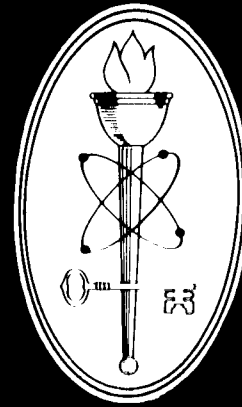


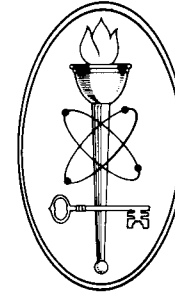
The Berg Plan  
for the  
ADVANCEMENT  
of SCIENCE



*"National In Scope—Grass Root In Concept"*



Mr. Joe Berg



"THE TORCH OF LEARNING PROVIDES THE KEY  
TO THE WORLD OF TOMORROW"

The symbol of The Joe Berg Foundation

## THE NEED FOR A SPECIALIZED PROGRAM TO DEVELOP SCIENTIFIC TALENT IN THE GIFTED CHILD

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The world of today is one which offers great promise and holds grave responsibilities. Technology has taken immense steps forward. It is said that the technological advances of the past 50 years exceed the sum of man's previous scientific progress. We now stand on the threshold of the conquest of space. Great advances have been made in the harnessing of atomic and thermonuclear power. Cures have been found for many of our dread diseases and the outlook is for ever greater achievements. The vistas offered in the second half of the Twentieth Century are limitless.

Progress presents us with grave responsibilities. In this age of "competitive coexistence" we now find greater and greater emphasis being placed upon "competitive scientific achievements"! Mankind now is capable of destroying itself. Truly, we now find that our national survival may very well depend upon our ability to keep pace with scientific advance. We dare not let complacency shove us into a position of secondary importance . . . a position which might mean the difference between freedom and slavery.

It therefore becomes increasingly apparent that our future lies in the brains of today's gifted children, who are tomorrow's leaders and scientists. How then do we go about developing the potential talent of our youth so that we will be able to meet the needs of tomorrow?



The bright look of the "future" is reflected in the face of one of the gifted students participating in a Seminar sponsored by The Joe Berg Foundation.

Certain facts are evident. Most of our leaders today have come from the gifted children of yesterday. In order that we develop the gifted child's talents and stimulate his interests we must provide him with necessary opportunities to utilize his full capabilities. The problem of providing the proper motivation to encourage our youth to embark upon careers in science and mathematics is of the greatest importance.

We cannot select some arbitrary time as the exact moment for the development of "budding" minds. Searching for a realistic plan of action, it appears that the 9th and 10th grade levels are most crucial. It is at this period that a student must orientate himself so that he will elect the essential preparatory studies basic to his future career. It is at this time that he must begin his serious studies in science and mathematics. Therefore the program discussed is one which is designed primarily for the secondary school level.

One of the most perplexing problems facing educators today is the utilization of the talents of the gifted child. Although the concept of providing specialized training facilities for the retarded child is generally accepted, this has not been the case with regard to the gifted child. In reality, we find that the gifted child may be comparably more "retarded" than the presently segregated retarded child. Usually, the gifted child is placed in a situation which is likely, as a result of heterogeneous grouping, to result in downgrading his talents. This subjects him to a series of uninspiring experiences during his high school stay. Instead of being stimulated, he is being bored! Instead of sparking ambition, apathy is encouraged!

## THE BERG PLAN FOR THE ADVANCEMENT OF SCIENCE

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The problems for the secondary school administrators in this area are immense. They are faced with critical shortages of teachers. In the field of science it has been extremely difficult for teachers to maintain proficiency in the light of rapid technological advances. Adequate research facilities for highly specialized science training are generally lacking, and, more often than not, funds to provide these facilities are also lacking.

Greater expenditures alone do not provide the answers to these problems, although in the long term such expenditures will be essential. Assuming that the necessary funds were available at this very moment, the time lag involved in the training and retraining of teachers and in the construction of research facilities would be considerable. The world of today does not allow us the luxury of such a time lag.

We seek an answer which can be put into operation immediately and furthermore this answer must lie within the democratic framework which forms the base upon which this great nation is conceived and dedicated.

We sincerely believe that the program which is explained herein is one that offers a realistic solution to these problems.

The plan for action proposed by The Joe Berg Foundation can best be described as a plan which calls for the *effective utilization of existing community resources*. It is "national in scope . . . grassroot in concept."

Excellent resources do exist in most communities to provide a program for the gifted student. To utilize these resources you need only make a beginning, for experience has shown that the community will respond. The program of The Joe Berg Foundation provides this beginning.

The Joe Berg Foundation proposes that Seminars be established throughout the nation to provide extracurricular training for selected gifted students. This educational program will offer students of exceptionally high ability instruction in scientific concepts, methods, and applications. This instruction is more advanced, rigorous, and individualized than that which could possibly be offered under the regular curriculum. It is distinguished in that it successfully enlists as members of a single cooperative team the technologists and professional scientists of the community.

## ● How The Berg Plan Operates

In outline, the Science Seminar program operates under the following procedures:

1. From its 10th and 11th grade groups, the school selects the most able and promising students who are interested in science and mathematics.
2. These students are invited to compete for admission to the Seminar by taking a qualifying written examination.
3. Those who score high on the examination are invited, with their parents, to attend a general orientation meeting at which the Seminar program is described in detail. At this meeting the students are interviewed personally and the decision on acceptance of the enrollment invitation is reached.
4. The students who enroll meet at the school once each week for a two and a half hour evening Seminar session.
5. The staff of instructors is derived, by invitation, from the community's qualified scientific personnel; they are responsible to the local school but render their services to the community's children at \$1 per year.

6. The activity of the Seminar embraces work and study on such topics as the nature of scientific inquiry and proof, the principles of logic and critical thinking, the preparation of oral and written technical reports, the canons of experimental design, the applied and theoretical methods of research, and statistical procedures.
7. In the course of mastery of understanding of some of the fundamental concepts of science, each student settles upon some hypothesis (or closely related set of hypotheses) suitable for an individual, original research project.
8. Local industry is invited to cooperate with the Seminar by making their research facilities available to the Seminar students while they are working on their research projects.
9. The Seminar operates within the obligations of the policies and educational philosophy of the school. However, in the selection of staff personnel, in the choice and organization of instructional materials and processes, and in the acquisition and utilization of laboratory supplies and equipment, the Seminar may be self-sufficient and self-directed.

It is evident from this outline that the Seminar, while under school sponsorship and support of The Joe Berg Foundation, enjoys a high degree of autonomy. The strength of the Seminar program lies in this autonomy since it allows each Seminar program to develop to the best of its ability, tailored to the local resources and to the needs of its students.

## ● The Motivational Importance Of The Berg Plan

Along with the important training opportunities offered by the Seminars, this program offers broad benefits by providing motivation to all students to strive for intellectual development.

Certainly this program is not designed to orientate every student into scientific endeavors or to create a "one-faceted" person, since any student who is invited to participate in this program must prove his aptitude.

The Seminar program offers recognition to its participating students based upon intellectual achievement. The experiences of schools that have the Seminar in operation have shown that this recognition tends to permeate the attitudes of the entire student body. In essence, this program offers to mental development the same kind of recognition which has long been given to star athletes for physical development.

We believe that the motivational aspects of this program are extremely effective in countering the "anti-intellectual" attitudes which are so prevalent today.

## ● The Importance Of The Berg Plan To Scientists And Industry

Participation in the Seminar program offers many advantages to both scientists and industry. Here is a program which offers the opportunity for public service in concrete personal terms.

The scientist is offered a highly stimulating opportunity of working with active, eager minds in the formative stage. One scientist who is presently participating in this program aptly described his participation as being "a constantly irritating, irresistible challenge."

Local industry has found in this program an opportunity for public service which reflects manifold public relations benefits upon their companies. The close working relationship and associations developed between industry and gifted students, provided by participation in the Seminar program, offers to industry an excellent opportunity to seek out potential talent for their companies in future years.

In all communities where the Seminar has been put into effect, the cooperation of local scientists and industry has been immediate and enthusiastic.



A budding scientist puts his slide rule to work during a Seminar session.

## ● What Is The Opinion Of Educators On The Berg Plan

In December 1957, the Board of Directors of the National Science Teachers Association met in Indianapolis, Indiana, to study plans for the improvement of science teaching. At this meeting the Directors of NSTA issued the following statement:

“The Board of Directors of the National Science Teachers Association commends the Berg Foundation for its plan to encourage talented students in science and sees in this plan a worthy set of objectives. The Board suggests that schools interested in programs for instructing the gifted students in science give careful consideration to the Berg Foundation Plan for Science Seminars for Gifted High School Students.”



## THE JOE BERG FOUNDATION

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Lesson plans for the evening Seminar meeting are discussed by a group of volunteer Seminar instructors.

To aid in the establishment of the "Seminar Program" throughout the United States, the Joe Berg Foundation was established in November, 1957. This Foundation was established through the efforts of Mr. Joe Berg, a manufacturer of trucking equipment, who became personally interested in the Seminar program when his grandson entered a Science Seminar which was in operation at Niles Township Community High School in Skokie, Illinois. Seeing the great interest that this program stimulated in his grandson and in the other students in the program at Niles Township High School, Mr. Berg believed that the Seminar concept had great value and could be used effectively throughout the nation. Conferences were held with leading educational and scientific groups to determine its real merit. After receiving the endorsement of these groups and their assurance that the Seminar concept was needed, realistic and worthwhile, the Joe Berg Foundation was established as a "not for profit organization."

Upon its organization, the Joe Berg Foundation set forth a three phase program for action.

- Phase I—To bring the Seminar program to public attention and to disseminate pertinent information regarding this program with the objective of establishing programs of a similar nature throughout the nation.

- Phase II—To assist all communities interested in establishing a Seminar. *The assistance of The Joe Berg Foundation is offered to interested communities without cost to the community.*

- Phase III—To act as a central clearing house and repository of information accruing as a result of the operation of the Seminars and to offer recognition for achievement to participants in the Seminar program.

Since its establishment, The Joe Berg Foundation has offered its assistance to communities from coast to coast. Presently, there are Seminars in operation in numerous communities and plans of the Foundation call for an ever increasing number.

### ● What Assistance Will The Joe Berg Foundation Give Your Community?

Upon written request and selection of a mutually satisfactory date, the Foundation will, without charge, cooperate by sending qualified staff personnel to assist in establishing a suitable program. There are several methods by which this may be accomplished. Experience has shown that the most effective means is by "area."

An interested individual, (or even more effectively a committee of interested individuals) can arrange a meeting of the school officials and other interested personnel. The Joe Berg Foundation representative will be present to give a detailed description of the plan, its methods of operation, and its objectives. If at that time the local community cares to proceed further, The Joe Berg Foundation representative will make arrangements to assist in the testing, selection of students, and the actual starting of the Seminar.

The Joe Berg Foundation will supply to members of your Seminar staff, without charge, a detailed "Operational Guide" which gives the suggested procedures for the operation of your community's Seminar.

A continuing program of information between Seminars will be conducted by the Foundation so that your local Seminar will be able to benefit from the experience of other Seminars throughout the country. Likewise, the Foundation expects to be kept informed of your local activities so that other areas will benefit from your experiences.

The Foundation will offer recognition for achievement to participants in your local Seminars.

If desired, The Joe Berg Foundation will be pleased to supply complete background material on the Seminar program, without charge, to all interested citizens in your community so that your community will be able to determine the merits of this program.

Although your local Seminar will be autonomous and self-directed, by being part of the broad national program of The Joe Berg Foundation, your local Seminar will receive national recognition.

## HOW TO BRING THE ASSISTANCE OF THE JOE BERG FOUNDATION TO YOUR AREA?

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Jacob W. Shapiro, Coordinator of The Joe Berg Foundation, explains the Seminar Entrance Examination to a group of hopeful Seminar candidates.

The staff of The Joe Berg Foundation stands ready to help your area help your gifted students. To bring the assistance of the Foundation to your area, write to The Joe Berg Foundation, 1712 South Michigan Avenue, Chicago 16, Illinois. Arrange with the Foundation to have a Foundation staff member visit your community, on a mutually convenient date, to set in motion the establishment of a Seminar for your gifted youth.

Write for additional copies of this brochure to distribute to your area's leading educators, scientists, industrial leaders, and service clubs. After bringing this program to the attention of your area's leaders, form a committee to work in conjunction with The Joe Berg Foundation in establishing this program. The Foundation will be pleased to assist in the arrangements for an area conference on this important matter.

For any further information or assistance write to:

The Joe Berg Foundation  
1712 South Michigan Avenue  
Chicago 16, Illinois

“The goal of educational opportunity to every pupil according to his ability, need and interest requires provision for the exceptionally talented as well as for slow learners and those of average ability.

“The problems of education are the concern of all the people—parents, teachers, government officers, scientists and engineers, farmers, industry, and labor. Through cooperative study and action by all these groups, the nation can achieve its goals.”

THE NATIONAL COMMITTEE FOR THE  
DEVELOPMENT OF SCIENTISTS  
AND ENGINEERS