



Science

GRADES: 6, 7, 8 | ENTRIES: 3 PER SECTION | TIME: 30 MIN

2026-2027
Qual ♦ Dist ♦ State

SECTIONS. Each grade competes separately.

ENTRIES. As many as THREE students from each grade levels may be entered in the Science District Contest from each school.

ADVANCING TO STATE. First and second place winners from each grades will advance to State. Third place winners will be alternates.

NATURE OF THE CONTEST. The contest presents 50 multiple choice problems. Emphasis in science is placed on three main areas: knowledge of scientific fact, understanding of scientific principles, and the ability to think through scientific problems. This last area is a cognitive challenge requiring students to use higher thinking skills in order to arrive at a “solution” or understanding of a problem without previously having been exposed to that particular set of circumstances. Approximately 40% of the 50-item test consists of Earth Science questions; 40% of the questions are about Life Science; and about 20% are Physical Science. Some overlapping of these scientific areas may be within the test questions, as well.

WHAT HAPPENS IN THE CONTEST. (Substitutes taking the place of absent registered contestants should be sure to let the contest director know as they enter the room to save time in roll call.) The contest director will announce the time and place that contestants and one adult should report for verification of the scoring of tests. Tests, on which the individual Contestant ID label has been placed, and answer sheets will be distributed to contestants face up. Contestants will be instructed to write their grade levels and ID numbers in the spaces provided on the answer sheets. No calculators, alarm watches or other devices that emit sound are allowed in the contest room.

TIME ALLOTTED. Contestants will have 30 minutes beginning at the start signal to take the test. A 5-minute time warning **SHOULD** be given. Contestants will remain quietly in their seats until the time has expired.

MARKING ANSWERS. Contestants will use a black pen or pencil to write their CAPITAL letter answers in the blanks provided on the answer sheet. Any marking or erasure in the answer space will constitute an attempt.

SCORING. Award 5 points for each correct answer. Deduct 2 points for each incorrect answer, or for each answer that was attempted, marked through or erased, and did not result in a correct answer. **No points** are added or deducted for skipped or unanswered test items.

- Mark-outs are acceptable, as long as a correct answer is written beside the mark-out. If an answer is marked out and no correct answer is written in the answer space, 2 points deducted. Erasures are permitted. Any erased correct answer that can still be seen is counted correct. An erased answer that is not correct and does not have a correct answer written over or beside it constitutes an incorrect answer, whereby 2 points are deducted.

VERIFICATION PERIOD. See page 16.

PREPARATION FOR CONTEST. Read and follow all instructions provided in the “Rules for ALL Participants” section of the *PSIA Academic Handbook*. Observe and practice with students all rules and procedures delineated in the “Instructions to the Contestant” and in the “Checklist for Contest Directors” and the “Checklist for Graders.” Preparation for the Science Contest should include studies in above grade level state-adopted Science textbooks, from which most of the test items are derived. The reading of current science publications is also very helpful. Tests from previous years are available on the PSIA order forms

PERSONNEL NEEDED FOR CONTEST.

1. **Contest Director.** *May be a knowledgeable coach of contestants in the contest.*
2. **Assistant Directors.** *Two knowledgeable coaches from different schools other than director’s. One Assistant Director may serve as the Hall Monitor when the test begins.*
3. **Graders.** *Director and assistant directors also serve as graders. To expedite the grading process, provide at least two graders for every 15 papers.*

READING LIST.

Popular Science - <https://www.popsci.com/>

ScienceNewsExplores - <https://www.snexplores.org/>

Currently adopted grades 6-9 textbooks, etc.

SAMPLE QUESTIONS

1. Solar radiation is a combination of light with different wavelengths. Which type of ray can harm human skin the least?

- A. visible light
- B. microwave
- C. deep purple
- D. ultraviolet light
- E. infrared

2. Why do clothing manufacturers study the structure of duck feathers to help them develop materials for use in winter coats?

- A. Duck feathers are soft, and soft materials make good insulators.
- B. The structure of duck feathers conducts cold away from the body.
- C. Duck feathers are made from fibers which conduct heat well.
- D. The structure of duck feathers conducts air away from the body.
- E. The structure of duck feathers traps air, which is a good heat insulator.

3. Which biome contains large populations of grazing herbivores, few species of birds, and deep, rich soil?

- A. a taiga
- B. a tundra
- C. a desert
- D. a grassland
- E. a deciduous forest

4. How much current flows through a circuit containing a 3.6-ohm resistor and a 9-volt battery?

- A. 0.4 Amp
- B. 2.5 Amps
- C. 5.4 Amps
- D. 12.6 Amps
- E. 32.4 Amps

5. Wesley throws a baseball straight up. Which of the following remains constant as the ball travels upward?

- A. its velocity
- B. its kinetic energy
- C. its potential energy
- D. its position in space
- E. its total momentum

Shall and Must List

Contestants **shall** use PRINTED (no cursive) CAPITAL (not lowercase) LETTERS for this contest.

Result: Count the question incorrect if the wrong type of response is given.

♦ ♦ ♦

Contestants **shall** write their Contestant ID on the Answer Sheets and not their name or their school name.

Result: Contest director should remedy the answer sheet by erasing or covering up the identifying information.

♦ ♦ ♦

Contestants **shall** write only their contestant ID and their answers on the answer sheet.

Result: Extraneous marks in answer blanks result in incorrect response for that answer. Extraneous marks outside the answer blanks should receive a warning to the contestant, but not a disqualification.