

## Study of Potential Area of Cooperation Between Industrial Organizations and Secondary School Science Classes in Western Oklahoma

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Science education in the secondary schools of Oklahoma is receiving more emphasis today than ever before in our State's history. The emphasis is extended toward encouraging interested and capable young men and women toward science careers. This is a trend recognized by every modern science teacher.

Probably one of the best ways to interest young people in science careers is to give them the opportunity to observe men and women in positions for which a young person might choose to prepare. The academic atmosphere of the classroom is not nearly as inspirational as the "science in action" atmosphere which may be observed in almost any industrial plant. Perhaps one well planned science field trip in the science program of each secondary school student will do as much to promote science careers as all the vicarious experiences which might be available in the classroom. Field trips for science students are widely advocated by both modern educators and leaders in the fields of science.

To encourage field trips for science classes, to promote careers in science, and to serve the secondary school science teacher, the Department of Chemistry at Southwestern State College in Weatherford has compiled a pamphlet called, "Field Trip Guide for Secondary Science Classes in Western Oklahoma." This guide is designed to aid the teacher in selecting appropriate places for science field trips. The guide summarizes the important science features which may be seen at a particular place, gives the names of the individual to be contacted, and other important items of information necessary for planning a successful educational experience.

Special attention is directed to the role which can be played by industry. For some time industry has made available to the science teacher many fine educational aids such as pamphlets, film strips, and motion pictures. The interest which industry has in education and the personal contributions which they are willing to make by making their facilities available to science classes are striking factors revealed by the contacts made in preparing this field trip guide for Western Oklahoma.

The first edition of the guide was prepared from a dual questionnaire. First, a letter was sent to selected individuals in Western Oklahoma asking them to nominate possible places or facilities thought to be of value for secondary school science field trips. "Western Oklahoma" is arbitrarily considered to be the area west of a north-south line drawn through Ardmore and Ponca City and including Stillwater.

Individuals selected were:

1. All superintendents of public schools.
2. All Chamber of Commerce secretaries in cities over 2,500 population.
3. A science department representative from each institution of higher learning.

A second questionnaire was then sent to each industry, agency or facility nominated requesting the following information:

1. Willingness to participate in this cooperative program.
2. Main features of interest to science students.

3. Approximate length of time required to tour facilities.
4. Preferable days and times of day.
5. Persons to contact in pre-planning the trip.

The information from each returned questionnaire was consolidated and included in the guide. A hypothetical entry is given below. Note the letters "CP" at the end of the first line, indicating that this particular trip would be most suitable for chemistry and physics classes. The code used includes "B" for biology and "G" for general science.

XYZ OIL CORPORATION	ADDRESS	CITY	CP
John Doe, Refinery Supt.	3 hrs.	Mon. thru Fri.	
Three days advanced notice. Chief laboratory chemist will conduct tour.			

All phases of petroleum refining. Chemical laboratory for testing and analyzing petroleum products.

Naturally, geographic locations with geological points of interest are treated somewhat differently.

The response received from school administrators and industrial organizations, as well as others, encouraged the continuation of this project beyond publishing the first guide which contained 51 places to visit. A more extensive survey is now in process using additional methods for selecting entries and, at present, 159 places of interest are planned for a second edition.

A breakdown of the entries indicates the important role which can be played by industry in providing valuable educational opportunities.

Field Trip Entries	1st Edition	2nd Edition
Industrial Organizations	25	67
Geological Formations	*1	33
Individual Collections	1	14
Educational Institutions	3	7
Federal Agencies	6	13
State Agencies	13	18
Municipal Agencies	2	7
<b>Total</b>	<b>51</b>	<b>159</b>

The enthusiastic letters received with the returned questionnaire, especially from industry, indicated the interest which many have in the science program of our schools. An extract from one letter is indicative: "We would be very happy to cooperate in this enterprise. It is the feeling of all concerned that industry certainly has a part in the development of young scientists."

Three ideas suggest themselves as possible values to be derived from this guide and from field trips to recommended places, particularly industrial facilities:

1. Primarily, the promotion of an important educational experience.
2. The promotion of interest in science and the encouragement of scientific careers as the result of direct observations and contacts.
3. The contribution and further development of the fine spirit of cooperation between industry and educators in this state.

Science teachers will find it profitable to avail themselves of the resource facilities in their area. The well planned field trip in science may be one of the educational experiences and the source of inspiration which will start some young person on a science career in Oklahoma. This is vocational guidance at its best.