MATERIAL FOR THE ENRICHMENT OF A
SEVENTH-GRADE COURSE IN INDUSTRIAL GEOGRAPHY

A Thesis Presented for the
Degree of Master of Arts

By

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The Ohio State University
1947

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ACKNOWLEDGEMENT

I wish to acknowledge my appreciation for the encouragement and assistance given me by my adviser, Dr. Alan Griffin, Department of Education, Ohio State University.
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CHAPTER I

INTRODUCTION

If the present confused world is to improve, the improvement must be accomplished by fostering those qualities which lead to a democratic way of life. If wars are to be eliminated, crime thwarted, poverty alleviated, and general social betterment brought about, men must become better "inside." If democracy is to continue, men must acquire those qualities which support such a way of life. A better future citizenship must be built by a better education for the present youth.

The teaching or fostering of those inner qualities or higher values rests on the shoulders of the school at least as squarely as does the training for a vocation. There are higher values to be taught by the present day teacher along with the subject matter of the particular field.

In the complexity of our present life the home has children so few of the hours of the day that the building of attitudes falls upon the school. Some desirable values have their source in the home, but the schools must enhance and develop those values. As with the home, so it is with the church. The church has the child only a few hours of the week.

Among all important modern institutions the public school is probably the most democratic. The public school
opens its door to all, regardless of race, creed or color. Indeed, it actually compels "all the children of all the people" to attend. Here is the institution among our many American institutions where a broad community can be obtained.

Through the school doors there comes a group of children representing various races, various nationalities, various religions, various denominations, various abilities, various emotions, various hopes and desires. To the extent that teachers can meet this widely diversified aggregation and mold it into a functioning group without allowing the individual to lose his particular individuality, then to that extent we have moved toward democracy.

What qualities are to be developed to meet the desires of a functioning democracy becomes our central question. The training in our schools becomes a training in those values which bring forth a social accord among the members of the groups and which develop individual potentialities. Our boys and girls cannot learn democracy without living democracy. The school should aid the child to become aware of his worth and assist him to participate actively in a number of undertakings. As a boy or girl realizes his helplessness without attachment to functioning groups he sees the wisdom of enlarging his social boundaries.
Boyd H. Bode says:

To be truly democratic, education must treat the individual himself as the end and set itself the task of preparing him for that intellectual and emotional sharing in the life and affairs of men which embodies the spirit of the Golden Rule. In proportion as common interests are permitted to outweigh special interests, the individual is becoming humanized and the successive adjustments of life will be made in the direction of democracy and in accordance with the needs of an expanding life.\footnote{Boyd H. Bode. \textit{Fundamentals of Education}, p. 62.}

In the very new age in which we find ourselves, the atomic age, now, as never before, we see the need to train our young people not only for brotherhood within the nation but for brotherhood among nations. Moreover, as never before, a respect for the individual of all lands, of all races, of all languages, becomes of paramount importance. The aim has grown for a world-wide democracy and a world-wide community.

In consideration of what is said above, the problem of this thesis is the presentation of materials which will help children of seventh-grade level to comprehend industrial geography in a way that it may have direct
relation to their living and may aid them in tolerance and understanding of others.

The study has dealt primarily with fictional stories, informational stories and films. In order that teachers of industrial geography may benefit from the assembled materials, brief reviews of the stories and films are included in the thesis.

All the materials which are reviewed were selected for their value in making particular industries more comprehensive, their adaptability to seventh-grade interest and for the extent to which they help seventh graders live a better life.
CHAPTER II

VALUES

Natural Values of Industrial Geography

For World-wide Community

In our approach to industrial geography, political boundaries are for the most part disregarded. We look at the world as a unit, seeing where on the vast globe each industry is possible. The climate regions are our concern, not the political regions.

As we study an industry, going from one part of the world to another, the pupils see that the wheat farmer of our Northwest shares the same problems as the wheat farmer of the Ukraine, or Argentina, or Australia; the sheep herder of Montana, the same problems as the ranch owner of Australia, New Zealand, or Patagonia. We grow closer to these people in other parts of the world as we see our common interests, our common successes and our common failures.

In studying the distribution of the world's resources, learning that nature has not put all raw materials in any one continent or specific degree of latitude, the children see the globe as a bountiful garden. From this garden all may share, if man through his greediness does not put a fence about some portion of this garden.
The children come to understand that a world friendliness is necessary if all are to use the widely scattered materials. A splendid example for seventh graders who, themselves, helped with the collecting of tin cans, has been our scarcity of tin while the Japanese occupied the Malay States.

As children learn of the scantiness of the tundra regions, the lack of fuel in China, the hunger in lands where the soil is exhausted, they long to share with those where conditions are not favorable.

In the Junior High Curriculum

The junior high curriculum is planned with an aim of offering an exploratory course so that boys and girls may become acquainted with the content of a variety of subjects. The curriculum aims also to assist the child in discovering those areas or fields which suit his interests and aptitudes.

Industrial geography lends itself well to this aim for it is, itself, a field of exploration. The major industries of the world, agriculture, fishing, lumbering, mining, manufacturing, transportation, and trade are explored. A child gains a knowledge of the wide span of industry and the many occupations at which man works.
Arousing interest

In introducing any one of the industries, if a rousing, good story which deals with the particular industry is read to the class, there is an immediate interest and a desire to find out what the text book has to say. For example, if the class is ready for the study of fishing, Anthony Cama's The Giant Tuna might be read. This is a story of Nino who goes with his uncle, Zio Luigi, on the Strait of Messina to catch tuna. One sees all the preparations, the baskets of carefully coiled lines, the greasing of the keels of the dories and the filling of the jugs with fresh water. The tuna is caught. He is a big fellow of four hundred pounds.

From this story, realms of interest are opened to us. One might begin with the canned tuna with which the children are familiar. What other fish are canned? Are sardines large fish, too? Where are salmon caught? In what other ways are fish preserved? Where are the richest fishing grounds? What fish live in salt water and what fish in fresh water? What methods of fishing are there besides the line and hook? How did primitive man catch his fish?

With this particular story, some child or several children will be familiar with the town of Messina. They

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heard of it from older brothers, uncles, or cousins in the service. These children locate Messina on the map and also the strait where Nino went fishing for the tuna. These children have information to tell to the class or perhaps something to bring to show which has come from Sicily or from Italy.

Stories furnish an interest and enthusiasm which is invaluable to the teacher. With the location of a suitable story, the task of teaching a particular industry is well launched.

Stimulating research

Research at the level of seventh grade does not mean a carefully controlled inquiry designed to test a particular hypothesis. This is an adult conception of research. For pre-adolescents, research generally means an investigation of the school library or city libraries for books or magazines with information on a subject in which curiosity has been aroused.

A desire to find further material on a subject is often the outgrowth of a story. The research may, or may not, concern the direct subject of the story. With the story of The Giant Tuna some child may wish to increase his information on the tuna. Another child may wish to know more about

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1 Anthony Cama, "The Giant Tuna", Story Parade Green Book, pp. 311-322.
dories or he may wish to know more of other types of boats, not only trawlers and whalers, but cattle boats, freighters, tankers, speed boats and perhaps, battleships and yachts. Frequently a teacher leans from the librarian that she is being besieged for material on a subject which has not been dealt with directly in class, but which is the outgrowth of a story. Some detail of a story has caught an individual interest. The story becomes an appetizer for the digesting of a full meal. The full meal may reach the proportions of a sumptuous banquet.

John Dewey has said:

Normally every activity engaged in for its own sake reaches out beyond its immediate self. It does not passively wait for information to be bestowed which will increase its meaning; it seeks it out. Curiosity is not an accidental isolated possession; it is a necessary consequence of the fact that an experience is a moving, changing thing. Curiosity is but the tendency to make these connections perceptible. It is the business of educators to supply an environment so that this reaching out of an experience may be fruitfully rewarded and kept continuously active.1

Boyd H. Bode has said:

Aims spring from the soil of experience, and new aims constantly arise as experience develops. Experience consequently has a marvelous flexibility and capacity for growth. The whole mass of human achievement has its

1 John Dewey, Democracy and Education, p. 245.
origin in the fact that experience constantly suggests new possibilities, new ventures.¹

**Vitalizing the industry**

An industry may seem very remote to a seventh grader if not connected to his everyday living by means of a story. The clothes he wears become a real part of the textile industry after he has heard or read such story as Youel B. Mirza's *The Rug That Went to Mecca*. In this story, with a Persian setting, the father removes the fleece from the sheep's backs, Onnah and her mother wash the wool, the wool carder comes to card the wool. Onnah learns to spin the wool by using the distaff. Asad and his grandfather gather roots and plants to dye the wool. Asad and Onnah learn to weave on the looms set up by the father.

The industries which produce his clothes become much more vital to the child as he sees the performance of the processes by people who are real to him. So it is with the cheese he eats, the watch he wears, or the copper which brings electricity to his house, if he may move a story which illuminates that industry.

Stories lift the child from a plane of gazing stupidly at land, water, air and animated things to a plane of understanding the world about him. Through stories the industries

of the world may steadily become more concrete to the child.

Adding detail and local color

Through a story an industry may take on a great deal of local color. Much detail may be added which is impossible in the textbook. The story, Barney of the North, illustrates this point well. Logging in the coniferous forest of Canada is described with much local color as the reader sees the arrival of the crews for the winter's work, the building of the cabins to house the men, the teamsters with their horses, the stables, the cook's cabin, and the snow-covered ground of the forest. The reader hears the sound of the axes as the trees are chopped, the crash of the falling trees, the clatter of dishes in the cook's cabin, at night the cracking of the trees in the intense cold, and in spring the grinding roar of the ice going out in the river. The reader smells the fragrance of the pines and spruces; the aroma of frying bacon and hot coffee assails his nostrils. He feels the warmth of the fires in the cabins and the freshness of the cold in the mornings.

Details of the lumbering industry are emphasized in this particular story as Barney watches the men break a log jam. "These men wear well-spiked shoes and use a long

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Margaret S. Johnson and Helen Lossing Johnson, Barney of The North.
pole with a sharp iron tip, called a peavy.\footnote{1}

Little, intimate details become important when related to characters who to the child are real people. Medium for the developing of attitudes

Many stories serve valuably in building attitudes of kindness, generosity, tolerance, responsibility, patience and endurance. Stories may be selected in which the hero has one or several of these desirable attributes. Children see characters as live persons; children march in the boots of the heroes.

Animal stories are good choices for showing kindness and devotion, as for example, Don Lang's \textit{An Elephant Never Forgets}.\footnote{2} Sirens and police bullets could not stop old Roger, the elephant, on his wild rampage but the sound of the sympathetic voice of Tex Bell, who had always been kind to the elephant, brought a very submissive Roger.

A good choice is a story which shows a working together for the accomplishment of a difficult task, sharing the hardships and joys of the job as in \textit{Road to Alaska}. \textit{Road to Alaska} is a true account of the construction of the Alcan

\footnotesize
\begin{enumerate}
\item Margaret S. Johnson and Helen Lossing Johnson, \textit{Barney of The North}, p 46.
\item Don Lang, "An Elephant Never Forgets", \textit{Story Parade Green Book}, pp 135-143.
\item Douglas Coe, \textit{Road to Alaska - The Story of the Alaska Highway}.
\end{enumerate}
Highway. With united effort, courage and unbelievable endurance, the men of the United States engineering corps fought the highway through to completion. These regiments, composed of men from the North, South, East and West, black men and white men, endured sickness, bitter cold, giant mosquitos, hardship and loneliness with courage and humor.

Son of The Apple Valley, in which the hero takes responsibility and sees things through to a successful finish, would bring inspiration to boys and girls. Cris Corbin, the hero, leaves college when his father is crippled by a fall from an apple tree. Cris takes over the pruning of the trees, the mulching, the spraying, the cold storage and the marketing. Cris outwits Benny Lux, the soundrel, saves the apple orchard, and pays off the mortgage.

Stories create a spirit of fellowship within the class. If a story causes us to laugh together or to weep together, we have grown closer because of the shared emotion.

Boyd H. Bode says:

This ability to share imaginatively in all sorts of experience, to regard nothing human as foreign to oneself is just another name for that enrichment of life which functions with the life of the individual, as a moral idea and in the institutions and practices of society as an ideal of democracy.

1 William Heyliger, Son of The Apple Valley.

2 Boyd H. Bode, Fundamentals in Education, p 15
John Dewey said:

The most important problem of moral education in the school concerns the relationship of knowledge and conduct. For unless the learning which accrues in the regular course of study affects character, it is futile to conceive the moral end as the unifying and culminating end of education.¹

Appreciation for our democracy

Innumerable contrasts to our freedoms are possible through stories.

One may tell a child that in certain parts of the civilized world girls are not taught to read or allowed to go to school, but the full realization of this is felt when the child experiences it through a story. In The Rug Which Went to Mecca, Asad goes to school, but Onnah, his sister, stays with her weaving. Never will Onnah know how to read; never will she, being a girl, make the privileged trip to Mecca. Likewise, in the story Ho-ming, Girl of New China, a little girl longs to learn to read. The reader witnesses her struggles against superstition and family tradition to gain the desired education.

In Young Fu of the Upper Yangtze, Young Fu, age thirteen, is seized by some soldiers on his way home from

¹ John Dewey, Democracy and Education, p 418

² Yoel B. Mirza, The Rug That Went to Mecca

³ Elizabeth Foreman Lewis, Ho-Ming, Girl of New China

⁴ Elizabeth Foreman Lewis, Young Fu of the Upper Yangtze
work at the coppersmith's. He is made to carry a load much too heavy for his frail shoulders and is beaten when he pauses.

Through stories a keen appreciation for the privileges and protections of democracy may be gained.

Understanding people in other lands

In reading stories of boys and girls in other lands, our children learn how very much they have in common with those boys and girls. They come to understand that living in a certain country or a certain climate has not made one fundamentally different. Through stories they share experiences with children in distant lands.

What boy or girl in America has not lain awake at night pondering how he could change a parent's point of view from the traditional and conventional as little Abdullah does in The Magic Horse of Samarkand? Abdullah can not sleep, he desires so much a tractor which he saw at the fair; the tractor plagues him, for Abdullah realizes that many hours of hard toil are child's play to the tractor. But to Ahmed, the father, the tractor is an evil thing; oxen have served for generations.

Ahmed of Uzbek gave way to the wishes of his son, not because he saw the wisdom of using the tractor but because he could not refuse his son. Is there an American boy or

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girl who has not had this kind of experience?

A shared experience fosters tolerance and appreciation for our brothers in other lands.

Value of Informational Stories

Clarifying the Concept

An informational story serves in making the concept of a product or an industry clearer by approaching the material from the realm of a child's experience. For example, from a textbook comes the following: "All coal, including peat, is sometimes called fossil fuel. Coal is the remains of plants that lived long ago and luckily for us, have been preserved in a form useful for fuel". In contrast to the textbook, is the following from an informational story: "There is something that ordinary householders store away in their cellars by the ton. Yet it is worth more than all the world's gold and silver. Poor people can buy it - and great nations fight for it. ..... Much of it is rock like, but it burns."

In the latter example the product has been approached from the child's experience. The origin, use, and value of coal are made clear to a child by proceeding from a

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1 J. Russel Smith, Our Industrial World, p 219

2 Mary K. Chapin, Coal, p 3.
point within his experience.

Simplifying the language

By the very nature of the subject matter, the language of a text book for industrial geography is difficult for a child. By making use of informational stories, the child can read of an industry or a product in meaningful language. For example, in the above citation from a text book, the word fossil is meaningless to the average seventh grader. Even the word fuel cannot convey to the child as much meaning as the word burn.

Informational stories, in simplified language, are available on all important subjects. Many of these stories can be secured at dime stores. A number of commercial companies have prepared stories of their products in language comprehensible to children.

Relief from Monotony

The informational story serves as relaxation from the text book and relieves the monotony by the use of detail and personal approach. The study of an industry or preparation of a lesson may become an enjoyable experience rather than an irksome task.

The retarded reader

For those members of a class, who are of lower reading level, the informational story is invaluable. The teacher can, by assigning work in the informational-story books,
keep the retarded readers even with the class. Through this means the retarded reader may be kept an active, participating member of the group.

The informational story serves valuable in avoiding frustration for the lower-level-reading members of a group.

Films

Replacing the excursion

An industry may be brought to the classroom by means of a film. The time, trouble, expense, and hazard of an excursion may be dispensed.

An excursion to a factory or mill means hours of time from the school building. While children may be witnessing processes valuable to industrial geography, they are missing periods from other subjects. An excursion involves the upsetting of school routine.

Arranging transportation for an excursion, notifying parents where the children will be at the time of the trip, and other details cause a great deal of work for the teacher and demand much of her time. Furthermore, there is expense incurred by an excursion.

The excursion is subject to hazards in that children traveling in groups become careless of traffic. In their excitement of a trip, children forget and mislay belongings.
Frequently, trips to plants and factories bring disappointment because the viewing of certain processes of the industry may be forbidden because of danger to visitors. For example, furnace rooms of steel mills and high voltage rooms of electric power plants are not available to visitors.

These shortcomings do not mean that teachers should never use excursions; they do suggest that excursions should not be undertaken lightly, and that if the aim of the excursion can be accomplished by other means it is often well to employ them. The film not only furnishes an adequate substitute for the excursion, but in many instances, it also takes the place of an impossible excursion. Industries not peculiar to our own locality or our own country may come to the classroom. It might be, for example, the salmon fishing industry of the Pacific coast or rubber production in Sumatra, or wood carving in Switzerland.

Simplifying the complex

Frequently the complexity of an industry makes it impossible for the teacher to present it to the class other than by a film. This is true, for instance, of the work of the machinist and tool maker. The film pictures for us the ways of machining metals: the engine lathe, drill press, milling machine, planer and grinder. The commentator explains each machine as the children see it at work.

The use of measuring devices with their infinitesimal
accuracy and of blue print reading can be pictured and explained. The children see men at work and have a chance to observe the care and exactness of the work.

**Portraying the climate regions**

Children may read in the text book of the scantiness of growth in the tundra, or the profusion of growth in the equatorial forest, or the arid condition of the hot deserts, but fuller realization is possible through a film. *Hunting Muskox* which was filmed within a few hundred miles of the north pole gave a clear portrayal of the region of the tundra, as *Jungle* did for the equatorial forest. *Death Valley* is excellent for the drought and aridness of the hot deserts. *Tibet* is splendid for showing the cold, wind-swept plateau. The *Watussi of Africa* pictures the tropic grasslands. Thus, by means of films, truer landscapes of remote regions are possible.

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2. *Ibid*, p 165

3. *Ibid*, p 42

4. *Ibid*, p 93

5. *Ibid*, p 88
Understanding peoples in other parts of the world

One of the greatest values of films is the picturing of peoples in other countries. Through films a child may learn of the homes, the work, the dress, the customs and festivals of peoples in the remotest parts of the world, from the Pygmies of Africa to the Laplanders of northern Sweden and Norway.

Films aid greatly in bringing an understanding of other peoples as we see them at work, view their skills, their hardships, and dangers; or watch them at a festival, seeing their pleasures and light-hearted moments. Scenes which show their worship, their temples, or religious ceremonies create in us deep impressions. An understanding as to how people work, play, or worship brings a tolerant and sympathetic feeling for them.

With films, as with stories, children see how much we have in common with other peoples. There is much we share with the black man of Africa or the Eskimo of the North. Everywhere man is striving for a livelihood and to adjust to his environment. Everywhere man endures risks and failures. Everywhere man enjoys successes. Everywhere man has griefs and sorrows, joys and happiness. Everywhere fathers and mothers are devoted to their children. A different continent, a different climate, or a different political boundary need not make man fundamentally different.
In the film, *The Watussi of Africa*, one sees the natives adjusted to their environment by their type of house, their clothing and their food. One sees them at their work and at their sports. One witnesses the pride of the father in the skill of his son and the devotion of the mother to her children.

Lawrence K. Frank says:

So soon as we begin to regard diverse cultures as so many different answers proposed by man to the same tasks or questions, so many solutions offered to the same vital problems, then may we find it less difficult to think of world order.

To believe that the English-speaking or Western European peoples can impose upon all others the parliamentarism, the peculiar economics, business practices, the esoteric creeds and religious rituals, and all the other idiomatic features of Western European patterns, is the initial misconception and blindness in so much present-day thinking and planning.

Brotherhood of man will come through the realization that all men everywhere face the same life tasks, share the same anxieties and perplexities, the bereavements and tragedies, seek the same goals in their cultures.

Increasing Aesthetic Appreciation

The beauties of nature may be shown, magnificent waterfalls, towering mountains, graceful trees, colorful birds

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2 Lawrence K. Frank, "World Order and Cultural Diversity", *Frontiers of Democracy* (October 15, 1942) pp 13-14
and flowers. The film, Orchids and the Flora of Tropical America in color, brings forth sounds of ecstasy from children as they view the wondrous beauty of the plants.

From The Motion Picture in Education we read: "In 'The Plow that Broke the Plains' Pare Lorentz caught a field of wheat in a mood of rhythmic beauty: So lens of the camera can be used to sharpen the eye to the aesthetics of the common place and the magnificent."

Value of Newspapers

Furnishing current material

Newspapers serve in furnishing timely material. Accounts of crop failures, forest fires, floods, tornadoes, laying of pipe lines, coal strikes, etc. all have a bearing on the study of industrial geography. Such accounts may be used with the particular industry being studied at the time.

Providing the unusual

Accounts of the unusual are brought to us by the newspaper, perhaps the birth of twin calves, a large litter of pigs, a giant wheat crop, a new speed record, or the discovery of a mineral in an unexpected place.

Furnishing timely pictures

Frequently, even from the ads, newspapers furnish

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pictures for the bulletin board. The picture might be of a large litter of pigs, twin calves, a new record breaker, the opening of a mine, or the laying of a pipe line.

**Providing student participation**

In almost every home there is a daily newspaper. Clippings from newspapers, probably more than any other material, are brought to class by children.

These contributions serve a doubly valuable purpose. The materials brought in are timely and pertinent. Of greater value is the student's participation. The contributing of newspaper clippings offers functional activity by individual members of the group. The writer has found it a good practice to allow each student to place his contribution on the bulletin board.

**Value of Magazines**

Magazines vary greatly in content of material and means of presenting materials, as well as in style and language. Some more valuable for industrial geography at seventh grade level are considered. Magazines provide a valuable source for supplementary work.

**Junior Scholastic**

The language and content of *Junior Scholastic* are easily handled by the average seventh grader. The magazine furnishes much pertinent material for industrial geography
as articles on copper, citrus fruits, quebracho and others. It provides pictures and maps. It is an excellent source of material for oral reports. The quality of paper is poor.

**Young America**

Another school magazine, similar to *Junior Scholastic* with material of seventh grade level is *Young America*. This publication usually carries an article on a particular country, giving its products and industries. The material is well selected and well presented. The maps are good. *Young America* provides material for oral reports. The quality of paper is poor.

**Building America**

A very valuable magazine for industrial geography. The magazine has many illustrative pictures. Each issue deals with a particular subject, featuring those things which are playing an important role in the lives of Americans. For example, one issue may be devoted to plastics, another to television, another to plywood, etc. The quality of the paper is good and the print is large. A teacher of industrial geography will find this magazine one of his most helpful aids.

**The National Geographic**

Although the reading material in the *National Geographic* is beyond the level of the average seventh grade child, he should by all means have access to it because of the splendid
photographs. Many of the photographs are in color, and the portrayal of fine detail is excellent. From the pictures a student gains a great deal of information pertaining to industries. Many important facts can be learned from a study of the pictures.

**Popular Mechanics**

The mechanically-minded child reads *Popular Mechanics* more easily than an adult who is not of that mind. Boys, especially, gain a great deal from this magazine. They bring many worthwhile contributions to class from their reading of this magazine. The pictures and diagrams are good. The quality of paper is good.

**Popular Science**

*Popular Science* is very similar to *Popular Mechanics* in format, quality of paper, and contents. It, too, appeals chiefly to boys and offers the same value as *Popular Mechanics*.

**Life**

The fact that *Life* is a pictorial magazine makes it usable by seventh graders. Both boys and girls enjoy it. It gives much material relative to industries and is helpful for the slow reader or the non-reader. The quality of the paper is excellent.

**Look**

*Look* is primarily a pictorial magazine. Boys and girls can assimilate much information with very little reading.
Seventh graders enjoy it. The paper is good.

Holiday

Like Look and Life, Holiday serves seventh graders through its pictures, many of them in color.

Value of Bulletins and Booklets

Bulletins and booklets are devoted to one subject and thus afford a source of additional information on a particular industry or product. Many must be read to the class by the teacher. However, some of the large commercial industries have prepared booklets which are on the reading level of seventh graders as for example The United States Rubber Company with the booklet Rubber. Many of the commercial companies will furnish sufficient copies of their booklets for the members of a class.

Most of the commercial companies furnish their educational material free, or at very low cost. The American Forest Products Industries have a series of three booklets, Forests, Trees for Tomorrow and New Magic in Wood, which are very helpful aids in teaching forestry and lumbering. These booklets are free and a number will be sent to a teacher upon request. These forest booklets are mentioned

1 Educational Department, United States Rubber Company, Box 12, Station G, New York City.

2 American Forest Products Industries, Inc., 1319 - 18th Street, N.W., Washington, D.C.
as an example. There are booklets on petroleum, coffee, cocoa, citrus fruits, rayon, and innumerable others which are offered by commercial companies at no charge.

Travel agencies, railroad companies, steamship lines, bus companies, and air lines have free bulletins, many of them very helpful. Most of these bulletins furnish pictures which are good bulletin board material.

Some companies offer booklets and bulletins at very low cost. The Tanners’ Council of America has a booklet, 1 The Romance of Leather, beautifully illustrated which sells at five cents a copy.

2 The Geographic School Bulletin published weekly by the National Geographic Society may be subscribed for by students at low cost. These bulletins discuss more than one topic in each issue. The material is very helpful for background enrichment. The language is a little difficult for the average seventh grader but the better students can read them and all students are helped by the pictures.

Bulletins and booklets on subjects pertaining to industrial geography are numerous. They furnish much material for the enrichment of a course. The fact that much of this material may be had for school children at low cost or free, brings an additional satisfaction.

1 Tanners’ Council of America, 100 Gold Street, New York 7, N.Y.

2 National Geographic Society, Washington, D.C.
CHAPTER III

FICTIONAL STORIES

Reviews of fictional stories are presented in this chapter. The stories were selected for their value in providing enriching detail concerning particular industries and for their interest appeal to children of seventh grade level.

Louise M. Rosenblatt says:

The really important things in the education of youth cannot be taught in the formal didactic manner; they are things which are experienced, absorbed, accepted, incorporated into the personality through emotional and esthetic experiences.  

Prolonged contact with literature may result in increased social sensitivity. Through poems and stories and plays, the child becomes aware of the complex personalities of other people. He develops a stronger tendency to notice the reactions of others to his own behavior. He learns imaginatively to "put himself in the place of the other fellow." He becomes better able to foresee the possible repercussions of his own actions in the lives of others. In his daily relations with other people such sensitivity is precious.  

The stories have been chosen for seventh-grade level with the fact in mind that in any group there are children who prefer stories dealing with more mature problems while

1 Louise M. Rosenblatt, Literature as Exploration, p. 214.

2 Ibid., pp. 217-218.
others prefer stories of more childish content. However, the interest appeal of the majority of the stories is sufficiently broad to span the interest range. If a story is not of sufficiently broad interest appeal it has been thus designated in the review.

In each instance the story selected calls for average seventh-grade reading ability unless specified otherwise in the review.

The writer has attempted to review each story in a manner which will show its relation to a particular industry and also to reveal its other merits.
AGRICULTURE
In the United States

Corn-Belt Billy by Mabel Leigh Hunt.

Corn-Belt Billy depicts the importance of the corn belt in the feeding of the world. The story makes it evident that this section can truly be called, "the bread basket of the world." It helps us look for beauty in the things about us.

The plot concerns Billy, a little boy of the Corn Belt who becomes dissatisfied upon hearing tales of the East and Far West from a tourist his own age. A trip with Cousin John through the corn belt enlightens Billy to the importance of his own work. He competes in the state corn-growing contest and wins.

From Billy's trip, we learn of the extent of the corn belt. We see the pens of cattle and hogs fattening on corn for market; along Lake Michigan, we see the freighters being loaded with by-products of corn. At home with Billy, we see the corn in the fields, the fertile soil and the care of a corn crop.

Golden Heritage by Elizabeth Yates.

An appreciation for the privilege of a schooling as well as a knowledge of the wheat industry of the Northwest may be gained through this story.

The Fentons own a large wheat farm in the Northwest.
When it is time to harvest the wheat, Mr. Fenton and son, Dan, drive two teams a distance of twelve miles to the nearest railroad station. The town swarms with harvesters waiting for farmers to choose them. Mr. Fenton chooses twenty men among them a Danish lad of sixteen. Then, ten men with Mr. Fenton and ten with Dan, they drive back to the Fenton's bunk houses.

Work begins at daylight and ends with darkness. As the reaper cuts and binds the wheat into bundles, the men follow gathering the bundles into shocks.

Nights, at the bunk houses the tired men sing and Dan, who is twelve, reads to them. These men have not learned to read. Arnuf, the Danish lad, wishes he knew how to read.

When the work in the wheat fields ends, some of the men go South to work with road gangs, others go North to the lumber camps, but Arnuf agrees to remain for a month to help haul grain to the elevators.

Before Arnuf leaves the Fentons, a blizzard strikes sending the thermometer to twenty-six below. A rope is stretched from house to barn to guide Mr. Fenton and Arnuf when they go to the barn to feed the stock. Dan ventures forth; losing his hold on the rope, he is lost in the blizzard. Arnuf rescues Dan. Mr. Fenton invites Arnuf to remain with them and to go to school with Dan at Red Deer Turn, five miles away.

Wheat Rancher will bring to the reader much information on the wheat industry and an equal amount of information about draft horses. The story presents the idea that success and enjoyment in life come in laboring at the work one loves regardless of its difficulties and risks.

The setting of the story is southern Montana. There is much local color, the fresh odor of the wheat fields, the black loamy soil, the horses sweating under their harnesses, the vast stretches of sparsely-peopled land, the outcroppings of granite, the raw cold of the winter, and the chinook melting the heavy snows overnight.

The time is the eve of the introduction of steam shovels, tractors, combines and other mechanically driven tools. "Yep, turned my horses out to pasture. This will do everything, disc, harrow, seed, pull a binder, run a thrashing machine, sawmill or anything else."  

The hero is Emery Frazier, age twenty, who has come from St. Paul, Minnesota to Montana with his father's construction gang to build railroads. Mr. Frazier's men use horses.

Emery does not like construction work. The rich soil lures him. Emery's adventures in his struggle to become a wheat rancher and his responsibility of his father's horses

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offer the reader an opportunity to learn much of wheat and horses. "Work horses needed to be curried and brushed every day. Above all, they needed to be well fed. On heavy work such as plowing or pulling scrapers they should have grain three times a day. Cattle were best and horses ought to have plenty of good hay too. Pasturage was not enough." "On either side of the four-mile lane leading toward the Big Belt Mountains yellow wheat waved in the warm southwest breeze in long, lazy undulations, giving off a fresh heady smell like newly baked bread."

There is sufficient adventure in the story, wheat fields afire, horse thieves, capturing of outlaws, etc., to keep seventh graders reading eagerly. There is also Jim Taylor, age twelve, who shares in many of Emery's adventures.

The Red Tractor by Paul Corey.

This is a wholesome story of an Iowa farm family on their homestead farm. A large 5,000-acre farm corporation, backed by the bankers and the farm agent, is trying to squeeze out the small farmers by buying their land and offering them work on the corporation farm. As the local hardware merchant is a stockholder in the farm, the Fairview Farm Corporation gets all the tractors.

\[1\] Op. cit., p. 16

\[2\] Op. cit., p. 97
The story tells how a few small farmers team together, get a tractor, and finally hold their homestead farms against the encroaching Fairview Corporation.

The story centers around the Shield family—Jim, the father, Mary, his wife, and the three children. Stan is the eldest, seventeen years old, and a graduate of the Hanley High School. Dorothy is a Sophomore in high school and the only girl who wears her hair in braids but, as her dad and the boys say in great pride, "You are the only girl with enough hair to wear it in braids." Pete is in grade school. Pete loves the cows and pigs and finds it fun doing the farm chores.

The year brings success for all. Jim and Mary save their farm for which they have worked so hard. Stan reclaims his father's newly-bought eighty acres of worn-out land which joins the home place. "When Stan took the Future Farmers courses in the Hanley High School, he'd studied about erosion, sheet-erosion and gulley washing. He used to dream, in order to pass the time plowing corn, of getting an old piece of worn-out land cheap and building it back into production. That'd be fun. He figured how he'd contour-farm it and strip-farm it, maybe even put in terraces. He'd put dams in the big gulleys and set out black locust trees to hold the soil." Dorothy raises chickens for her 4H

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project and Pete's calf became state champion.

_The Pedler's Clock_ by Mabel Leigh Hunt.

_The Pedler's Clock_ might be used for introducing a study of dairying. It affords excellent opportunities for contrasts with modern dairying.

There is a good portrayal of New England family life, with father the authority in the home and grandmother the guiding light. It gives a vivid picture of a little boy's love for his cow and his farm chores.

The setting is in Maine in the early part of the nineteenth century. The Bellamy family live on a farm. Each day the three Bellamy boys, Miles, Ezra, and Timothy bring the cows, Daisy, Sukey, and Muley, from pasture. Each boy milks the cow he claims.

The Bellamys have no clock for Father thinks his watch is all that is necessary. When a pedler comes along, Mother exchanges Muley for a clock.

Timothy is very lonely without Muley. Father rides into town, pays for the clock, and brings Muley back to her stall. As Timothy sat down in the milking stool and pressed his head against Muley's flank, he thought that the sound of the milk hissing against the sides of the pail was much sweeter than the chimes of the clock.
Son of the Apple Valley by William Heyliger

The story takes place in New York. The reader can learn much of the care of apple trees, the gathering of the apples, cold storage, marketing of apples, the location of orchards. "Seven hundred and fifty trees to spray, again and again, in the ceaseless fight against scab, apple maggot, red aphis, and codling-moth ......... He roved the orchards, Baldwins, Romes, Greenings, Macs, Spies, and noted the skill with which his father's careful pruning of other years had formed the trees."

Cris Corbin is the hero of the story. Cris leaves college when he finds things are not going well at his father's apple farm. Through hard work and keen wits, Cris manages to save the orchards and pay off the mortgage.

This story will appeal to the more mature children.

Writing to Popsey by Mabel LaRue

This story will make children laugh. Mrs. Toosey with her seven lively children, a lively dog and a lively cat, finds the kitchen of their house much too crowded.

Mrs. Toosey locates a farm with a yellow farm house, a red barn, a shed, and other buildings. There is space for all. The children help with the moving.

The most amusing part of the story contains the letters

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William Heyliger, *Son of the Apple Valley*, p. 45.
written to Father telling him of the animals needed to fit the newly-found farm. Tiny's letter was a series of drawings but the message was clear.

"Popsey" does not fail; he arrives with the animals requested and farming gets under way.

This story is suitable for the less mature members of a seventh-grade group.

In Other Countries

Lazy Mario by Lucy Herndon Crockett.

A story which shows us that experience is the best teacher even though sometimes expensive.

The scene is the Philippine Islands. The reader sees the rice paddies, the nipa houses with their bamboo ladders, the carabao drawing carts, the palm trees, the bamboo and banana plants, and the white dust of the roads.

Lazy Mario is a little boy of twelve who dislikes helping his father in the rice paddies. Mario sits in the warm sun and daydreams. How he longs to go to Manila where there are automobiles, moving pictures, and money easily earned!

The opportunity comes. Mario rides to Manila on a cart loaded with baskets. Once there he falls into the hands of some boys who strip him of his two pesetas in a game of chance.

Mario, hungry and tired, has a long walk home along a
hot, dusty road. He was poorer by two pesetas but much richer in wisdom.

Ho-Ming, Girl of New China by Elizabeth Forman Lewis.

A picture of modern Chinese farming is given in this story of Ho-Ming. The reader meets Ho-Ming, a little girl whose feet are not bound, and also her family including the grandmother, Lao-Po-Po who represents the Old China. On their small farm one sees the care and feeding of silk worms, the use of the water buffalo, the crops, and work done by crude implements. "Yuen-San pedaled at the water-wheel to divide moisture evenly over the small terraced fields; carried fertilizer in buckets and ladled it freely about beans, peanuts and sweet potatoes; led old Shui-niu to the nearest pond for the clumsy beast to bathe in the water that was almost as essential to his existence as air."¹

The plot of the story deals with Ho-Ming's desire to learn to read. Her struggles against tradition and superstition to gain an education through association with the white woman doctor makes an interesting story which American boys and girls will enjoy.

Masha, The Little Goose Girl by Marguerita Rudolph.

Marguerita Rudolph, from the Ukraine herself, has written a delightful little book of events and scenes in

¹ Elizabeth Forman Lewis, Ho-Ming, Girl of New China, p. 45.
her native land as she recalls them.

There is much warmth of feeling in the story. The little things Masha enjoys are the same things which little girls everywhere find to be fun.

The story is a picture of the Ukraine, a land of broad wheat fields and song, where people sing at work or at play.

Masha does her tasks cheerfully. Her adventures are helping with real grown-up work. Masha tends the geese. She helps with the washing at the creek, beating the clothes with a big paddle. She helps her mother bake the rye bread and carry dinner to her father and brother in the fields.

The big fall event is the cutting of the cabbages to make barrels of kraut. Hogs are butchered, apples are stored, peas and fruit are dried. The family feels secure against the cold of winter.

The Magic Horse of Samarkand by Ruth Epperson Kennell.

An excellent portrayal of the people of Uzbek with their antiquated methods of farming is given. These people, with the help of oxen, toil long hours in their fields. The women help in the fields hampered by their veils which they dare not put aside for fear a passer-by may see their faces.

The story concerns the efforts of Abdullah to persuade his father, Ahmed, to enter their cotton crop at the fair in Samarkand. Ahmed is reluctant for he does not like the new ways. However, he gives way to Abdullah. Ahmed's
cotton wins first prize, an American multiple disc plow. Eventually Ahmed is converted to the idea of sharing a tractor (the iron horse) to draw the new plow. As Gulnare, the mother, watches the tractor, she casts aside her veil. Abdullah is leading his parents into new ways.

How the beliefs of the Mohammedan religion thwart advance is revealed through this story.
FISHING AND HUNTING
White Otter by David Cory.

White Otter is an Indian story which seventh grade children read avidly. Children say the story should be called Little Indian. Through the adventures of Little Indian the good things of the American Indian's culture are brought out, the bravery, the scorn of a sneak, skill with simple tools, patience, love of nature and faith in the Great Spirit. It is a refreshing story which brings to children a feeling of the friendliness in our universe. The story offers a good introduction to the fishing and hunting industries.

Little Indian (the son of Big Chief) is the hero of the story. Little Indian is sent on a mission by his father to the camp of Three Feathers. Three Feathers is chief of a friendly tribe which is starving because game has left their land and their stores of corn are exhausted. Little Indian is to lead the friendly tribe back to the camp of Big Chief where buffalos roam the prairie and where there will be food for all. How Little Indian saves the starving Indians by providing food with his arrows, his net, and his hands makes a real fishing and hunting story. White Otter is the traitor who tries to harm Little Indian.

The Giant Tuna by Anthony Cama.

This is a story of a fishing trip on the Strait of Messina. The story contains much local color; the salty
air, the coiled lines, the greased keels of the dories, the jugs of fresh water, and the fishermen's wooden shoes.

Nino, a little boy of ten, is making his first trip on the strait, with his uncle, Zio Luigi. They are going to catch tuna. Dangers and thrills are experienced on the trip. There is a tug at Nino's line, his uncle helps, as the others do, and a big tuna of 400 pounds is pulled into the dory. Nino gazes at the quivering tuna; the lower part of the fish gleams with a silvery sheen while the upper part is a steel-blue. Nino has indeed brought good luck to the trip.

If You Had A Wish by Charles J. Finger.

If You Had A Wish is a good portrayal of the French fisher folk of the Gaspe, of their homes and of their simple, contented life.

The story is a fairy tale, told by a fisherman's wife as she knits briskly. Her husband smokes his pipe and listens with much interest to the story he has heard twenty times. The tale tells how the contented French people of the Gaspe came to be in this good land where fish are plentiful, where fields are green, and where a kindly neighborliness prevails.

The Hobnailed Boots by Jeannette Covert Nolan.

This story portrays frontier life in Kentucky. The importance of hunting in providing food and clothing for
the woodsmen is made evident.

Bland Ballard, fourteen, and John Sanders, a little older, go with some men in a row boat up the Ohio River to a trading post. Bland exchanges six 'coon skins, two skunk pelts and a brace of wild turkeys for a pair of hob-nailed boots. The hobnailed boots lead to the capture of the two boys by Colonel George Rogers Clark's men who believe them to be spies for the enemy. Given warm food and good treatment, the boys are useful guides to Colonel Clark in the wilderness. Later, the hobnailed boots win release for Bland from the Indians who captured him while he was making a scouting trip for Colonel Clark.
HERDING, DRAFT AND PACK ANIMALS
Big Bend Treasure by Elizabeth W. Baker.

The disaster suffered by a rancher in a year of drought is vividly pictured.

The scene is in west Texas, on a ranch which raises pure-bred Herefords. It is the summer of 1930, the year of a long, hard drought. The pastures are burned brown and the streams have dried.

Roddy and Don Summerfield are watching the steers come into the corral, trotting meekly, weak from starvation. These cattle are stacks of bones, not fit for sale. Four of the other herds had been shipped for pasturage on the well-watered mountains of Virginia. This process ate up the profits of the ranch.

John Summerfield is losing his ranch; he cannot meet the payments. The story concerns Roddy's and Don's efforts to keep the ranch.

The adventure is Don's hunting trip with a retired rancher to Big Bend country. Old Henry finds his wolf skins, deer hides, and a panther skin. Don finds a cave filled with long horns from a herd once drowned when a flood rushed the canyon.

The horns bring a big price and Don is able to meet the notes due on his father's ranch.
Road to Down Under by Maribelle Cormack.

Road to Down Under portrays ranch life in the southern hemisphere, the heat of December, the sirocco, the shearing of the sheep and the loading of the wool for market.

The story tells of a journey from the heather-clad island of Eday in the North Sea to Australia in 1845. We are introduced to the Reid family aboard the Southern Star. The family consists of the father, Hugh, not yet forty-five, his sister, his mother, his daughter, Barbara, age sixteen, and Ronnie, a lad of twelve.

The family land at Sydney. They buy land in the Bush, build a home, make furniture, put out crops, and buy stock. Typical Australian problems, such as drought, cattle diseases, convict labor and hostile natives, are endured. The family share together much hard work and much anxiety but in the end they share much happiness.

There is a romance in the story, the love affair of Barbara and young Colin MacIntyre.

This story is suitable for the more mature boys and girls.

The Good Master by Kate Seredy.

The background of the story is the Hungarian plain, an immense grassy expanse unbroken by mountains or trees. On the plain, cattle, horses, and sheep pasture. Large crops of wheat, rye and corn are raised. Apples ripen in the well-tended orchards. The people are truly children of
the soil.

Janci, age ten, is very excited over the coming of his city cousin. Kate arrives from Budapest but she is not the motherless lamb they expected. Kate's escapades keep the household in uproar.

Janci's father is the Good Master, the owner of a large ranch. The Good Master, so accustomed to taming wild young things, tames Kate. When Kate's father arrives for Christmas, he finds a very different Kate.

The Silver Llama by Alida Malkus.

This story shows well the dependence of the Andean people on the llama. The llama gives wool to spin and weave, milk for cheese, and the llama's back can carry heavy loads. The strong devotion of the Andeans for the llama is brought out in the story.

Yama is a very handsome llama, his coat is a beautiful, soft, silver white. He belongs to Cusi, the son of the family, for Cusi had found him when Yama was just a baby. Cusi and his family go to the fair at Puno. The llamas are well-loaded with products to sell at the fair. The mother spins as she walks using a distaff. They go down the mountain, across the pampas, and reach Puno, near the shores of Lake Titicaca.

Amid the festivities of the fair, the family become so engrossed that Yama wanders away on the pampas and is lost. What joy when Cusi finds him again!
The Tale of Nanni by Mary Gould Davis.

This story pictures a quiet and peaceful village in Italy.

Nanni is a faithful and intelligent little donkey that saves the life of the good priest of the village. The priest falls on a steep mountain pass and wounds himself. Nanni carries a message to the village which brings aid to the padre. It is Nanni, too, that bears the wounded padre on his back to the doctor in haste and does not hesitate at the bridge he hates to cross.

Justin Morgan Had A Horse by Marguerite Henry.

This is a delightful horse story based on authentic material. The story gives us the history of the famous breed of Morgan horses. The scene is laid in Vermont, in an early period of our country.

Justin Morgan, school master and singing teacher, goes a long distance on foot to collect a debt from Farmer Beane. With Justin is Joel, the son of the family with whom the school teacher boards. Farmer Beane is unable to pay the debt because his cows had been foundered and the previous year his crops had failed. However, he offers Morgan a horse, Ebenezer, and just for good measure, throws in Sub, an undersized colt which is no good.

This common, ordinary, undersized colt became the father of the Morgan horses. He could run faster, trot
faster and pull heavier logs than any other horse in Vermont. He grew up when America was young and he helped her grow by drawing logs to clear land and to build houses and bridges. He helped with the roads through the wilderness.

The affection of Bub and Joel is very strong and very touching. As Bub and Joel grow up together their lives are very similar. Joel is apprenticed to a miller and Bub is rented out. Both do fine jobs.

No one ever knew whether Justin Morgan was of British, Dutch, or French ancestry but as Joel said, "He is American".
LUMBERING
River Rising! by Hubert Skidmore.

To earn money in order to go to medical school, York Allen, age eighteen, takes a position teaching school in a lumbering camp. He meets with plenty of adventure and action.

River Rising! gives a vivid picture of life in a lumber camp in the mountains of West Virginia. It is a story filled with action and suspense. We see the logs dumped into the swiftly moving waters and the men atop the logs risking the danger of being thrown into the torrent. We feel the anxiety of the wives and sweethearts as they watch from the banks knowing that a man who falls will have little chance amid the wild rush of the logs.

We see the abundance of nature's gifts as the mountain people make use of the things about them, the log cabin with its cracks filled with mud from the river bank, the furniture of hard wood from the mountain side, the sturdy home-made brooms, the sacks filled with leaves for mattresses, and sand for scouring powder. Much of the food of the mountain people comes from the things which grow wild, the pawpaws, the persimmons, huckleberries, walnuts, hickory nuts, chestnuts, wild honey and meat of the rabbit, squirrel, groundhog, possum, and wild birds.

The story abounds in local color and folk-lore. The power of nature's forces and the value of man's co-operation are set forth.
Barney of the North, written and illustrated by Margaret S. Johnson and Helen Lossing Johnson.

In a book of 114 pages of large print, the two authors have given an excellent description of a lumber camp among the tall spruces of New Brunswick, Canada. Crews of men come in winter to fell the trees, cut them into logs, and pile them by the river to await the spring thaw.

Barney is a Newfoundland puppy who, by accident, finds himself a home at the lumber camp and a friend, Simon LeClair, a teamster. Barney loves life in the snowy woods and the food from the cook's cabin. Adventure is added when Barney saves the life of Simon by killing two large lynx.

The scene changes to the rough coast of New England when Barney is sold. Newfoundland dogs are fine swimmers and very strong. Barney earns a medal when he rescues his young master from the sea.

An Elephant Never Forgets by Don Lang.

The superior strength of the elephant is portrayed as well as its response to kindness. The story will furnish background for logging in the tropics.

Roger, called a bad elephant by his keepers, is the strongest among the circus elephants. Tex Bell, in charge of the canvas part of the circus, always gives Roger an affectionate pat, a lump of sugar, and a kind word as he passes Roger chained in line.
Slashed with a knife by the owner of the circus when he didn't obey an order, Roger breaks his chains. Roger is on the loose, overturning all obstructions in his path, trucks, box cars, autos, fences.

Sirens sound, police chase, bullets are fired but the only thing that subdues Roger is the sound of a kindly voice, a voice he remembers. The voice belongs to Tex Bell.
MANUFACTURING
The Rug That Went to Mecca by Yoel B. Mirza.

A valuable little book to be used for the study of the textile industry and from which many facts of life in Persia may be learned. The print is large and the story could be read by a seventh grader in one class period. From this story the children learn all the main steps in turning fibers into cloth.

Asad and his sister, Onnah, live in Persia in a village called Gultapa, which means Hill of Flowers.

"Spring was the happiest and busiest time of the year in the Village of Flowers. The warm sun melted the ice and snow on the high mountains that surrounded the village and the water rushed down to fill the water channels in the fields and orchards, and made the grass green. The flocks of sheep and goats that had kept warm and safe in the mud-walled barns all during the winter were led out to feed on the mountain slopes."

Spring brings the shearing of the sheep. Asad puts the fleece of the sheep in baskets; Onnah and her mother wash the wool in a nearby stream; the wool is carefully dried by Mother. Mother teaches Onnah how to spin the wool into yarn. Asad goes with Grandfather to the woods to gather herbs for dyes. Father sets up the looms and the weaving begins. Asad and Onnah are learning to weave. Onnah makes more

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Yoel B. Mirza, The Rug That Went to Mecca, p. 3.
progress because it is now school season and Asad must go to school but girls do not learn to read, write and do sums. Mother weaves a beautiful prayer rug with an old, old, pattern for Father is making a pilgrimage to Mecca.

The story offers opportunity to contrast the freedoms and privileges of life in the United States with conditions in Persia.


A detailed account of the sardine industry as well as a picture of the Maine coast, with its winter cold, icy gales and rough sea is given in this story. "Outside, the gale roared. Inside, the packing room steamed and reeked and sweated of oil and of fish. The revolving flaker now dropped sardines at a steady pace. Women and girls aproned and capped, packed fish at a hard-pressed speed." ¹

The scene of the story is Eastport, Maine. At Eastport there is one sardine factory operating. It is owned by Jake Grimmer. There are a dozen closed factories, forced out of business by Jake Grimmer and his sardine wars.

The hero is Larry Myers who inherits one of the closed factories.

¹ William Heyliger, Silver Run, p. 6.
The plot concerns Larry's opening of his factory, his success and his final triumph over Jake Grimmer by putting a better sardine on the marker. "The Larry M had already discharged its first loading of twenty-five hogshead and had gone back to the weir. Fish lay salting in the brine tanks, and a heavy truck came down through the alley and lumbered toward the shipping-room doors."

The Brave Automobiles by Antoniorrobles.

Edward Huberman translated this story from the Spanish. A concept of the assembly-line process can be given to children by this amusing story.

Don Manolito Casapinas owns a very modern automobile factory on the island of Villasonar de los Motores. Each workman does just one single task, thus if a workman smashes a finger, another stands close to do the complaining. If one stretches on the floor to work, another stands ready to brush off his knees as he rises.

Upon hearing how men makes slaves of autos, the little newly-born autos strike. The strike is a swallowing-up of all the roads on the island.

As a result of the strike, Mr. Manolito Cascapinas is much more considerate of his autos.

Young Fu of the Upper Yangtze, by Elizabeth Forman Lewis. (Newberry Medal, 1933)

The work of the coppersmith is the industry treated in this story. The reader is introduced to a small Chinese factory in the city of Chungking where skilled workmanship produces fine objects of copper. One sees the furnace room with its charcoal fires, the anvil's on which the metal is hammered, and the shop where the objects are offered for sale. The bargaining of the Chinese is well portrayed.

The scene of the story is Chungking where Young Fu, age thirteen, has come with his widowed mother, Fu Be Be, from their farm home. Young Fu is apprenticed to Tang, a master coppersmith.

Through Young Fu's work at Tang's and his adventures in the city, one learns much of China, the climate, the food, the dress, the customs and superstitions.

The book is a delightful story which is much enjoyed by seventh grade boys and girls.

Dobry by Monica Shannon.

The author has unfolded a beautiful story of peasant life in Bulgaria. The story opens with the gathering of the crops and the falling of the first snow. The story ends in spring when the storks return and Dobry goes away to art school.

The story is full of homely scenes which warm the heart.
of the reader. Dobry sees beauty in everyday things about him, the strings of peppers, the ripe tomatoes, the snow flakes and the flying storks. There is Nida, the daughter of the shoemaker, with fair hair, blue eyes and very nimble fingers.

Dobry's mother, so busy with her many tasks, feels that Dobry wastes time but Grandfather understands. He, too, sees the beauty in the waving fields of wheat and in the freshly plowed land.

This is a story that will bring satisfaction to the sensitive and artistic child.

The Clock That Stuck Out Its Tongue by Frances Carpenter.

The ingenuity and skill of the Swiss clock-maker are revealed. Two children, Josette and Luc are greatly interested in the old cuckoo clock which has hung on Grandmother's wall for seventy years, accurately ticking the minutes.

Grandmother tells the children a story which happened long ago. The story is about the city of Basel on the Rhine River and how an unusual clock which could stick out its tongue saved the city from the Austrians.
MINING
Conies in the Rock by Laura Benet.

This is a story of a backward people in the mountains of North Carolina. It is written in mountain dialect. It portrays the affection of a little boy for his "Ma" and her ambition for him.

Hosea, age thirteen, walks fifteen miles to High Ridge Community School where he learns that it will take ten dollars to enter. Ma thinks she can save ten dollars from egg money without Pa's knowing it, but Hosea knows where there are rocks with garnets which he can sell to summer visitors.

A stone Hosea carries home for Ma to prop the cabin door, produces a beryl which brings the necessary ten dollars and the friendship of a geologist. Ma, in spite of Pa's objections, gets Hosea off to school where he can learn to read.

Hosea does not forget his mother when he sells his garnets. He buys a new calico dress length and a gold ring for Ma.

Pay Dirt by Glen Rounds.

Pay Dirt acquaints the reader with gold mining and tells him of some other minerals as well as introduces him to gold miners. The story takes place in South Dakota, there is much local color and miners' lingo.

The story is concerned with Whitey, age ten, who goes prospecting for gold with Uncle Torwal. A drought and a
plague of grasshoppers the previous summer have forced Uncle Torwal back to prospecting.

Whitey and Uncle Torwal set out in an old car, drive along the Cheyenne River and into the Badlands. They set up housekeeping in an old shack where Whitey does his share of housekeeping, slicing bacon, scouring dishes, and shooting varmints. Whitey learns how to pan for gold, how to use a rocker (sluice box), how to tell gold from pyrite, how to analyze dirt, and about land grants. They visit a modern silver mine.

The story ends with plans for going into New Mexico and Nevada to mine mica and columbite.
TRADE AND TRANSPORTATION
The Peddler's Cart by Elizabeth Coatsworth.

The Peddler's Cart takes place in the Mohawk River region of New York.

George Messenger, the youngest of thirteen brothers and sisters, is not like the others who are conscientious and fond of doing farm chores. George fished and daydreamed instead of studying. He often met Papa fishing too.

When the martins returned in the spring, Mr. Messenger painted his cart and started on his usual summer business of peddling. George's mother felt that Mr. Messenger should stay at home and help with the farm work, but Papa didn't like farm work. This particular spring Papa takes George with him.

The New York countryside and people are portrayed through Mr. Messenger's calls with his wares. The trip takes them along the barge canal where George gets a ride on the boat as far as Lockport.

The adventure of the story is the concealing of a colored woman and her child in a compartment under the seat of the cart while the sheriff hunts for the slaves. George and his father deliver the negroes to a home in Buffalo from where they will be gotten to the Promised Land (Canada).

From this story comes a tender feeling for members of another race. From the example of Mr. Messenger and George comes an understanding of individual abilities.
"Hello, The Boat!" by Phyllis Crawford.

"Hello, The Boat!" is an easily read book from which children learn not only of river transportation in the early nineteenth century but of trade also. The book offers lessons in history and geography.

The setting of the story is the Ohio River and its shores from Pittsburgh to Cincinnati. The time is the spring of 1817 when James Monroe is president.

The book is a story of the Doak family who leave Pittsburgh in March in a boat flying a yellow flag which indicates to settlers and other river boats that there is dry goods for sale. The main part of the cabin is the store with its shelves and counter. There are two sleeping rooms and a kitchen. On deck there is space for a cow and a coop of chickens.

The crew of the boat is the Doak family, Father, Mother, Susan, the eldest child age sixteen, and Steve and David who are younger. The Doaks not only man the boat but operate the store. Susan keeps the ledger.

From the trip down the river with the current to Cincinnati, the reader learns much of the different types of river craft, of river navigation, and of early trade, of geography and of history.

History lessons come first hand as when William Henry Harrison, then a member of Congress, comes aboard the boat and the story of the Blennerhassetts and Aaron Burr when
the family stops at Blennerhassett Island to do a washing.

This is a valuable book which should not be overlooked.

*Curly Top* by Clara A. Ford.

Some important facts about passenger trains are learned through this story. Curley Top is one of eight children. The family live by the railroad tracks. Curly, who can smash a home run, considers waving to the train more important than making a home run. Faithful, day after day, with a wave to her special train, *Twentieth Century*, Curly is eventually rewarded.

Christmas, with Curly's father out of work, turned out merrily nevertheless. Men from the *Twentieth Century* arrived with gifts. Curly had been chosen Sweetheart of Twentieth Century.

Curly and her mother had a ride on Curly's train to Chicago where they saw the railroad yards and learned how Curly's train was kept running smoothly.

Later, Curly had a ride to New York with meals and a berth on the train.

This story is suitable for the less mature members of a seventh-grade group.

*The Long Trains Roll* by Stephen W. Meader.

Railroad transportation is the theme of this book. One learns a great deal about railroad tracks, yards, round
houses, freight cars, cabooses, engines, engineers, firemen, brakemen, and especially of the section gangs which keep the tracks in shape.

The scene is laid in Pennsylvania where the railroad lines wind through the gap of the Appalachians moving the east and west traffic.

The plot concerns German spies who try to dynamite the gap in order to halt the flow of war equipment and troops.

The hero is Randy MacDougall, age seventeen, whose father is an engineer and whose two brothers are overseas service men. Randy, himself, is a section hand due to manpower shortage. Randy discovers the German plot through close observation of one of his section mates. He reports to the railroad detectives and the plot is interrupted in time to save the tracks.

This is a story full of thrills and wholesome family scenes.
SECTIONAL INDUSTRIES
A Surprise for Araminta by Eva Knox Evans.

This book is an amusing story from which children will have many laughs while learning of the industries of the southeastern United States.

Jerome Anthony goes to visit his aunt in Atlanta taking for auntie a jar of strawberry jam, for uncle a jug of molasses, and for Araminta, a goat.

Through Jerome Anthony's and Araminta's wild chase after goat, we gain first-hand information of several industries of the section.

As Jerome Anthony and Araminta rush down the street, they pass wagons loaded high with watermelons. When they wander into a warehouse near the railroad tracks they find crate after crate filled with cotton thread from the cotton mills. In some low stables they see many mules. They see mules being loaded on freight cars. There are little mules being shipped to Alabama for work in the coal mines, middle-sized mules going to New Orleans to haul ice and coal wagons and big mules going to the cotton fields to pull the plows.

Goat doesn't like the city so Goat goes back to the country.
CHAPTER IV

INFORMATIONAL STORIES

The main purpose of an informational story is to convey to the reader authentic material. The information given in a fictional story, although it may be authentic, carries far less guarantee of authenticity than does that given in the informational story, and in any case the information is incidental to the development of the plot. The informational story is without a plot. It may have characters, but the characters are either real, in which case they are an essential part of the material or fictional, in which case they are introduced solely for interest appeal or to humanize the story.

The informational stories offered in this chapter were selected because the material is presented in a form which attracts the interest of children more than does the usual textbook treatment.

Since the informational story is one of the best tools in aiding the retarded child, the stories selected are all easy reading material. Unless the review specifies that a book is difficult in particular places or chapters, the writer believes that it can be read by any member of a seventh-grade group.
AGRICULTURE
Farm Animals and Farm Crops by William Lewis Nida.

This small book has good quality paper, good print and clear photographs. It consists of a section on farm animals and a section on crops.

The author's first chapter concerns the horse. He has written of riding horses, draft horses, coach horses and race horses. There are photographs of a Percheron, of a Clydesdale, and of a Morgan. How to hitch, how to clean, how to shoe, how to shelter, how to feed, and how to train a horse are explained. In similar fashion the author has treated in succeeding chapters cattle, sheep, swine, poultry and bees.

In the opening chapter of Part II, the author discusses kinds of soil, soil properties and how to maintain soil fertility. There is a chapter on tillage and farm machinery. Then in successive chapters the author treats corn, wheat, Irish potato, sweet potato, cotton, hay, orchards, sugar cane and sugar beets, the farm garden, country roads, ways of preserving foods and farm sanitation.

Our Cereal Grains by Nellie B. Allen.

This is a book which tells in simple language the stories of wheat, corn, oats, barley, rye, and buckwheat as well as the sorghum family, milo, kafir, and durra. There are excellent photographs illustrating the stories.

Wheat, as the principal bread crop of the world, is given fullest treatment. The reader learns of the raising and harvesting of the grain, the milling and the making of
bread. The wheat regions of the world and the milling centers of the United States are discussed.

Corn is given the second fullest treatment. Corn countries, corn climate, our own corn belt, raising and harvesting of corn, and the by-products of corn are described.

Johnny Appleseed by James Henry Daugherty.

This is a story of early Ohio and the wandering of Johnny Appleseed. It is a good story to read to the class when introducing the study of apple culture. It is excellent both for its facts on apple trees and for the attitudes of persistence and patience which it portrays. "...: but Johnny would shoulder his bag of apple seeds, and with bare feet penetrate to some remote spot that combined picturesqueness and fertility of soil, and there he would plant his seeds, place a slight enclosure around the place and leave them to grow until the trees were large enough to be transplanted by the settlers who in the meantime would have made their clearing in the vicinity."

Letters from Guatemala by Delia Goetz.

The author catches the interest of children by writing in the form of letters "from Dick to Billy".

Dick's letters acquaint one with the products and industries of Guatemala and make one feel closer to the people

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James Henry Daugherty. Johnny Appleseed, p. 27.
of that country. The gentleness of the Guatemalians with one another and their endurance at long, hard work are portrayed.

One learns of the banana plantations where the bananas are picked green and hung to ripen, of the coffee plantations on the Guatemala highlands because coffee needs a cool, dry climate, of the making of pottery and the weaving of cloth.

The book has illustrations in color.
FISHING AND HUNTING
Fisheries by Clara L. Tutt.

This little book (only thirty-six pages) gives a very thorough treatment of the fishing industry. In easy language and simple manner, the author has told of the importance of fishing, of the location of fisheries, of the North Sea, of the Grand Banks, of how different fish are caught, of the types of fishing boats, of salmon and oyster fishing, of whales and whaling, of Japanese fishing and the use of the cormorant, of how fish are preserved, of ocean fishing and inland fishing.

The book is illustrated with informative photographs.

Ootah and His Puppy by Marie Ahnighito Peary.

Marie Ahnighito Peary, the daughter of the famous Commander Peary, has written a well-told tale of the Greenland she knows so well.

From the adventures of Ootah, a little Eskimo boy, the reader learns of life in northern Greenland. Ootah hunts walrus, polar bear, hair seal, blue fox, rabbit, and muskox. He hunts birds also, auks, owls, and falcons. Ootah builds a fine kayak. He learns to drive a dog team arranged in fan-shaped fashion and hitched to a sledge.

Nalegah is the puppy who becomes ill. He is saved by the white doctor and thus Ootah becomes the white man's friend.

1 Little Wonder Book. See Appendix for others of this series.
HERDING
A Man Who Heard and Obeyed God's Call.

How Lot's Choice Brought Trouble by Elsie E. Egermeier.

These two stories from Egermeier's Bible Story Book are difficult for seventh grade students. The writer believes that they can more profitably be read to the class. These stories bring to the children a better realization of the antiquity of herding. They afford an excellent illustration through the quarrel of Lot's servants and Abram's servants that space is necessary where men live upon flocks and flocks upon grass. "When Lot selected the fertile plains of Jordan for his share of Canaan's land, he thought he was making a wise choice." While hearing these stories it is well for children to open their text books to a map of the Near East region so that they may trace Abram's journey up the Euphrates River and into the land of Canaan. "Driving their flocks and herds before them, they turned away from the great river and journeyed southwest, toward the land of Canaan. On one side of them the mountains rose wild and high, while on the other side, as far as they could see, the barren desert stretched away toward the south."

From these stories children learn that the problems of herding have not changed through the ages, nor have men changed.

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1 Elsie E. Egermeier, Bible Story Book, p. 40.

2 Ibid., p. 38.
Forestry and Lumbering by Josephine Perry and Celeste Slauson.

The first chapter of this book tells of forests in Europe but the remaining twelve chapters give a thorough treatment of forestry and lumbering in the United States. The book contains thirty-three very good photographs and one map which shows the forest regions and the principal types of forests in the United States.

The forest regions are located and the principal species of trees found in each are listed. The development of forestry in the United States is traced and the present educational plan of forestry is explained. There are discussions on the causes and prevention of forest fires, the work of the forest ranger, the lumbering in each region, the saw mills, the lumber mills, and the pulp mills.

Lumbering in the Northwest is more fully described. Briefly the whole process of the lumber industry is viewed from the felling of the trees to the seasoning of the lumber.

The book has an index.
MANUFACTURING
Steel by Esther Gould.

The author introduces her subject by telling the reader what we would lack if a magic wand removed all the steel from the world. How iron first came into use and early implements made of iron, how iron is removed from its ore and where ore is mined in quantities, and how it is mined and transported are amply and simply explained and illustrated with photographs.

The processes of turning iron into steel, the furnaces, the ingot molds, the rolling into slabs and sheets, and the final shaping of objects of steel, are explained. Clear photographs picture the various processes.

This booklet has a final page of "things to do" and an attractive binding in color.

The Rubber Industry by Josephine Perry

This small book, a revised edition, contains a very complete story of the rubber industry. There are a number of photographs with a few sentences of explanation below each. This print is large and the quality of the paper is excellent.

Parts of the book are too difficult for average seventh graders. The chapters on synthetic rubber, rubber in modern industry, and research in rubber contain words too difficult for the average seventh grader. They could, however, be read by the more advanced student. Chapter 11, "The Source of
Crude Rubber and Chapter 111, "Collecting Latex and Preparing it for Market" could both be read by the average pupil. A study of the photographs of the book conveys much information concerning the place of rubber in industry today.

Paper by Alice Martin.

How hornets make paper and perhaps gave man the idea and also the materials used to write upon before paper came into use constitute the introduction to this simple story of paper.

The making of the first paper by the Chinese is described. The use of cotton and linen rags for paper making and the invention of the first paper-making machine are discussed.

The description of paper making today begins with the story of the spruce trees, as they stand, yet uncut, in the northern forests. The story is traced from the felling of the trees through all the processes to the finished paper. Some of the many kinds of paper, newsprint for example, are described.

The booklet is illustrated with photographs in black and white and has a colorful cover which will appeal to children.

Glass-Maker's Street by Frances Rogers.

The story gives much information about the early American method of making glass for window panes.
The scene is laid in New Amsterdam, 275 years ago. Gerrit Van Dyke with his school master has come across the Hudson River to Glass Maker's Street in order to get some window panes for his mother. Garrit has never seen glass, but his mother has told him how she could look out through window panes when she was a girl in Holland. Gerrit has a pair of beaver skins to trade for the glass.

Gerrit goes to the furnace room with the proprietor. They pass piles of fine white sand and bins of lime. Gerrit sees the sand and lime put into the furnace and heated to a molten mass. He watches a man take red balls of the molten glass, blow it to a ball, hand it to another man who spins it around until it becomes a disc. He learns that the iron rod causes the roundels or bulls eyes in the panes.

In Storeland by Margaret E. Wells and H. Mary Cushman.

In Storeland is a book too valuable to miss. It is full of information on the clothing we wear, told in story form. The authors have cleverly told their story by taking us first to the store where we see the finished products and then we learn of the processes which produced them. For example, first we visit "Cotton Avenue" seeing all the cotton materials, ticking and denim, muslin and calico, cotton crepe, dimity and mull, lawn and organdy. Then the story of the making of these cotton materials is told.
In similar fashion the authors take us to visit "Linen Lane", "Silk Street", "Wool Road", "Fur Alley", "Leather Corner", "Lace Place", "Notion Aisle", "Hat Circle" and "Rubber Row".

The book contains many photographs and sketches. The story of wool is almost entirely told by pictures.

The Story Book of Silk by Maud and Miska Petersham.

This book is beautifully illustrated with colored pictures which show Chinese performing the various processes of silk manufacture. The book is unpaged.

The authors catch the child's interest by opening the story with a legend. The legend tells of a little Chinese princess who discovered the silk thread spun by a worm and thus she was known as the "Silk Goddess".

In simple language, the story of silk is told from the care of the silkworms to the weaving of the cloth. Information is given on the quality of cultivated silk and wild silk.

Story of Cotton by Dorothy Scarborough

This account of cotton manufacture opens with a description of cotton cultivation in our southern states. Manufacture of cotton into cloth is treated not only for the United States but for many other countries. The history of cotton manufacture and cotton's value as an article of commerce are discussed.
Wide Road Ahead! by Henry B. Lent.

The author of this book on the automobile is talking directly to his youthful readers: "By the time your father was old enough to drive a car, the engine was no longer built under the seat but was in the front under a hood, as we see it in the cars of today."

The book is illustrated with drawings by Earle Winslow, some of them very clever and all very helpful. "No one who saw it could understand how a carriage could possible go without a horse to pull it. It looked like this:"

The reader is taken to Detroit and told of the many makes of cars manufactured there. He is told of the materials used in the making of an automobile and from where they come.

There is a full page drawing showing the buildings at an automobile plant, the research laboratory, the foundry, the machine shop, the glass factory, the body plant, the assembly plant, and the testing laboratory. In successive chapters the reader visits each of these buildings and views the work being done. The reader leaves the plant by automobile, quite well acquainted with the machine in which he is riding.

\[1\]
Henry B. Lent, *Wide Road Ahead!*, p. 6

\[2\]
Road to Alaska - The story of the Alaska Highway by Douglas Coe

Road to Alaska tells of the adventurous construction 1,600 miles of highway through an almost impenetrable wilderness from Dawson Creek in Canada to Fairbanks, Alaska.

Regiments of engineers started at various points, each to make a section of road finally joining into the completed Alcan highway.

The story opens when the United States army rolled into Dawson Creek on March 9, 1942 with the thermometer reading thirty below.

This true account of how heroic men with bulldozers, road graders, plows, trucks, shovels, jeeps and other equipment fought the road through to completion in eight months and eleven days makes a more thrilling tale than fiction.

The men endured sickness, hardship, and loneliness with courage and humor.

On October 25, 1942 a negro "cat skinner" driving a bulldozer for the 97th regiment working southward drew his machine up to the nose of a bulldozer of the 18th regiment working northward. The road had joined.

"Negro and white, both so covered with grime that the difference in the color of their skins was scarcely noticeable solemnly shook hands."

Douglas Coe, Road to Alaska, p. 165.
The Electrical Industry by Josephine Perry.

This book is written in easy language. It gives the reader a history of electrical industry and an explanation of electricity in industry today. The paper is of good quality and the photographs are splendid.

The reader learns of Benjamin Franklin's lightning rod, of Michael Faraday's dynamo, of Samuel Morse's telegraph, of Alexander Graham Bell's telephone and of Thomas Edison's many inventions.

The use of electric motors, of water wheel generators, turbines, etc. are all explained and illustrated with photographs.
MINING
The Story of Mining by Martha Gruening.

This small book is so simply written that it is of use not only for the average student but also for the retarded readers of a seventh grade group. It is well illustrated with photographs and diagrams. The subject of mining is amply treated. The author opens her story with a history of mining and minerals. She tells of the use of flint, of the stone age, of the early miners, and of the use of minerals for weapons. There are stories of the bronze age, of the iron age, and of the gold rushes. She tells also of the diamond mines of South Africa.

The origin of coal, the early methods of mining coal, the present methods of mining, dangers in the mines, the work of rescue crews, mine ventilation, and safety devices are discussed. There is a drawing of the Davy Safety Lamp.

Prospecting, boring, separating metals from their ores, metallurgical processes, iron and steel are explained. Terms like "malleable", "ductile" and "amalgamating" are clearly defined.

Coal by Mary K. Chapin

Kinds of coal and their properties including peat, are discussed in story manner. The different ways of mining coal, the work of the miners, loading coal for the surface, blasting, sorting coal, how coal was formed, and the by-products of coal are explained.
The final page has a list of "things to do" which would help a child to become more familiar with coal and its value.

The book is well illustrated with photographs, some full-page size. There is a diagram of a blast furnace.

The Wonders of Oil by Ann Jackson in collaboration with Delmar E. Jackson.

The Wonders of Oil has excellent photographs and diagrams. It is written in simple language. It tells of oil in the past ages, early sources and uses of oil, of oil in Bible Lands, how oil came to be in the earth, how the Indians and early white man obtained oil before Drake drilled his well at Titusville, Pa., how drilling of this well revolutionized the oil industry, how drilling is done, how oil is transported in pipe lines, in tank cars, in tankers, how oil is refined and the many products, of the importance of oil in our lives today, where the richest oil fields are and of the largest oil producing countries.

Copper - The Red Metal by June M. Metcalfe.

This little book has forty-one splendid photographs in sepia finish. Most of the photographs are half-page size and a few are full-page. The book has a copper color binding. It shows how copper is found, what it looks like, how it is mined and made usable, and what are the most important uses to which it is put.

Children will read this book easily. The author begins,
"The copper which makes pennies may be found a mile below the surface, or on a peak three miles high up in the clouds."

The author tells of the copper utensils and weapons of the Egyptians, of the underground mines and the surface mines, of the crushing and melting of copper, of the refining of copper, of the mixtures of copper, of an Egyptian copper-smith who fashioned the first spear of bronze, of the oldest copper mines, the Rio Tinto, in Spain, of the many uses of copper and of the amount used annually by the Americans.

1 June M. Metcalfe. Copper-The Red Metal, p. 13.
TRANSPORTATION AND TRADE
Travelers and Traveling by Eva March Tappan.

A small book with excellent photographs, in which all sorts of passenger and freight transportation are discussed.

The first few chapters deal with how railroads are built and trains are run, how mail and passengers are carried, how perishable foods and other express are managed.

There are chapters on trolley cars, subways, elevated trains and motor cars. Still other chapters deal with river boats, canal boats, and ocean liners.

The final chapter entitled Cruising in the Air gives a full treatment to the place of the airplane in transportation.

The Story Book of Wheels by Maud and Miska Petersham.

So far as the writer knows, this is the only book about wheels which is written in language which children can understand. It is well illustrated with colored pictures.

The book tells of the origin of the wheel from rollers. It traces the development of wheels. Wheels on carts, chariots, wagons, stagecoaches, buggies, bicycles and autos serve in showing how the wheel has developed through the ages.

The importance of wheels in industry is explained. Wheels in industry, from water wheels and Dutch windmills, to circular saws and wheels in factories which seem to go faster and faster make an interesting story.
The Tugboat by Henry B. Lent.

Full information is given on how the tug boats in New York harbor work. There is a two-page spread with a diagram of a tug and the pictures are helpful.

The reader visits Whitehall Building where the duties of the dispatcher are witnessed. Then, from the vantage point of one of the tugs, Alice M. Moran, the reader sees the workings of the tug and the duties of each of its seven crew members.

There is a first-hand account of the docking of the big 1,029 foot long Normandie. Sometimes fifteen tugs are used. The reader learns of the duties of the harbor pilot. The undocking of the Scythia is also witnessed.

The reader sees the busy harbor of New York with craft of all kinds at work.

Full Steam Ahead by Henry B. Lent.

This is a story of a sea voyage. Sailing aboard the S.S. Paris, with a goodbye wave to New York, the reader is made acquainted thoroughly with the boat from the cabins and dining rooms to the boiler rooms and the bridge. One meets the captain, the pilot, the pursar, the chief steward, chief engineer and other officers and learns of the duties of each.

One learns of a passenger’s life aboard the steamship, of play time and evening programs, of brisk walks on the
deck and rest in the deck chairs.

The docking of the liner at Havre, with passports and landing cards produced, completes this informational voyage.

The book is well illustrated.

The Story of the Great Lakes by Marie E. Gilchrist.

This is an unpaged book of large format with lithographs by C.H. DeWitt. The book is full of information told in story manner and both boys and girls of the seventh grade read it eagerly.

The reader learns the history of transportation on the lakes from the building of the first sailing vessel, The Griffin, by LaSalle to the present. One reads of the raw materials in the region around the lakes, of their development and transportation. The construction of the Welland Canal by Canada, The Soo Canal and the Erie Canal by United States, and even the storms and tours, are treated.

"And there are only seven to eight months of open water for handling this vast commerce. Iron ore and coal, wheat, flax, and other grains, flour, salt, copper, wood, stone, and merchandise keep a fleet of perhaps 450 steel bulk freight carriers shuttling up and down the Lakes until they shove their way into port in December, ice shrouded."  

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The Boys' Book of Airmen by Irving Crump.

This book, written in easy language, contains stories of famous pilots. There are photographs of the men and of some of the planes.

The first story is of Lindbergh, the Lone Eagle. The reader learns of the preparation of the Spirit of St. Louis, the arrival in Paris on May 21, 1927 and of Lindbergh's return aboard the S.S. Memphis to receive honors from President Coolidge.

Other stories are: The story of Clarence Chamberlin in Columbia bound for Berlin but landing at Helfta, Germany; The flight of Richard Evelyn Byrd over the North Pole in America. He is honored by France with an office in The Legion of Honor; The fatal trip of Charles Nungesser in the White Bird from Le Bourget Field in Paris, May 8, 1927; The flight to the Hawaiian Islands in 1927 by Lt. Lester J. Maitland and Albert F. Hegenberger.

Treasures of the Sea by Frances W. Kittridge.

This story of Eskimo children acquaints the reader with the use the Eskimo makes of products washed in by the sea.

The story takes place on the shores of Bering Strait. Dress and customs of the Eskimo are pictured.

Neeluk has an ermine skin he wishes to trade for chewing gum. Storms have come and the whaling vessels do not venture through Bering Strait.
Although the storms prevent the ships from coming they bring many treasures to the people. There are piles of drift wood which the Eskimo need badly; there are clams, crabs, and other sea creatures which are a treat; there is sea weed which the Eskimo cook and there are some large spruce logs.

All the men, women and children are on the shore gathering these treasures. When Neeluk discovers the spruce logs he is very happy for he likes to chew the gum of the spruce tree better than the gum which the whaling ships trade for his ermine skins.
INDUSTRIES OF SOUTH AMERICA
Wings Around South America by Alice Dalgleish

Wings Around South America is a delightful, easily read, travel story from which the reader learns of life, climate, customs, products and industries in South America.

The reader learns of the manufacture of the panama hat in Ecuador and of the toquilla palm which furnishes the material for the hat, of gold panning in Colombia, of coffee production on the fazendas (farms) in Brazil, of the mines in the Andes, the fruit-growing sections of Chili, and of the pampas of Argentina with the estancias (ranches) of perhaps 100,000 acres.

There are many facts of interest to the student of industrial geography.
CHAPTER V
FILMS

I'd rather see a lesson than hear one any day.
I'd rather you would walk with me than merely lead the way.
The eye's a better teacher and more willing than the ear.
And council is confusing but example's always clear.

Reviews of films are presented in this chapter. The films selected are those which the author has found especially helpful for the enrichment of industrial geography.

All films considered in this chapter are obtainable at the Slide and Film Exchange, Department of Education, State of Ohio, Room 605 State Office Building, Columbus, Ohio.

AGRICULTURE
The Wheat Farmer  sd - 1 reel.

The film shows a wheat farmer and his family on their farm in a western area. The film shows us the preparation of the soil and the planting of winter wheat. We see the harvesting with a combine. The transportation of the wheat to an elevator and the shipping of wheat to a flour mill are shown. Additional information on wheat farming is gained through the conversation of the family.

The Corn Farmer  sd - 1 reel.

We see the farm agent riding past fields of corn and his arrival at a farm home. We learn much from his conversation with the farmer as they discuss hybrid corn, crop rotation and weather. We see the corn in the fields, the cutting of the corn and modern machinery at work. We witness the feeding of hogs and cattle. We see the farmer and his son at an auction of live stock and hear the auctioneer and the lively bidding. The son buys a calf, we see it loaded into a truck and the return to the farm.

Science and Agriculture  sd - 1 reel.

This film traces the soy bean from its cultivation in China through its adoption and present use in the United States. It describes the plant's characteristics, its cultivation and harvest. Pictured also is the extracting of soybean oil and the soy bean by-products used in homes and industries. The film sets forth the values of the soy
bean and especially its value in soil restoration.

Grain That Built A Hemisphere  sd - 1 reel.

This is one of Walt Disney's educational films, Mr. Disney has told in drawings the story of corn from the time it grew wild on the slopes of mountains to its present day cultivation. The importance of corn in the life of peoples and its contribution to the advance of civilization are portrayed. The use of the many by-products of corn is also shown. As the title implies, the film shows corn building the western hemisphere.

This is a valuable film which should not be missed.

The Orange Grower  sd - 1 reel.

This film might be used in introducing a study of the citrus fruits. It describes the location of citrus growing industries. It tells the story of a typical orange grower and his family. We see the tending of the trees, pruning, fertilizing, irrigation and spraying. We see the harvesting of the crop, the transporting and marketing.

1 Storing Vegetables Indoors  sd - 1 reel.

One learns much concerning the storing of vegetables for winter. The different types of vegetables with a method of storing each are pictured. For example, we see

1 A similar film, Storing Vegetables Outdoors, treats outdoor storage.
the farmer's wife breaking green beans, washing them and packing them in earthenware jars with layers of salt; we see the farmer packing rooty vegetables—carrots, parsnips, etc.—in bins and covering them with earth; we see him stringing onions. Pictured also is the vegetable store house with its bins and compartments.

Orchids and the Flora of Tropical America  sd - 1 reel.

This is a National Geographic film. It is a sound film in color. It deals mainly with orchids of which there are hundreds of species; the colors are gorgeously displayed. We learn that the orchid is the highest attainment in plant evolution. Other flora are also shown. This is a beautiful film and an instructive one.

Poultry on the Farm  sd - 1 reel.

Young and adult chickens, ducks, geese, and turkeys are shown in this film. We learn of the appearance, sound, food, and habits of these fowls. We see a brooder house and chicks, gathering of eggs, incubation of eggs, chicks hatching, ducklings hatching, ducklings' first swim, goose, gander and goslings and turkeys roosting in trees.
CONSERVATION
Conservation of Natural Resources  sd - 1 reel.

The appalling results of wasteful lumbering and agriculture not only as regards timber and soil, but also water supply are shown in this film. The results of wind and water erosion and careless farming are pictured. The Dust Bowl is shown. Pictured also are the steps being taken by the government to conserve our timber, soil and water.

The River  sd - 1 reel (1200 ft.)

This documentary film is a story of the Mississippi River and of the blessings and misfortunes it has brought to the people. The picture shows the settlement of this great river basin and the devastation resulting from over-cultivation and reckless deforestation. The film is based on the poem The River by Pare Lorentz. It is a film which should not be missed.

Ground Water  sd - 1 reel.

This film shows the work of ground water. We see the rain striking the ground, a pool of water seeping into the ground, and a spring of water in the hillside. A diagram is pictured showing the fluctuating water level in a well and in the water table. The film shows an artesian well, hot springs in Yellowstone Park, a geyser erupting, the Carlsbad Caverns, a close-up of stalactites and stalagmites, a river in Mammoth Cave, Natural Bridge of Virginia,
the Petrified Forest of Arizona and other examples.

The explanations of the commentator are very helpful.

Master of the Soil  sd - 2 reels.

This film pictures the work of the modern farmer and his contributions to progress by soil tests, use of test plots, crop rotation, contour farming, and power machinery.

A map of United States shows the arable areas, productive farming areas and areas free from erosion.

The film shows a modern dairy farm and the harvesting of a clover crop.

One Match Can Do It  sd - 1 reel.

This film opens with a careless camper throwing down a match. The dead leaves start to burn, the brush catches fire and then the trees. A roaring, sweeping forest fire is pictured. The result of this carelessness is portrayed, the fight against the fire and the long period of bringing it under control, the washing away of the soil with no trees to hold it, the river rising and water covering the valley, a town is destroyed by the flood. The film emphasizes that all this destruction may happen from one match.

The Valley  sd - 1 reel.

This film tells the story of the relocation of two hundred families, victims of the 1935 dust bowl. We witness the embarkation on an Alaskan bound steamer. In the
Matanuska valley, these families clear the land, saw lumber, build homes, plow and land and put out crops. The bountiful harvest is pictured.
FISHING AND HUNTING
New England Fisherman  sd - 1 reel.

A Gloucester fisherman and his wife are pictured having breakfast in their modest home. From their conversation we learn that a fisherman's financial status depends on the size of the catch. We learn also of the anxiety of the fishermen's wives.

The fisherman boards a schooner. We see the crew making ready the lines and hooks for fishing from dories as the schooner approaches the Grand Banks.

Pictured also is fishing aboard a steam trawler where nets are drawn in overflowing with fish. The work aboard both trawler and schooner is shown. We see both dock at the Boston fish piers with their holds full of fish.

Seals - Beach Masters  sd - 1 reel.

This film pictures Mist Island in the Bering Sea where the seals come by thousands to bring forth their young. The pups, almost as playful as kittens, are shown with their mothers. The mothers guard their offspring carefully. We see them both on the land and in the water. The bulls are much larger than the females and have heavier coats of fur.

Sponge Diving  sd - 1 reel.

This picture was filmed at Tarpon Springs, Florida. It shows the boat going out to sea, the Greek sponge fishers dressing in their diving suits and being lowered to the ocean bottom. They collect from the ocean bottom large
sponges while they work against the currents and dangerous sea creatures. Up they come eventually with a net filled with sponges. The sponges are cleaned, the ship returns to port with her cargo of sponges. A sponge market is pictured.

Hunting Muskox sd - 1 reel.

This picture was filmed within a few hundred miles of the North Pole. We see preparations being made for the hunting trip, the loading of the dog sleds with supplies and the harnessing of the dogs. We see the difficulties of the journey over frozen ground and up steep embankments. We see the Eskimo hunters and learn that they are accompanying the white man. They reach the herd of muskox. The herd protects itself by forming in a circle, heads outward ready to charge against an enemy. A large muskox does charge against one of the dogs exposing to our view a baby muskox protected within the circle. A muskox is slain and a calf is roped and captured. We witness the struggles of the wild calf against his captors but at the end of the trip we see the calf, petted by one of the Eskimo hunters and affectionately responding to the man. We witness also the slaying of a seal when supplies are almost exhausted. We see the feeding of the hungry dogs.
HERDING
Grass  sd – 1 reel

An excellent film to use for introducing the herding industry. The film shows vividly the necessity of grass for the existence of herbivorous animals and the dependence of a people upon their animals.

The film shows the Baktyari tribe of Persia in its semi-annual migration searching for grass. The tribe of 50,000 people, driving its flocks, crosses barren wastes, mountains, and streams to a land of grass.

Of value also are the picturizations of a pastoral people and the Persian landscapes.

The Cattleman  sd – 1 reel.

This is a good film to use when studying the pastoral industries. It pictures a typical cattle ranch. One sees hundreds of cattle on the range, one sees a rounding up of the cattle, the dipping of cattle and the loading of cattle in cars for shipment.

The film shows the work of the cowboy as he repairs fences, herds cattle and breaks horses. Meal time at the ranch is pictured. We hear cowboy songs and get much atmosphere of real ranch life.
LUMBERING
Logging Along sd - 1 reel.

The film shows the work in a lumber camp of the northwestern part of our country. One witnesses the felling of the trees, the topping, piling the logs, rolling them into the river, a log jam and a log rolling contest. Scenes of mountains, valleys and rivers are shown. This is a very excellent film.
MINING AND MINERALS
Death Valley  sd - 1 reel.

The barrenness of the valley is pictured. We see a lone prospector and his donkey. The prospector is returning from a trip into the desert, the donkey is carrying a load of salt. They find a rattlesnake in their path. The fight with the rattlesnake is pictured. Other scenes of the valley are Furnace Creek Inn, Old Harmony Borax Mill, Mushroom Rock, Devil's Golf Course, the Bottle House and Death Valley's Sahara.

Wealth of the Andes  sd - 1 reel - color.

This film pictures a trip to the Cerro de Pasco mining district in the Andes Mountains of Peru where one sees copper and lead mining. The cameraman has shown also some of the engineering feats accomplished in the construction of the famous Central Railway of Peru. Views of the mountain region are gorgeous.

Gold  si - 1 reel.

This film pictures hydraulic mining in Alaska. One sees the water washing down the earth, the sluice boxes, the dredging, the separating of the gold by the use of mercury and other mining processes. One sees the uses of gold, gold dental crowns, gold wire, jewelry, gold leaf, gold lead signs and the making of gold coins.
Romance of Radium  sd - 1 reel.

This film tells the story of radium. The discovery by Becquerel of the queer light given off from a rock and his soliciting the aid of the Curies are shown. The main part of the film deals with the work of the Curies in extracting the radium from pitchblende. It shows their crude laboratory and their long hours of toil. One sees also the discovery of pitchblende in the Belgium Congo. We are made aware of the medical uses of radium as well as its destructive powers.
MANUFACTURING
Clothing  sd - 1 reel.

This film describes the way in which primitive peoples use the materials in their immediate environment for clothing. It traces the development of textiles through the hand processes to the mass production of the modern machine age and illustrates how climate affects modes of dress.

The Machine Maker  sd - 1 reel.

Machine tools in operation are portrayed in this film. There are helpful explanations by the commendator. Lathes, millers, planers, drill presses, boring machines, grinders and other machines are shown. The workers are shown and the conversation of some of the men is reproduced. There are close-ups of assembly line operations. The film ends with the picturing of a machinist in his home with his family surrounded by conveniences made possible through mass production.

The Story of Dr. Carver  sd - 1 reel.

The film tells the story of the life of Dr. Carver from his capture by night raiders when a little slave boy to his work as a scientist at Tuskegee Institute. The main part of the film deals with Dr. Carver's work in restoring the worn out cotton land with peanut crops and his discovery of many uses for peanuts. There are now 140 products from peanuts including oil, wall board, shaving cream, ice cream
cones, axle grease, meat sauce and quinine. As the commentator tells us these interesting facts we see Dr. Carver at work in his laboratory and we also see the making of a few of the products.

Furniture Craftsman sd - 1 reel.

This film shows the designer and skilled craftsman at work making custom-built furniture. The pattern making, planing, joining, lathe turning, gluing, carving and other processes are pictured in close-ups. The finished products are shown in use.

Pottery Making - sd - 1 reel.

The film pictures a potter mixing his clay, dividing it and then placing a piece on his wheel where he shapes a vase, trims it and prepares it for firing. We are then introduced to modern pottery making. We see the clay poured into molds, the removing of the clay objects from the molds. We see the decorating and various glazing techniques, dipping, brushing, spraying and pouring. We see the objects placed in the kiln for firing.

Water Power sd - 1 reel.

This film shows the change of rapids and waterfalls from hinderances to man to aids in the progress of man. The development of water power in United States is traced from the mill of the early colonist to the modern projects
of Niagara, Boulder Dam and Tennessee Valley. In sequence the kinetic energy of the waterfall into potential energy through the hydroelectric plant is shown. The film concludes with a world-wide survey of potential water power and through this it displays some magnificent scenes.
SECTIONAL INDUSTRIES

AND

PRIMITIVE PEOPLES
Southeastern States sd - 1 reel.

This film pictures a variety of living patterns in the various regions and shows the industries of the section. The spectator has a glimpse of plantation life, of southern city life and of mountain cabin life. The spectator is also shown the wooded mountains, the cotton fields, the tobacco fields and the fields of blue grass.

Central America sd - 1 reel.

This film gives an excellent picture of the coffee industry. In Costa Rico we see native women picking coffee berries. We see the berries being extracted and spread in the sun to dry and finally the sorting of the berries. The coffee is hauled to market in huge carts drawn by oxen.

The film opens with an airplane view of Central America which shows the mountainous terrain of the country. In closer views we see a volcanic peak, steaming pools of lava, and cooled lava rocks. Pictures also are men bearing heavy loads, a horned iguana, a native dance, an ancient church in Guatemala, and a dog with a monkey riding on its back.

The Pygmies of Africa sd - 2 reels.

The film opens with a Pygmy mother constructing a hut while she carries a child on her back. It shows a father.

Available also are films on Northeastern States, Middle States, Southwestern States, Northwestern States and Far Western States. Each of these pictures the topography of the section, the pattern of living and the industries. Each is a sound film of one reel.
making a bow and arrow and bringing down game with his weapons. It shows the making of baskets and of fabric from the bark of trees. The fabric is dyed. The film shows the gathering of food and the cooking. It shows the assembling of products, tusks, bananas, and other things for a day of bartering. We witness the bartering managed by the Chief. We see also a religious ceremony with primitive rites.

People of the Congo sd - l reel.

This film portrays the life of the Mangbetu people of the Congo region. We see the constructing of a hut, the gathering of food and the preparation of the food with primitive household utensils. Pictures also is the practice of headbinding which elongates the head. Ivory carving, designing and painting are delineated. We see the construction of a stringed instrument and witness a native dance to the sound of weird music.
CHAPTER VI

CONCLUSION

A thorough investigation of the school library will yield many stories, both fictional and information, which are of use in the teaching of industrial geography. A consultation with the librarian is the first step for the teacher. The librarian will suggest books with which she is familiar. The teacher, however, aware of the content she wishes, should make an examination of the card catalog, listing all the books which are likely to furnish enriching material. The informational stories are readily discovered by a survey of the card catalog, but the discovery of fictional stories is more difficult. The annotations are not sufficient evidence, for frequently a fictional story tells a great deal about a particular industry of which the annotation gives no clue. The library investigation, therefore, means that any fictional book on the reading level of seventh grade or of any member in the group should be lifted from the shelves for examination.

When the informational stories and fictional stories are located, it is a good plan to remove them to a shelf in the classroom if school regulations permit. If it is not possible to remove the books from the library, an industrial geography shelf may be arranged in the library. By some means, the material should be made easily available to the pupils.
A teacher will usually not be satisfied with the yield of books from the library. By consulting the *Children's Catalog*, *The Standard Catalog for High School Libraries* or *The Book Review Digest*, all of which give ample reviews, a teacher may build a list of desired books. *The Saturday Review of Literature* has a section devoted to the review of children's books, as does also *The New York Times Book Review* and *The New York Herald Tribune Weekly Book Review*. By watching these current reviews, a teacher becomes aware of new books she may use to include in her list. By keeping a list, a teacher will be ready when asked for a requisition for the coming semester or when asked to play her part in any plan by which a school procures needed materials.

When a teacher has assembled her stories, she should make for herself a catalog of the assembled material. The cards should carry full annotations of each story, not only as to the content but whether the material is suited for the more juvenile members or the more mature members of the group, whether it can be read by the average, the retarded or the advanced readers. This special catalog may be kept on the teacher's desk for frequent reference. It enables the teacher to make suggested readings to suit individual interests and individual abilities. It serves also in selecting a story to read to the class when introducing a study of an industry.

The investigation of the library should include an
examination of the magazines and other periodicals. An examination of the periodical indexes will reveal magazine material pertinent to industrial geography. Much of the magazine material will be beyond the reading level of seventh grade children, but if an article of sufficient merit is discovered the teacher may wish to read it to the class.

Back numbers of magazines may often be removed from the library to the classroom. Librarians are often gratified to find space for accumulated magazines. The author of this paper had twenty or more library copies of Building America and Nature Magazine on the classroom shelf for several months. On this shelf also were accumulated copies of Life, Look, National Geographic, Popular Science, Popular Mechanics, Junior Scholastic and Boys' Life. These seven magazine accumulations were not from the school library, however; two were gifts from other departments and other teachers, and some were the property of the children. Children take pride in donating to the magazine shelf.

A teacher of industrial geography will find that material furnished by commercial companies is one of her greatest enrichment aids. If there is objection to advertising within the school, the name of the company or firm can usually be cut from the materials or covered. Commercial companies of size have educational departments, many of which have prepared material for classroom use. Even materials not especially designed for classrooms, particularly specimens,
are of great value. Booklets, charts, pictures, and specimens are available to teachers, usually for the mere sending of a penny postal card. If the material is not free, it is of very low cost. Oil, rubber, textile, lumber, steel, coffee, tea, and cocoa companies, and many others, have materials a teacher will want for classroom use. One of the large bottling companies distributes to teachers, upon request, any or all of their eight teacher's kits. Each kit deals with a particular industry, as oil, glass, rubber, etc., and each contains a large colored chart, a teacher's manual, and individual work books for the pupils. One of the textile mills will furnish a display box with specimens showing the wool at each stage from the unwashed wool to the finished dyed yarn. One of the coffee companies will supply booklets on coffee culture and a box of specimens. Travel agencies and railroad, steamship, river boat, lake boat, bus and airplane lines have travel literature, much of it valuable for the pictures. One of the air lines distributes charts of Central and South American countries which show the products and industries of each country.

If a teacher is not aware of how to procure the names and addresses of commercial companies or other agencies which have free or low cost materials, she might wish to procure an index such as the following:

*Free and Inexpensive Learning Materials*
prepared by Curriculum Laboratory, George Peabody College for Teachers, Nashville, Tennessee, at seventy cents, or
Free and Inexpensive Learning Materials
from Quarry Reference Library, 35 E. Wacker
Drive, Chicago, Illinois, at five dollars, or

References on Free and Inexpensive Aids
for Classroom Use from National Education Asso-
ciation, Research Division, Washington, D.C., or

Sources of Free Teaching Materials
A bibliography of free teaching aids which may be
secured from various manufacturing companies from
R.M. Holmes, State Teachers College, Lock Haven,
Pennsylvania, at fifty cents, or

Visual Aids from Commercial Sources and
List of Sources for Travel Material from Department
of Education, Division of Instruction, Hartford,
Connecticut, at ten cents.

It is suggested, however, that a following of the ads
of commercial companies and travel agencies in magazines
and newspapers will inform one of available materials.
Frequently, in N.E.A. Journal, Ohio Schools, or student
publications, the commercial companies' ads list free
materials for school use, or give addresses for securing
information on their materials. Similar ads by Chambers of
Commerce or State Departments will be found. In Ohio Schools
the Conservation Department of the State of Virginia listed
a dozen films available and free except for shipping cost.
The titles of some of these indicated they would be valuable
for industrial geography as Apples and Luray Caverns.

For filing bulletins, pamphlets, clippings, charts,
pictures, and similar materials, a homemade vertical file
will serve. A box of orange-crate size is suggested. In
the box, a teacher may set up her own index system, prefer-
ably an alphabetical system. Since vertical file material
usually becomes voluminous, it is well to prepare a catalog of this material. Specimens can usually be placed in classroom cupboards when not on display.

The writer has found that showing films once a week is a desirable practice. By scheduling a film or two films once a week a teacher may, within a school year, show a number of films which are helpful aids in increasing the knowledge of industries and also those which make complex industries understandable to children.

The length of the class period governs the number and length of films which may be scheduled. Time should be allowed for class discussion following a film. This is the most appropriate time for answering questions concerning the film and for comments children may wish to make. In the usual forty-five minute periods of a daily school program, not more than two films of 400 feet length should be scheduled. If the film is 800 feet or 1200 feet, only one should be scheduled. By preparing the program of films in advance, a teacher may secure a particular film at the time she wishes it. For example, films on fishing are thus shown while that subject is being studied. The State of Ohio Film Exchange asks that an order for films for the entire school year be prepared and presented at the Exchange at least three months in advance of the first use date requested. By conforming to the advice of the Exchange, a teacher can secure films on the dates set for them.
There are a number of other sources from which films may be purchased, rented or borrowed. Several catalogs on the market list these sources. If a teacher wishes to secure this material it may be had from the following:

Educational Film Catalog (#4 including supplements) H.W. Wilson Company, New York, N.Y.

or

1001 Films (75¢) Educational Screen
64 E. Lake St., Chicago, Ill.

or

U.S. Government Films (free)
Castle Company, R.C.A. Bldg., New York City

or

Film and Slide List (free)
U.S. Department of Agriculture, Interior,
Bureau of Mines, Labor, Navy, Washington,
D.C.

There are also a number of commercial firms which issue free catalogs containing lists of films they sell and rent. For example, Encyclopedia Britannica Films, Inc., 20 North Wacker Drive, Chicago, Ill., or Edited Pictures System, Inc., 330 West 42nd St., New York City, N.Y.
BIBLIOGRAPHY


APPENDIX A

FICTIONAL STORIES CONSIDERED IN THIS STUDY


INFORMATIONAL STORIES CONSIDERED IN THIS STUDY


FILMS CONSIDERED IN THIS STUDY

Central America
Clothing
Conservation of Natural Resources
Death Valley
Furniture Craftsman
Gold
Grain That Built a Hemisphere
Grass
Ground Water
Hunting Muskox
Logging Along
Master of the Soil
New England Fisherman
One Match Can Do It
Orchids and the Flora of Tropical America
People of the Congo
Pottery Making
Poultry on the Farm
Romance of Radium
Science and Agriculture
Seals—Beach Masters
Southeastern States
Sponge Divins
Storing Vegetables Indoors
The Cattleman
The Corn Farmer
The Machine Maker
The Orange Grower
The Pygmies of Africa
The River
The Story of Dr. Carver
The Valley
Water Power
Wealth of the Andes
Wheat Farmer
APPENDIX B

A SUGGESTED LIST OF SUPPLEMENTARY FICTIONAL STORIES


A SUGGESTED LIST OF SUPPLEMENTARY
INFORMATIONAL STORIES


Richardson, Ralph A. Diesel, the Modern Power. Detroit: General Motors Corporation, 1944. 30 pp.

Richardson, Ralph A. Electricity and Wheels. Detroit: General Motors Corporation, 1939. 32 pp.


A SUGGESTED LIST OF SUPPLEMENTARY FILMS

A Boat Trip 1 reel - sound
An Alpine Journey 1 reel - sound
Anthracite Coal 1 reel - silent
Battak of Sumatra 1 reel - silent
Bituminous Coal 1 reel - silent
Canned Salmon 1 reel - sound
China, The Mysterious and Beautiful 1 reel - sound
Copper 1 reel - silent
Development of Transportation 1 reel - sound
Flax to Linen 1 reel - silent
For Years to Come 800 ft. - color - sound
Fresh Water Fishing 1 reel - sound
Gold 1 reel - silent
Harvests for Tomorrow 3 (400 ft.) reels - sound
Hawaii the Beautiful 1 reel - sound
Lead 1 reel - silent
Limestone and Marble 1 reel - silent
Lumbering in the Northwest 1 reel - silent
Making Paving Brick 1 reel - sound
Metal Craft 1 reel - sound
Muddy Waters 1 reel - sound
Ore to Pig Iron 1 reel - silent
Peanuts 1 reel - silent
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