

Characteristics Outstanding Biology Teachers

Outstanding biology teachers are inspirations for the rest of us. Individually, such a biology teacher meets the characteristics in each of the following important areas of teaching:

Teaching Style/Approach

1. Is enthusiastic about teaching students the subject matter.
2. Treats students with respect and designs curricula to meet the needs of all students, regardless of level of instruction.
3. Relates subject matter to students' lives, explaining how they are an integral part of the entire ecosystem.
4. Sets an example of integrity inside and outside the classroom and teaches students responsibility and high standards.
5. Plans lessons well in advance, gives adequate time for each topic, and integrates subjects (*e.g.* Science, Technology and Society).
6. Teaches well-organized concepts in a conceptually concise fashion.
7. Stresses concept learning rather than rote memory.
8. Continually reassesses approaches, lectures and tests to insure a fresh, relevant curriculum.
9. Exhibits inquiring behavior typical of scientists.

Subject Expertise/Teaching Techniques

1. Teaches students how to learn, analyze and think critically, emphasizing good scientific methodology and problem solving skills.
2. Prepares lessons that will enhance problem solving ability.
3. Develops hands-on activities to illustrate concepts and uses a variety of approaches to assist the learning processes lectures, discussions, laboratories, demonstrations, field trips, guest speakers, student presentations, films and slide shows.
4. Keeps up-to-date in the subject matter.
5. Maintains competence in the life science fields.
6. Teaches useful lab techniques and lab safety.
7. Stresses the fragility of life on the planet and the importance of maintaining well managed ecosystems.

Teaching Environment

1. Creates an exciting classroom atmosphere with as many living things as possible to enhance learning (*e.g.* well maintained plants and animals, which may include fish tanks, gerbils, mice, reptiles and amphibians).
2. Acquires up-to-date equipment for laboratory work.
3. Joins committees to improve the school, department, himself or herself.
4. Generates new and exciting ideas for students.
5. Encourages students to ask questions about the lesson.
6. Maintains a safe and clean classroom laboratory.
7. Knows how to administer first aid in case of accidents.

Community Involvement

1. Uses community resources by inviting guest speakers from nearby institutions and conducts field trips to laboratories, nature reserves, museums, local water plants, etc.
2. Develops and promotes advanced and/or continuing education courses in the school district, if possible.
3. Attends other activities in which students are involved such as musicals, sports, art exhibits, etc.
4. Takes an interest in and gets involved in community activities.
5. Solicits support from community businesses to improve facilities and programs in the schools.

Professional Development

1. Continually updates knowledge by
 - Reading the literature (e.g. journals such as *The American Biology Teacher*, *Scientific American*, *Science*, *Science News*, etc.)
 - Attending conferences, conventions, workshops and seminars
 - Taking college or in-service courses .
 - Visiting local laboratories, nature reserves, etc.
2. Becomes active in professional organizations and encourages colleagues to join as well.
3. Seeks grant support to purchase equipment, to organize or attend meetings or conferences, and to fund special educational projects.