

**Texas Science Olympiad Guidelines**  
**“Don’t Bug Me!”**

*The following guidelines are intended to aid TSO coaches in teaching the necessary information, as well as to provide their students with the best tools in preparation for the state and national competitions. This information applies to Divisions B and C.*

**Number of participants/team: 2**

**Approximate testing time: 50 minutes**

**Coaching and student study guidelines:**

- Learn *spot identification* of insects in the **Science Olympiad Official Insect List** without reference materials (NOTE: reference materials *will be* allowed, but it is recommended that students be able to identify insects with minimal or no learning aids as time at each testing station is minimal)
- Learn associated types of metamorphosis, type of mouthparts (chewing, biting, etc.), and economic status
- Learn basic knowledge of insect biology and ecology
- Practice using several references to enhance the students’ ability to identify insects (NOTE: a list of links will be provided on the website)
- All information, including these guidelines, the Science Olympiad Official Insect List, and other resources pertaining to the event can be found at:  
<http://insects.tamu.edu/youth/tso/> .

**Basic testing information:** The test will be composed of 25 questions, of which 15-20 questions will require students to identify insects to order (Division B and C) and family (Division C) level. Students will also be required to identify types of metamorphosis, types of mouthparts, and economic status. The remaining questions will require students to exercise different skills, such as using a dichotomous key and analyzing data through charts, graphs, and basic data sets. Each insect identification question will be worth 4 or 5 points (order = 1, family = 1, metamorphosis = 1, mouthparts = 1, economic status = 1). Skills processing questions will vary in point value depending on difficulty of the question. The difficulty of questions will be modified accordingly for both testing divisions.

**Competition details:**

1. Each team will be given one answer sheet on which they will record answers. Students may bring resources for identification, but are urged to learn spot-identification techniques, and be familiar with the biology and ecology of insects from the competition list.
2. Insect specimens and selected immatures will be exhibited for identification questions; and process skills questions including observations, inferences, data analysis, and use of dichotomous keys will be presented at remaining stations.
3. **The team with the highest score will determine the winner. Spelling or selected questions will be evaluated for teams with tied scores.**