



# National Science Bee

## 2025-2026 Regional Finals Study Guide – Blue Question Set

**Instructions:** This study guide should be your first step in preparing for the [National Science Bee Regional Tournaments](#) on the Blue Question Set. Many of the facts below are found in the 120 questions on the Blue Question Set. Other facts in the study guide will be found in the other Question Sets being used this academic year. **However, the majority of questions in the tournament are not referenced in the study guide.** The study guide is meant to help you get started. It is not meant to be fully comprehensive as the essence of academic competition is not memorizing a list, but having wide-ranging knowledge.

As the questions are all short paragraphs on a particular topic, if a topic is found below, then it is a good idea to learn more about it (since additional facts about a topic will also be referenced in the question). It is also helpful to read the introduction of a Wikipedia page on a topic. Please also use our past question sets which are [found here](#). Many of the topics that are found in past years' questions will come up this year too. Good luck!

Note: This academic year, the study guides are slightly shorter than in past years, but we are also including a list of additional terms at the end. These are also likely to be referenced at some point in the tournament, but you will need to do some research to learn about the significance of each of these.

### Biology & Anatomy

1. A large prehistoric cat called the [saber-tooth tiger](#) had incredibly sharp, elongated canine teeth.
2. Energy from the cell is generated by the [mitochondria](#).
3. The digestive process starts in the mouth with mastication, or the process of [teeth](#) breaking down food into smaller pieces.
4. [Parasitism](#) is exhibited when an organism benefits at the expense of another organism.
5. The tube of tissues that runs from the brain to the lower back is called the [spinal cord](#).
6. [Bacteria](#) is a microscopic, single-celled organism that is destroyed by a class of medicine which includes [penicillin](#).
7. Diseases, such as the [plague](#) and [typhus](#), can be transmitted by [fleas](#).

### Astronomy

1. [Stars](#), dust, and stellar remnants are bound together by gravity to form a [galaxy](#).
2. [Neptune](#) became the outermost planet in our Solar System after [Pluto](#)'s demotion to a dwarf planet in 2006.
3. The eight [phases of the Moon](#) is a cycle that repeats every 29.5 days.
4. [Black holes](#) are regions in space where an enormous amount of mass is packed into a tiny volume.

### Chemistry

1. The Earth's atmosphere is composed of 78% of [nitrogen](#) and 21% of [oxygen](#).
2. [Diamonds](#) are hard-like crystals that are composed of 99.9% of [carbon](#).
3. In a laboratory, a [test tube](#) is typically used to hold, mix, and heat smaller amounts of liquids.
4. Robert Bunsen created a [burner](#) that produces an open gas flame that is used for heating and sterilization in laboratories.
5. [Lead](#) was historically used in paint and pipes before it was poised as a health risk.

## Computer Science

1. An [operating system](#) is a software that manages a computer's memory, processes, software, and hardware, and coordinates programs.

## Earth Science

1. [Hail](#) is a form of frozen solid precipitation that forms inside thunderstorms.
2. [Humidity](#) is the amount of water vapor in the atmosphere.
3. A [dam](#) is a barrier constructed to hold back water and raise its level, forming a [reservoir](#) used to generate electricity or as a water supply.
4. Plant life is supported by a mixture of organic matter and minerals called [soil](#).
5. [Coral reefs](#) are massive underwater structures built by colonies of tiny animals called polyps.
6. [Mosses](#) are flowerless plants that form dense green cushions or carpets on rocks, soil, or trees.
7. [Currents](#) are continuous, directed flows of seawater moving horizontally and vertically throughout the world's oceans.
8. [Tectonic plates](#) are large slabs of Earth's outer crust that move independently.

## Math

1. The [decimal system](#) uses ten digits from zero to nine to write every number.
2. [Prime numbers](#) are numbers that are only divisible by one and themselves. 2, 3, 5, 7, and 11 are examples of prime numbers.
3. [Multiplication](#) is a math operation that is described as a shortcut for the repeated addition of numbers.

## Physics

1. [Air pressure](#) is the force exerted by the weight of air molecules in the Earth's atmosphere.
2. [Weight](#) is measured in ounces or pounds typically using a [scale](#).
3. [Velocity](#) is the rate at which an object changes its position.
4. [Light](#) is a form of energy that can be perceived by the human eye.

## Terms for Further Study

- |   |                                    |   |
|---|------------------------------------|---|
| 1. <a href="#">Sorting</a> (computer science) | 11. <a href="#">Richter scale</a>  | 21. <a href="#">Conifer</a>                 |
| 2. <a href="#">Bubonic plague</a>             | 12. <a href="#">Nervous system</a> | 22. <a href="#">La Brea Tar Pits</a>        |
| 3. <a href="#">IQ</a>                         | 13. <a href="#">Graphite</a>       | 23. <a href="#">HTML</a>                    |
| 4. <a href="#">Power</a>                      | 14. <a href="#">Chlorophyll</a>    | 24. <a href="#">Asteroid belt</a>           |
| 5. <a href="#">Mohs scale</a>                 | 15. <a href="#">Edward Jenner</a>  | 25. <a href="#">Weather front</a>           |
| 6. <a href="#">Dwarf planet</a>               | 16. <a href="#">Archipelago</a>    | 26. <a href="#">E. coli</a>                 |
| 7. <a href="#">Immune system</a>              | 17. <a href="#">Bone</a>           | 27. <a href="#">Gravity</a>                 |
| 8. <a href="#">Noble gas</a>                  | 18. <a href="#">Torque</a>         | 28. <a href="#">Antonie van Leeuwenhoek</a> |
| 9. <a href="#">Bryophyte</a>                  | 19. <a href="#">RNA</a>            | 29. <a href="#">ATP</a>                     |
| 10. <a href="#">Cell division</a>             | 20. <a href="#">Milky Way</a>      | 30. <a href="#">Great Dark Spot</a>         |