time, the origin of our Universe was known.*

**Do the following tasks:**

1. **Translate the lines given in italics.**
2. **Decide whether the statement is true or false.**
3. The real world is very predictable and simple.
4. You need a lot of knowledge and imagination to explain something.
5. The physical Universe is already
6. Our Universe consist of protons and electrons.
7. The Universe must rise it’s temperature enough to form neutral atoms.
8. In 1954, Arno Penzias and Bob Wilson accidentally discovered the Big Bang’s leftover glow
9. The remains of uniform noise have given an idea of huge explosion, that had become the Universe’s origin.

1. **Fill in the gaps using your glossary.**
2. This physical \_\_\_\_\_\_\_\_\_\_\_\_has been extensively studied by both academics and journalists.
3. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of that experiment is quite unpredictable.
4. They tried \_\_\_\_\_\_\_\_\_\_\_\_\_\_the elements together. Well, they shouldn’t have.
5. Protons and electrons are about\_\_\_\_\_\_\_\_\_. You better be away that moment!
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_supposes an idea, perform an experiment. Blind testings are also required
7. If we heat an object – it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and If we cool it down, it shrinks!
8. We need to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_the whole experiment to Mike, because I only hope he will find the explanation!
9. **Give translation to the following word combination:**
10. Weird phenomenon
11. Demonstrate the result
12. Doubtful statement
13. Messy ideas
14. To expand the ways of searching
15. **Make 5 your own sentences with the glossary:**
16. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
17. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
18. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
19. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
20. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Департамент образования и науки Тюменской области**

**ГАПОУ Тюменской области**

**«Ишимский многопрофильный техникум»**

**отделение**

**ПРАКТИЧЕСКИЕ РАБОТЫ**

ОГСЭ 03. Иностранный язык в профессиональной деятельности

13.02.09 Монтаж эксплуатации линий электропередачи

**2019г.**