

Resource #1

Rice

By Mary Oliver

It grew in the black mud.
It grew under the tiger's orange
paws.
Its stems thicker than candles, and
as straight.
Its leaves like the feathers of
egrets,
but green.

The grains cresting, wanting to
burst.
Oh, blood of the tiger.

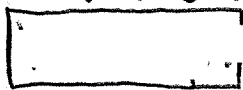
I don't want you to just sit at the table.
I don't want you just to eat, and be content.
I want you to walk into the fields
Where the water is shining, and the rice has
risen.
I want you to stand there,
far from the white tablecloth.
I want you to fill your hands with mud,
like a blessing.



1. Write a main idea next to each stanza
2. If Mary Oliver wanted us to take ONE idea about nature from this poem, what would she want us to think?
3. What was Oliver's *purpose* in writing this poem?

Resource #2

Poetry Analysis



How to Analyze a Poem:

- 1) Read the poem
- 2) Read the poem again
- 3) Chunk + Number
 - break poem into smaller sections
 - give each section a #
- 4) Investigate Vocabulary
 - record this info in the margins
- 5) Circle figurative language / underline rhyme
- 6) Summarize
 - main idea (literal meaning of each chunk - 10 words or less)
 - then summarize entire poem in 1-2 sentences
- 7) Dig Deeper
 - theme of the poem
 - symbols
 - author's purpose
 - Draw a sketch
- 8) Read the poem one last time

Resource #3

Aldo Leopold (1887-1948) is considered the father of wildlife ecology. He was a renowned scientist and scholar, exceptional teacher, philosopher, and gifted writer. It is for his book, A Sand County Almanac, that Leopold is best known by millions of people around the globe. The Almanac, often acclaimed as the century's literary landmark in conservation, melds exceptional poetic prose with keen observations of the natural world. The Almanac reflects an evolution of a lifetime of love, observation, and thought. It led to a philosophy that has guided many to discovering what it means to live in harmony with the land and with one another.

The roots of Leopold's concept of a "land ethic" can be traced to his birthplace on the bluffs of the Mississippi River near Burlington, Iowa. As a youngster, he developed a zealous appreciation and interest in the natural world, spending countless hours on adventures in the woods, prairies, and river backwaters of a then relatively wild Iowa. This early attachment to the natural world, coupled with an uncommon skill for both observation and writing, lead him to pursue a degree in forestry at Yale.

After Yale, Leopold joined the U.S. Forest Service and was assigned to the Arizona Territories. During his tenure, he began to see the land as a living organism and develop the concept of community. This concept became the foundation upon which he became conservation's most influential advocate. In 1924, he accepted a transfer to the U.S. Forest Products Laboratory in Madison where he served as associate director, and began teaching at Wisconsin in 1928.

Often credited as the founding father of wildlife ecology, Leopold's cornerstone book Game Management (1933) defined the fundamental skills and techniques for managing and restoring wildlife populations. This landmark work created a new science that intertwined forestry, agriculture, biology, zoology, ecology, education and communication. Soon after its publication, the University of Wisconsin created a new department, the Department of Game Management, and appointed Leopold as its first chair.

Leopold's unique gift for communicating scientific concepts was only equal to his fervor for putting theories into practice. In 1935, the Leopold family purchased a worn-out farm near Baraboo, in an area known as the sand counties. It is here Leopold put into action his beliefs that the same tools people used to disrupt the landscape could also be used to rebuild it. An old chicken coop, fondly known as the Shack, served as a haven and land laboratory for the Leopold family, friends, and graduate students. And it was here Leopold visualized many of the essays of what was to become his most influential work, A Sand County Almanac.

Adapted from <http://www.naturenet.com/alnc/aldo.html>

~~Since then I have lived to see state after state extirpate its wolves. I have watched the face of many a newly wolfless mountain, and seen the south-facing slopes wrinkle with a maze of new deer trails. I have seen every edible bush and seedling browsed, first to anaemic desuetude, and then to death. I have seen every edible tree defoliated to the height of a saddlehorn. Such a mountain looks as if someone had given God a new pruning shears, and forbidden Him all other exercise. In the end the starved bones of the hoped-for deer herd, dead of its own too-much, bleach with the bones of the dead sage, or molder under the high-lined junipers.~~

~~I now suspect that just as a deer herd lives in mortal fear of its wolves, so does a mountain live in mortal fear of its deer. And perhaps with better cause, for while a buck pulled down by wolves can be replaced in two or three years, a range pulled down by too many deer may fail of replacement in as many decades. So also with cows. The cowman who cleans his range of wolves does not realize that he is taking over the wolf's job of trimming the herd to fit the range. He has not learned to think like a mountain. Hence we have dustbowls, and rivers washing the future into the sea.~~

~~We all strive for safety, prosperity, comfort, long life, and dullness. The deer strives with his supple legs, the cowman with trap and poison, the statesman with pen, the most of us with machines, votes, and dollars, but it all comes to the same thing: peace in our time. A measure of success in this is all well enough, and perhaps is a requisite to objective thinking, but too much safety seems to yield only danger in the long run. Perhaps this is behind Thoreau's dictum: In wildness is the salvation of the world. Perhaps this is the hidden meaning in the howl of the wolf, long known among mountains, but seldom perceived among men.~~

The Land Ethic

The Ethical Sequence

[The] extension of ethics, so far studied only by philosophers, is actually a process in ecological evolution. Its sequence may be described in ecological as well as in philosophic terms. An ethic, ecologically, is a limitation on freedom action in the struggle for existence. An ethic, philosophically is a differentiation of social from anti-social conduct.

These are two definitions of one thing. The thing has its origin in the tendency of interdependent individuals or groups to evolve modes of co-operation. The ecologist calls fees symbioses. Politics and economics are advanced symbioses in which the original free-for-all competition has been replaced, in part, by co-operative mechanisms with an ethical content. . . .

There is as yet no ethic dealing with man's relation to land and to the animals and plants which grow upon it. Land, like Odysseus' slave-girls, is still property. The land relation is still strictly economic, entailing privileges but no obligations.

The extension of ethics to this third element in human environment is, if I read the evidence correctly, an evolutionary possibility and an ecological necessity. It is the third step in a sequence. The first two have already been taken. Individual thinkers since the days of Ezekiel and Isaiah have asserted that the despoliation of land is not only inexpedient but wrong. Society, however, has not yet affirmed their belief. I regard the present conservation movement as the embryo of such an affirmation.

An ethic may be regarded as a mode of guidance for meeting ecological situations so new or intricate, or involving such deferred reactions, that the path of social expediency is not discernible to the average individual. Animal instincts are modes of guidance for the individual in meeting such situations. Ethics are possibly a kind of community instinct in-the-making.

The Community Concept

All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. His instincts prompt him to compete for his place in that community, but his ethics prompt him also to co-operate (perhaps in order that there may be a place to compete for).

The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land.

This sounds simple: do we not already sing our love for and obligation to the land of the free and the home of the brave? Yes, but just what and whom do we love? Certainly not the soil, which we are sending helter-skelter downriver. Certainly not the waters, which we assume have no function except to turn

turbines, float barges, and carry off sewage. Certainly not the plants, of which we exterminate whole communities without batting an eye. Certainly not the animals, of which we have already extirpated many of the largest and most beautiful species. A land ethic of course cannot prevent the alteration, management, and use of these 'resources,' but it does affirm their right to continued existence, and, at least in spots, their continued existence in a natural state.

In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such. . . .

That man is, in fact, only a member of a biotic team is shown by an ecological interpretation of history. Many historical events, hitherto explained solely in terms of human enterprise, were actually biotic interactions between people and land. The characteristics of the land determined the facts quite as potently as the characteristics of the men who lived on it. . . .

We are commonly told what the human actors in this drama tried to do, but we are seldom told that their

success, or the lack of it, hung in large degree on the reaction of particular soils to the impact of the particular forces exerted by their occupancy. . . .

Plant succession steered the course of history; the pioneer simply demonstrated, for good or ill, which successions inhered in the land. Is history taught in this spirit? It will be, once the concept of land as a community really penetrates our intellectual life. . . .

The Land Pyramid

An ethic to supplement and guide the economic relation to land presupposes the existence of some mental image of land as a biotic mechanism. We can be ethical only in relation to something we can see, feel, understand, love, or otherwise have faith in.

The image commonly employed in conservation education is 'the balance of nature.' For reasons too lengthy to detail here, this figure of speech fails to describe accurately what little we know about the land mechanism. A much truer image is the one employed in ecology: the biotic pyramid. I shall first sketch the pyramid as a symbol of land, and later develop some of its implications in terms of land-use.

Plants absorb energy from the sun. This energy flow through a circuit called the biota, which may be represented by a pyramid consisting of layers. The bottom layer is the soil. A plant layer rests on the soil, an insect layer on the plants, a bird and rodent layer on the insects, and so on up through various animal groups to the apex layer, which consists of the larger carnivores.

The species of a layer are alike not in where they came from, or in what they look like, but rather in what they eat. Each successive layer depends on those below it for food and often for other services, and each in turn furnishes food and services to those above. Proceeding upward, each successive layer decreases in numerical abundance. Thus, for every carnivore there are hundreds of his prey, thousands of their prey, millions of insects, uncountable plants. The pyramidal form of the system reflects this numerical progression from apex to base. Man shares an intermediate layer with the bears, raccoons, and squirrels which eat both meat and vegetables.

The lines of dependency for food and other services are called food chains. Thus soil-oak-deer-Indian is a chain that has now been largely converted to soil-corn-cow-farmer. Each species, including ourselves,

is a link in many chains. The deer eats a hundred plants other than oak, and the cow a hundred plants other than corn. Both, then, are links in a hundred chains. The pyramid is a tangle of chains so complex as to seem disorderly, yet the stability of the system proves it to be a highly organized structure. Its functioning depends on the co-operation and competition of its diverse parts.

In the beginning, the pyramid of life was low and squat; the food chains short and simple. Evolution has added layer after layer, link after link. Man is one of thousands of accretions to the height and complexity of the pyramid. Science has given us many doubts, but it has given us at least one certainty: the trend of evolution is to elaborate and diversify the biota.

Land, then, is not merely soil; it is a fountain of energy flowing through a circuit of soils, plants, and animals. Food chains are the living channels which conduct energy upward; death and decay return it to the soil. The circuit is no closed; some energy is dissipated in decay, some is added by absorption from the air, some is stored in soils, peats, and long-lived forests; but it is a sustained circuit, like a slowly augmented revolving fund of life. There is always a net loss downhill wash, but this is normally small

and offset by the decay of rocks. It is deposited in the ocean and, in the course of geological time, raised to form new lands and new pyramids.

The velocity and character of the upward flow of energy depend on the complex structure of the plant and animal community, much as the upward flow of sap in a tree depends on its complex cellular organization. Without this complexity, normal circulation would presumably not occur. Structure means the characteristic numbers, as well as the characteristic kinds and functions, of the component species. This interdependence between the complex structure of the land and its smooth functioning as an energy unit is one of its basic attributes.

When a change occurs in one part of the circuit, many other parts must adjust themselves to it. Change does not necessarily obstruct or divert the flow of energy; evolution is a long series of self-induced changes, the net result of which has been to elaborate the flow mechanism and to lengthen the circuit. Evolutionary changes, however, are usually slow and local. Man's invention of tools has enabled him to make changes of unprecedented violence, rapidity) and scope.

One change is in the composition of floras and fauna. The larger predators are lopped off the apex of the pyramid food chains, for the first time in history, become short rather than longer. Domesticated species from other land are substituted for wild ones, and wild ones are moved new habitats. In this world-wide pooling of faunas and floras, some species get out of bounds as pests and disease others are extinguished. Such effects are seldom intended foreseen; they represent unpredicted and often untraceable readjustments in the structure. Agricultural science is large a race between the emergence of new pests and the emergence of new techniques for their control.

Another change touches the flow of energy through plant and animals and its return to the soil. Fertility is the ability of soil to receive, store, and release energy. Agriculture, by overdrafts on the soil, or by too radical a substitution domestic for native species in the superstructure, may derange the channels of flow or deplete storage. Soils depleted of their storage, or of the organic matter which anchors it wash away faster than they form. This is erosion.

Waters, like soil, are part of the energy circuit. Industry by polluting waters or obstructing them with

dams, may exclude the plants and animals necessary to keep energy in circulation.

Transportation brings about another basic change: the plants or animals grown in one region are now consumed and returned to the soil in another.

Transportation taps the energy stored in rocks, and in the air, and uses it elsewhere; thus we fertilize the garden with nitrogen gleaned by the guano birds from the fishes of seas on the other side of the Equator. Thus the formerly localized and self-contained circuits are pooled on a world-wide scale.

The process of altering the pyramid for human occupation releases stored energy, and this often gives rise, during the Pioneering period, to a deceptive exuberance of plant and animal life, both wild and tame. These releases of biotic capital tend to becloud or postpone the penalties of violence.

This thumbnail sketch of land as an energy circuit conveys three basic ideas:

1. That land is not merely soil.
2. That the native plants and animals kept the energy circuit open; others may or may not,

3. That man-made changes are of a different order than evolutionary changes, and have effects more comprehensive than is intended or foreseen

These ideas, collectively, raise two basic issues: Can the land adjust itself to the new order? Can the desired alterations be accomplished with less violence?

Biotas seem to differ in their capacity to sustain violent conversion. Western Europe, for example, carries a far different pyramid than Caesar found there. Some large animals are lost; swampy forests have become meadows or plow land; many new plants and animals are introduced, some of which escaped as pests; the remaining natives are greatly changed in distribution and abundance. Yet the soil is still there and, with the help of imported nutrients, still fertile, the waters flow normally; the new structure seems to function and to persist. There is no visible stoppage or derangement of the circuit. . . .

The combined evidence of history and ecology seems to support one general deduction: the less violent the man made changes, the greater the probability of successful readjustment in the pyramid. Violence, in turn, varies with human population density; a dense

population requires more violent conversion. In this respect, North America has a better chance for permanence than Europe, if she can contrive to limit her density.

This deduction runs counter to our current philosophy which assumes that because a small increase in density will enrich human life, that an indefinite increase will enrich it indefinitely. Ecology knows of no density relationship that holds for indefinitely wide limits. All gains from density are subject to a law of diminishing returns.

Whatever may be the equation for men and land, it is improbable that we as yet know all its terms. Recent discoveries in mineral and vitamin nutrition reveal unsuspected dependencies in the up-circuit: incredibly minute quantities of certain substances determine the value of soils to plants, of plants to animals. What of the down-circuit? What of the vanishing species, the preservation of which we now regard as an esthetic luxury? They helped build the soil; in which unsuspected ways may they be essential to its maintenance? Professor Weaver proposes that we use prairie flowers to re-flocculate the wasting soils of the dust bowl; who knows what purpose cranes and condors, otters and grizzlies may some day be used?

The Outlook

It is inconceivable to me that an ethical relation to land can exist without love, respect, and admiration for land and a high regard for its value. By value, I of course mean something far broader than mere economic value; I mean value in the philosophical sense.

Perhaps the most serious obstacle impeding the evolution of a land ethic is the fact that our educational and economic system is headed away from, rather than toward, a intense consciousness of land. Your true modern is separate from the land by many middlemen, and by innumerable physical gadgets. He has no vital relation to it; to him it is the space between cities on which crops grow. Turn him loose for a day on the land, and if the spot does not happen to be a golf links or a 'scenic' area, he is bored stiff. If crops could be raised by hydroponics instead of farming, it would suit him very well. Synthetic substitutes for wood, leather, wool, and other natural land products suit him better than the originals. In short, land is something he has 'outgrown.'

Almost equally serious as an obstacle to a land ethic is the attitude of the farmer for whom the land is still an

adversary or a taskmaster that keeps him in slavery. Theoretically, the mechanization of farming ought to cut the farmer's chains, ' but whether it really does is debatable.

One of the requisites for an ecological comprehension of land is an understanding of ecology, and this is by no means co-extensive with 'education'; in fact, much higher education seems deliberately to avoid ecological concepts. An understanding of ecology does not necessarily originate in courses bearing ecological labels; it is quite as likely to be labeled geography, botany, agronomy, history, or economics. This is as it should be, but whatever the label, ecological training is scarce.

The case for a land ethic would appear hopeless but for the minority which is in obvious revolt against these 'modern' trends.

The 'key-log' which must be moved to release the evolutionary process for an ethic is simply this: quit thinking about decent land-use as solely an economic problem. Examine each question in terms of what is ethically and esthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability, and beauty of the

biotic community. It is wrong when it tends otherwise.

It of course goes without saying that economic feasibility limits the tether of what can or cannot be done for land. It always has and it always will. The fallacy the economic determinists have tied around our collective neck, and which we now need to cast off, is the belief that economics determines *all* land-use. This is simply not true. An innumerable host of actions and attitudes, comprising perhaps the bulk of all land relations, is determined by the land-users' tastes and predilections, rather than by his purse. The bulk of all land relations hinges on investments of time, forethought, skill and faith rather than on investments of cash. As a land-user thinketh, so is he.

I have purposely presented the land ethic as a product of social evolution because nothing so important as an ethic is ever 'written.' Only the most superficial student of history supposes that Moses 'wrote' the Decalogue; it evolved in the minds of a thinking community, and Moses wrote tentative summary of it for a 'seminar.' I say tentative because evolution never stops.

The evolution of a land ethic is an intellectual as well as an emotional process. Conservation is paved with *good intentions* which prove to be futile, or even dangerous, because they are devoid of critical understanding either of the land or of economic land-use. I think it is a truism that as the ethical frontier advances from the individual to the community, its intellectual content increases.

The mechanism of operation is the same for any ethic: social approbation for right actions: social disapproval for wrong actions.

By and large, our present problem is one of attitudes and implements. We are remodeling the Alhambra with a steam shovel, and we are proud of our yardage. We shall hardly relinquish the shovel, which after all has many good points but we are in need of gentler and more objective criteria for its successful use.

Resource #4

John Steinbeck	<i>Grapes of Wrath</i> Chapter 5
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The owners of the land came onto the land, or more often a spokesman for the owners came. They came in closed cars, and they felt the dry earth with their fingers, and sometimes they drove big earth augers into the ground for soil tests. The tenants, from their sun-beaten dooryards, watched uneasily when the closed cars drove along the fields. And at last the owner men drove into the dooryards and sat in their cars to talk out of the windows. The tenant men stood beside the cars for awhile, and then squatted on their hams and found sticks with which to mark the dust.

In the open doors the women stood looking out, and behind them the children—corn-headed children, with wide eyes, one bare foot on top of the other bare foot, and the toes working. The women and the children watched their men talking to the owner men. They were silent.

Some of the owner men were kind because they hated what they had to do, and some of them were angry because they hated to be cruel, and some of them were cold because they had long ago found that one could not be an owner unless one were cold. And all of them were caught in something larger than themselves. Some of them hated the mathematics that drove them, and some were afraid, and some worshipped the mathematics because it provided a refuge from thought and from feeling. If a bank or a finance company owned the land, the owner man said, The Bank—or the Company—needs—wants—insists—must have—as though the Bank or the Company were a monster, with thought and feeling, which had ensnared them. These last would take no responsibility for the banks or the companies because they were men and slaves, while the banks were machines and masters all at the same time. Some of the owner men were a little proud to be slaves to such cold and powerful masters. The owner men sat in the cars and explained. "You know the land is poor. You've scabbled at it long enough, God knows."

The squatting tenant men nodded and wondered and drew figures in the dust, and yes, they knew, God knows. If the dust only wouldn't fly. If the top would only stay on the soil, it might not be so bad.

The owner men went on leading to their point: "You know the land's getting poorer. You know what cotton does to the land; robs it, sucks all the blood out of it."

The squatters nodded—they knew, God knew. If they could only rotate the crops they might pump blood back into the land.

Well, it's too late. And the owner men explained the workings and the thinkings of the monster that was stronger than they were. "A man can hold land if he can just eat and pay taxes; he can do that."

"Yes, he can do that until his crops fail one day and he has to borrow money from the bank."

"But—you see, a bank or a company can't do that, because those creatures don't breathe air, don't eat side-meat. They breathe profits; they eat the interest on money. If they don't get it, they die the way you die without air, without side-meat. It is a sad thing, but it is so. It is just so."

The squatting men raised their eyes to understand. "Can't we just hang on? Maybe the next year will be a good year. God knows how much cotton next year. And with all the wars—God knows what price cotton will bring. Don't they make explosives out of cotton? And uniforms? Get enough wars and cotton'll hit the ceiling. Next year, maybe." They looked up questioningly.

"We can't depend on it. The bank—the monster has to have profits all the time. It can't wait. It'll die. No, taxes go on. When the monster stops growing, it dies. It can't stay one size."

Soft fingers began to tap the sill of the car window, and hard fingers tightened on the restless drawing sticks. In the doorways of the sun-beaten tenant houses, women

sighed and then shifted feet so that the one that had been down was now on top, and the toes working. Dogs came sniffing near the owner cars and wetted on all four tires one after another. And chickens lay in the sunny dust and fluffed their feathers to get the cleansing dust down to the skin. In the little sties the pigs grunted inquiringly over the muddy remnants of the slops.

The squatting men looked down again. "What do you want us to do? We can't take less share of the crop—we're half starved now. The kids are hungry all the time. We got no clothes, torn an' ragged. If all the neighbors weren't the same, we'd be ashamed to go to meeting."

And at last the owner men came to the point. "The tenant system won't work, any more. One man on a tractor can take the place of twelve or fourteen families. Pay him a wage and take all the crop. We have to do it. We don't like to do it. But the monster's sick. Something's happened to the monster."

"But you'll kill the land with cotton."

"We know. We've got to take the cotton quick before the land dies. Then we'll sell the land. Lots of families in the East would like to own a piece of land."

The tenant men looked up alarmed. "But what'll happen to us? How'll we eat?"

"You'll have to get off the land. The plows'll go through the dooryard."

And now the squatting men stood up angrily. "Grampa took up the land, and he had to kill the Indians and drive them away. And Pa was born here, and he killed weeds and snakes. Then a bad year came and he had to borrow a little money. An' we was born here. There in the door—our children born here. And Pa had to borrow money. The bank owned the land then, but we stayed and we got a little bit of what we raised."

"We know that—all that. It's not us, it's the bank. A bank isn't like a man. Or an owner with fifty thousand acres, he isn't like a man either. That's the monster."

"Sure," cried the tenant men, "but it's our land. We measured it and broke it up. We were born on it, and we got killed on it, died on it. Even if it's no good, it's still ours. That's what makes it ours—being born on it, working it, dying on it. That makes ownership, not a paper with numbers on it."

"We're sorry. It's not us. It's the monster. The bank isn't like a man."

"Yes, but the bank is only made of men."

"No, you're wrong there—quite wrong there. The bank is something else than men. It happens that every man in a bank hates what the bank does, and yet the bank does it. The bank is something more than men, I tell you. It's the monster. Men made it, but they can't control it."

The tenants cried, "Grampa killed Indians, Pa killed snakes for the land. Maybe we can kill banks—they're worse than Indians and snakes. Maybe we got to fight to keep our land, like Pa and Granpa did."

And now the owner men grew angry. "You'll have to go."

"But it's ours," the tenant men cried. "We—"

"No. The bank, the monster owns it. You'll have to go."

"We'll get our guns, like Granpa when the Indians came. What then?"

"Well—first the sheriff, and then the troops. You'll be stealing if you try to stay, you'll be murderers if you kill to stay. The monster isn't men, but it can make men do what it wants."

"But if we go, where'll we go? How'll we go? We got no money."

"We're sorry," said the owner men. "The bank, the fifty-thousand-acre owner can't be responsible. You're on land that isn't yours. Once over the line maybe you can pick cotton in the fall. Maybe you can go on relief. Why don't you go on west to California?"

There's work there, and it never gets cold. Why, you can reach out anywhere and pick an orange. Why, there's always some kind of crop to work in. Why don't you go there?" And the owner men started their cars and rolled away.

The tenant men squatted down on their hams again to mark the dust with a stick, to figure, to wonder. Their sun-burned faces were dark, and their sun-whipped eyes were light. The women moved cautiously out of the doorways toward their men, and the children crept behind the women, cautiously, ready to run. The bigger boys squatted beside their fathers, because that made them men. After a time the women asked, What did he want?

And the men looked up for a second, and the smolder of pain was in their eyes. "We got to get off. A tractor and a superintendent. Like factories."

Where'll we go? the women asked.

"We don't know. We don't know."

And the women went quickly, quietly back into the houses and herded the children ahead of them. They knew that a man so hurt and so perplexed may turn in anger, even on people he loves. They left the men alone to figure and to wonder in the dust.

After a time perhaps the tenant man looked about—at the pump put in ten years ago, with a goose-neck handle and iron flowers on the spout, at the chopping block where a thousand chickens had been killed, at the hand plow lying in the shed, and the patent crib hanging in the rafters over it.

The children crowded about the women in the houses. What we going to do, Ma? Where we going to go?

The women said, We don't know, yet. Go out and play. But don't go near your father. He might whale you if you go near him. And the women went on with the work, but all the time they watched the men squatting in the dust—perplexed and figuring.

The tractors came over the roads and into the fields, great crawlers moving like insects, having the incredible strength of insects. They crawled over the ground, laying the track and rolling on it and picking it up. Diesel tractors, pattering while they stood idle; they thundered when they moved, and then settled down to a droning roar. Snub-nosed monsters raising the dust and sticking their snouts into it, straight down the country, across the country, through fences, through dooryards, in and out of gullies in straight lines. They did not run on the ground, but on their own roadbeds. They ignored hills and gulches, water courses, houses.

The man sitting in the iron seat did not look like a man; gloved, goggled, rubber dust mask over nose and mouth, he was a part of the monster, a robot in the seat. The thunder of the cylinders sounded through the country, became one with the air and the earth, so that earth and air muttered in sympathetic vibration. The driver could not control it—straight across country it went, cutting through a dozen farms and straight back. A twitch at the controls could swerve the cat', but the driver's hands could not twitch because the monster that built the tractor, the monster that sent the tractor out, had somehow got into the driver's hands, into his brain and muscle, had goggled him and muzzled him—goggled his mind, muzzled his speech, goggled his perception, muzzled his protest., He could not see the land as it was, he could not smell the land as it smelled; his feet did not stamp the clods or feel the warmth and power of the earth. He sat in an iron seat and stepped on iron pedals. He could not cheer or beat or curse or encourage the extension of his power, and because of this he could not cheer or whip or curse or encourage himself. He did not know or own or trust or beseech the land. If a seed dropped did not germinate, it was nothing. If the young thrusting plant withered in drought or drowned in a flood of rain, it was no more to the driver than to the tractor.

He loved the land no more than the bank loved the land. He could admire the tractor—its machined surfaces, its surge of power, the roar of its detonating cylinders; but it was not his tractor. Behind the tractor rolled the shining disks, cutting the earth with blades—not plowing but surgery, pushing the cut earth to the right where the second row of disks cut it and pushed it to the left; slicing blades shining, polished by the cut earth. And pulled behind the disks, the harrows combing with iron teeth so that the little clods broke

up and the earth lay smooth. Behind the harrows, the long seeders—twelve curved iron penes erected in the foundry, orgasms set by gears, raping methodically, raping without passion. The driver sat in his iron seat and he was proud of the straight lines he did not will, proud of the tractor he did not own or love, proud of the power he could not control. And when that crop grew, and was harvested, no man had crumbled a hot clod in his fingers and let the earth sift past his fingertips. No man had touched the seed, or lusted for the growth. Men ate what they had not raised, had no connection with the bread. The land bore under iron, and under iron gradually died; for it was not loved or hated, it had no prayers or curses.

At noon the tractor driver stopped sometimes near a tenant house and opened his lunch: sandwiches wrapped in waxed paper, white bread, pickle, cheese, Spam, a piece of pie branded like an engine part. He ate without relish. And tenants not yet moved away came out to see him, looked curiously while the goggles were taken off, and the rubber dust mask, leaving white circles around the eyes and a large white circle around nose and mouth. The exhaust of the tractor pattered on, for fuel is so cheap it is more efficient to leave the engine running than to heat the Diesel nose for a new start. Curious children crowded close, ragged children who ate their fried dough as they watched. They watched hungrily the unwrapping of the sandwiches, and their hunger-sharpened noses smelled the pickle, cheese, and Spam. They didn't speak to the driver. They watched his hand as it carried food to his mouth. They did not watch him chewing; their eyes followed the hand that held the sandwich. After awhile the tenant who could not leave the place came out and squatted in the shade beside the tractor.

"Why, you're Joe Davis's boy'!"

"Sure," the driver said.

"Well, what you doing this kind of work for—against your own people?"

"Three dollars a day. I got damn sick of creeping for my dinner—and not getting it. I got a wife and kids. We got to eat. Three dollars a day, and it comes every day."

"That's right," the tenant said. "But for your three dollars a day fifteen or twenty families can't eat at all. Nearly a hundred people have to go out and wander on the roads for your three dollars a day. Is that right?"

And the driver said, "Can't think of that. Got to think of my own kids. Three dollars a day, and it comes every day. Times are changing, mister, don't you know? Can't make a living on the land unless you've got two, five, ten thousand acres and a tractor. Crop land isn't for little guys like us any more. You don't kick up a howl because you can't make Fords, or because you're not the telephone company. Well, crops are like that now. Nothing to do about it. You try to get three dollars a day someplace. That's the only way."

The tenant pondered. "Funny thing how it is. If a man owns a little property, that property is him, it's part of him, and it's like him. If he owns property only so he can walk on it and handle it and be sad when it isn't doing well, and feel fine when the rain falls on it, that property is him, and some way he's bigger because he owns it. Even if he isn't successful he's big with his property. That is so."

And the tenant pondered more. "But let a man get property he doesn't see, or can't take time to get his fingers in, or can't be there to walk on it—why, then the property is the man. He can't do what he wants, he can't think what he wants. The property is the man, stronger than he is. And he is small, not big. Only his possessions are big—and he's the servant of his property. That is so, too."

The driver munched the branded pie and threw the crust away. "Times are changed, don't you know? Thinking about stuff like that don't feed the kids. Get your three dollars a day, feed your kids. You got no call to worry about anybody's kids but your own. You get a reputation for talking like that, and you'll never get three dollars a day. Big shots won't give you three dollars a day if you worry about anything but your three dollars a day."

"Nearly a hundred people on the road for your three dollars. Where will we go?"

"And that reminds me," the driver said, "you better get out soon. I'm going through the dooryard' after dinner."

"You filled in the well this morning."

"I know. Had to keep the line straight. But I'm going through the dooryard after dinner. Got to keep the lines straight. And—well, you know Joe Davis, my old man, so I'll tell you this. I got orders wherever there's a family not moved out—if I have an accident—you know, get too close and cave the house in a little—well, I might get a couple of dollars. .And my youngest kid never had no shoes yet."

"I built it with my hands. Straightened old nails to put the sheathing on. Rafters are wired to the stringers with baling wire. It's mine. I built it. You bump it down—I'll be in the window with a rifle. You even come too close and I'll pot you like a rabbit."

"It's not me. There's nothing I can do. I'll lose my job if I don't do it. And look—suppose you kill me? They'll just hang you, but long before you're hung there'll be another guy on the tractor, and he'll bump the house down. You're not killing the right guy."

"That's so," the tenant said. "Who gave you orders? I'll go after him. He's the one to kill."

"You're wrong. He got his orders from the bank. The bank told him, 'Clear those people out or it's your job.' "

"Well, there's a president of the bank. There's a board of directors. I'll fill up the magazine of the rifle and go into the bank."

The driver said, "Fellow was telling me the bank gets orders from the East. The orders were, 'Make the land show profit or we'll close you up.' "

"But where does it stop? Who can we shoot? I don't aim to starve to death before I kill the man that's starving me."

"I don't know. Maybe there's nobody to shoot. Maybe the thing isn't men at all. Maybe, like you said, the property's doing it. Anyway I told you my orders."

"I got to figure," the tenant said. "We all got to figure. There's some way to stop this. It's not like lightning or earthquakes. We've got a bad thing made by men, and by God that's something we can change." The tenant sat in his doorway, and the driver thundered his engine and started off, tracks falling and curving, harrows combing, and the phalli of the seeder slipping into the ground. Across the dooryard the tractor cut, and the hard, foot-beaten ground was seeded field, and the tractor cut through again; the uncut space was ten feet wide. And back he came. The iron guard bit into the house-corner, crumbled the wall, and wrenched the little house from its foundation so that it fell sideways, crushed like a bug. And the driver was goggled and a rubber mask covered his nose and mouth. The tractor cut a straight line on, and the air and the ground vibrated with its thunder. The tenant man stared after it, his rifle in his hand. His wife was beside him, and the quiet children behind. And all of them stared after the tractor.

Resource # 5

Name: _____

Literature Circle Preparation

Discussion Director – Lit Circle # _

1.

Answers

2.

Answers

3.

Answers

Name: _____

Literature Circle Preparation

Connector – Lit Circle # ___

Connection	Question	Group Answers

Name: _____

Literature Circle Preparation

Literary Luminary - Lit Circle #_

Page #	Quote	Why you chose quote/type of figurative language/importance of quote
Quote #1 Reactions/Thoughts		
Quote #2 Reactions/Thoughts		
Quote #3 Reactions/Thoughts		

Name: _____

Literature Circle Preparation

Vocabulary – Lit Circle #_

Page #	Word	Definition
Word #1 Picture/Sentence		Word #2 Picture/Sentence
Word #3 Picture/Sentence		

Resource #6
WENDELL BERRY: THE PLEASURES OF EATING

Many times, after I have finished a lecture on the decline of American farming and rural life, someone in the audience has asked, "What can city people do?"

"Eat responsibly," I have usually answered. Of course, I have tried to explain what I meant by that, but afterwards I have invariably felt that there was more to be said than I had been able to say. Now I would like to attempt a better explanation.

I begin with the proposition that eating is an agricultural act. Eating ends the annual drama of the food economy that begins with planting and birth. Most eaters, however, are no longer aware that this is true. They think of food as an agricultural product, perhaps, but they do not think of themselves as participants in agriculture. They think of themselves as "consumers." If they think beyond that, they recognize that they are passive consumers. They buy what they want—or what they have been persuaded to want—within the limits of what they can get. They pay, mostly without protest, what they are charged. And they mostly ignore certain critical questions about the quality and the cost of what they are sold: How fresh is it? How pure or clean is it, how free of dangerous chemicals? How far was it transported, and what did transportation add to the cost? How much did manufacturing or packaging or advertising add to the cost? When the food product has been manufactured or "processed" or "precooked," how has that affected its quality or price or nutritional value?

Most urban shoppers would tell you that food is produced on farms. But most of them do not know what farms, or what kinds of farms, or where the farms are, or what knowledge or skills are involved in farming. They apparently have little doubt that farms will continue to produce, but they do not know how or over what obstacles. For them, then, food is pretty much an abstract idea—something they do not know or imagine—until it appears on the grocery shelf or on the table.

Food in the Mind of the Eater: When food, in the minds of eaters, is no longer associated with farming and with the land, then the eaters are suffering a kind of cultural amnesia that is misleading and dangerous. The passive American consumer, sitting down to a meal of pre-prepared or fast food, confronts a platter covered with inert, anonymous substances that have been processed, dyed, breaded, sauced, gravied, ground, pulped, strained, blended, prettified, and sanitized beyond resemblance to any part of any creature that ever lived. The products of nature and agriculture have been made, to all appearances, the products of industry. Both eater and eaten are thus in exile from biological reality. And the result is a kind of solitude, unprecedented in human experience, in which the eater may think of eating as, first, a purely commercial transaction between him and a supplier and then as a purely appetitive transaction between him and his food.

And this peculiar specialization of the act of eating is, again, of obvious benefit to the food industry, which has good reasons to obscure the connection between food and farming. It would not do for the consumer to know that the hamburger she is eating came from a steer who spent much of his life standing deep in his own excrement in a feedlot, helping to pollute the local streams, or that the calf that yielded the veal cutlet on her plate spent its life in a box in which it did not have room to turn around. And, though her sympathy for the slaw might be less tender, she should not be encouraged to meditate on the hygienic and biological implications of mile-square fields of cabbage, for vegetables grown in huge monocultures are dependent on toxic chemicals—just as animals in close confinement are dependent on antibiotics and other drugs.

The consumer, that is to say, must be kept from discovering that, in the food industry—as in any other industry—the overriding concerns are not quality and health, but volume and price. For decades now the entire industrial food economy, from the large farms and feedlots to the chains of supermarkets and fast-food restaurants, has been obsessed with volume. It has relentlessly increased scale in order to increase volume in order (presumably) to reduce costs. But as scale increases, diversity declines; as diversity declines, so does health; as health declines, the dependence on drugs and chemicals necessarily increases. As capital replaces labor, it does so by substituting machines, drugs, and chemicals for human workers and for the natural health and fertility of the soil. The food is produced by any means or any shortcut that will increase profits. And the business of the cosmeticians of advertising is to persuade the consumer that food so produced is good, tasty, healthful, and a guarantee of marital fidelity and long life.

Eat Responsibly. Eaters must understand that eating takes place inescapably in the world, that it is inescapably an agricultural act, and that how we eat determines, to a considerable extent, how the world is used. This is a simple way of describing a relationship that is inexpressibly complex. To eat responsibly is to understand and enact, so far as one can, this complex relationship. What can one do?

Here is a list, probably not definitive:

Participate in food production to the extent that you can. If you have a yard or even just a porch box or a pot in a sunny window, grow something to eat in it. Make a little compost of your kitchen scraps and use it for fertilizer. Only by growing some food for yourself can you become acquainted with the beautiful energy cycle that revolves from soil to seed to flower to fruit to food to offal to decay, and around again. You will be fully responsible for any food that you grow for yourself, and you will know all about it. You will appreciate it fully, having known it all its life.

Prepare your own food. This means reviving in your own mind and life the arts of kitchen and household. This should enable you to eat more cheaply, and it will give you a measure of "quality control": you will have some reliable knowledge of what has been added to the food you eat.

Learn the origins of the food you buy, and buy the food that is produced closest to your home. The idea that every locality should be, as much as possible, the source of its own food makes several kinds of sense. The locally produced food supply is the most secure, the freshest, and the easiest for local consumers to know about and to influence.

Whenever possible, deal directly with a local farmer, gardener, or orchardist. All the reasons listed for the previous suggestion apply here. In addition, by such dealing you eliminate the whole pack of merchants, transporters, processors, packagers, and advertisers who thrive at the expense of both producers and consumers.

Learn, in self-defense, as much as you can of the economy and technology of industrial food production. What is added to food that is not food, and what do you pay for these additions?

Learn what is involved in the best farming and gardening. Learn as much as you can, by direct observation and experience if possible, of the life histories of the food species.

The last suggestion seems particularly important to me. Many people are now as much estranged from the lives of domestic plants and animals (except for flowers and dogs and cats) as they are from the lives of the wild ones. This is regrettable, for these domestic creatures are in diverse ways attractive; there is much pleasure in knowing them. And farming, animal husbandry, horticulture, and gardening, at their best, are complex and comely arts; there is much pleasure in knowing them, too.

The pleasure of eating should be an extensive pleasure, not that of the mere gourmet. People who know the garden in which their vegetables have grown and know that the garden is healthy will remember the beauty of the growing plants, perhaps in the dewy first light of morning when gardens are at their best. Such a memory involves itself with the food and is one of the pleasures of eating. The knowledge of the good health of the garden relieves and frees and comforts the eater. The same goes for eating meat. The thought of the good pasture and of the calf contentedly grazing flavors the steak. Some, I know, will think it bloodthirsty or worse to eat a fellow creature you have known all its life. On the contrary, I think it means that you eat with understanding and with gratitude. A significant part of the pleasure of eating is in one's accurate consciousness of the lives and the world from which food comes. The pleasure of eating, then, may be the best available standard of our health. And this pleasure, I think, is pretty fully available to the urban consumer who will make the necessary effort.

Eating with the fullest pleasure—pleasure, that is, that does not depend on ignorance—is perhaps the profoundest enactment of our connection with the world. In this pleasure we experience and celebrate our dependence and our gratitude, for we are living from mystery, from creatures we did not make and powers we cannot comprehend.

WENDELL BERRY: THE PLEASURES OF EATING

Wendell Berry, a Kentucky farmer, is the author of many books of essays, fiction, and poetry. His article on the pleasures of working with a hand scythe appeared in our January 1980 issue. "The Pleasures of Eating" originally appeared in What Are People For? By Wendell Berry. Copyright © 1990 by Wendell Berry. Reprinted by permission of North Point Press, a division of Farrar, Straus and Giroux, LLC.

Resource # 7 From Subjects Matter - Daniels & Zemelman

STRATEGY: **Written Conversation**

FOCUS: **Sharing Ideas, Discussing, Debating**

WHEN TO USE: Before Reading **During Reading** After Reading

DESCRIPTION:

Kids love to write notes to each other in school—but those notes rarely have anything to do with what we're trying to teach. Written conversation harnesses the universal urge to share, but brings it into the curriculum. After reading (or discussing a topic, or watching a video, or doing a science experiment), students in pairs or small groups write short notes and responses to each other about the experience. Also called dialogue journals—or write-arounds when the groups involve three or more students—you can think of written conversation as legalized note-passing in your content area that gets students thinking by putting their thoughts into words and responding to one another. We can easily structure this so that students are taking and defending positions, based on evidence in the text they have read.

Why Use It?

We often use "class discussion" as a key after-reading activity. But when you think about it, what is a class discussion? It is usually one person talking and twenty-nine others sitting, pretending to listen, and hoping that their turn never comes. This ain't exactly what the standards documents call "engaged learning." In fact, while whole-class discussion may be ubiquitous in our schools, it is a pretty passive form of instruction, since most kids at any given moment are not actively engaging the material. If the point of talk is to help students get more deeply into the subject matter and the meaning of what they've read, then everybody in the room ought to be doing it. Smokey and his wife Elaine just published a whole book on this activity, which they call "the best-kept teaching secret" (Daniels and Daniels, 2013).

The solution, then, is quite simple: with written conversation, you can have a "discussion" where everyone is actively talking at once—though silently, in writing. Sure, you may have a few kids drift off the topic or say they can't think of anything—but you'll also have a solid majority of the class actually thinking and exchanging ideas about your subject.

How Does It Work?

- 1 After the reading (or other shared experience) is completed, have students identify partners or a small group for their written conversation. Four is the max. Each student needs a full-size blank sheet of paper and a pen at the ready, as well as the material being studied.
- 2 Explain the activity first, if this new to them, so the students understand that they will be writing simultaneous notes to one another about the reading selection, swapping them every two or three minutes at your command, and continuing the process for as long as your time constraints allow—and of course keeping quiet along the way. They are to write for the whole time allotted for each note, putting down reactions, questions, connections, ideas, wonderings—anything related to the passage, or responding to what their partner or other group members have said, just as they would in out-loud conversation. Spelling and grammar do not count—after all, these are only notes, not polished papers. Just to be clear, *all students are writing all the time*—no one is watching someone else write and waiting for a turn.
- 3 You can leave the topic open (“whatever struck you about this reading”) or give an appropriate open-ended prompt: “What do you understand or not understand in this selection?” “What are the most important ideas here?” “Do you agree or disagree with the author, and why?” You can also use very narrow and precise topics: “Talk about Holden Caulfield’s attitudes toward sex as they are revealed in Chapter 9 of *Catcher in the Rye*.”
- 4 Both students in each pair—or all in a larger group—write an initial note (e.g., “Dear Bobby, When I read this chapter, I was amazed that General Eisenhower actually said . . .”). Meanwhile, watch the time, and after a minute or two ask students to pass their notes to their partners or to the next person in their group. Explain to everyone: “Read what your partner said, then take a minute to answer, just as if you were talking out loud. You can write responses, feelings, make connections of your own, or ask your partner questions—anything you would do if you were talking face-to-face. Just keep the conversation going.”
With each succeeding pass, you need to allow a little more time since students have to read what the increasing number of classmates on the page have contributed.
For dialogue journals in pairs, it’s a good idea to have the notes go back and forth three or four times so that an extended conversation gets going. For groups of three to five, students can keep passing their notes around the circles and writing until each group member gets his or her original note back.

5 After conversation switch, face-to-face to talk al

6 Nov everyone: light or t MacArtn: anonymi once it’s the way, starter re

Predict

The first (adults a group). E best inst utes of v Becau four or fi use thes to respo with thei ment pro

5 After the exchange is complete, the payoff begins when you say: "OK, now continue the conversation out loud with your partner(s) for a couple of minutes." If you worry about kids making that switch, first have them read back through all the notes on their sheet and then circle the "one most interesting sentence" that anyone wrote. Now have them use these as discussion starters for the face-to-face conversation. You should notice a rising buzz in the room, showing that kids have plenty to talk about. Circulate and sit in on groups as they talk, to get a flavor of their thinking.

6 Now a short whole-class discussion can be much more engaged and productive, because everyone will have rehearsed their thinking about the topic. Ask a few pairs to share one highlight or thread of their written conversations as a way of starting discussion. Biology teacher Lisa MacArtney collects the papers and reads aloud some of the marked sentences—which allows for anonymity for students who wish it. Lisa reports that the students especially enjoy this step, and once it's a regular practice, it serves as a strong motivation to write thoughtful comments. Lisa, by the way, uses written conversation with the real-world articles that she employs as high-interest starter reading for just about every unit in her course.

Predictable Problems

The first time you try this, a few kids may shift into oral conversation when papers are passed (adults also do this—it's a normal human response when you are bonding with a partner or a group). Be ready to remind them to "keep it in writing" during the transitions. Then, even with the best instructions, some kids will write two words and put their pens down, wasting two good minutes of writing time with each pass. You have to keep stressing that "we write for the whole time."

Because this activity has a lot of positive social pressure to work fast, we've taken to projecting four or five "safety net topics" just for the kids who need a jumpstart—or a restart. We tell them to use these only if they're really stuck. Usually the comments from classmates will give them plenty to respond to. Finally, when you call kids back to order at the end, when they are talking out loud with their partners, you may find it very hard to regain their attention. This happy little "management problem" shows you that kids are connecting to each other and the material.

EXAMPLE

Melly, Did Mr. Gridley say that microwaves gave off ionizing radiation? I thought that kind was dangerous, and I don't understand why they'd let us have something in our homes that's dangerous. Did I just hear him wrong?
 - Rose

Yea, microwaves do give off ionizing radiation which is dangerous. But microwaves give off such small amounts so they're not dangerous. Mr. Gridley said that we can only have under 5,000 mREMs a year. Microwaves give off such small amounts that we won't come close to having reaching 5,000 mREMs.

Melly

That still kinda creeps me out though. I don't want to grow a third ear just cause I wanted to make some oatmeal in my microwave.

- Rose



Written Conversation About Ionizing Radiation

TO LEARN MORE

Daniels, Harvey, and Elaine Daniels. 2013. *The Best-Kept Teaching Secret: How Written Conversations Engage Students, Activate Learning, and Grow Fluent Writers*. Thousand Oaks, CA: Corwin.

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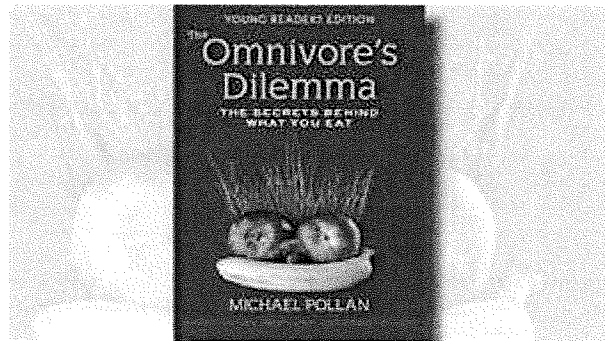
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Resource #8

EXCERPT: 'The Omnivore's Dilemma'

- By ABC NEWS

Oct. 23, 2009

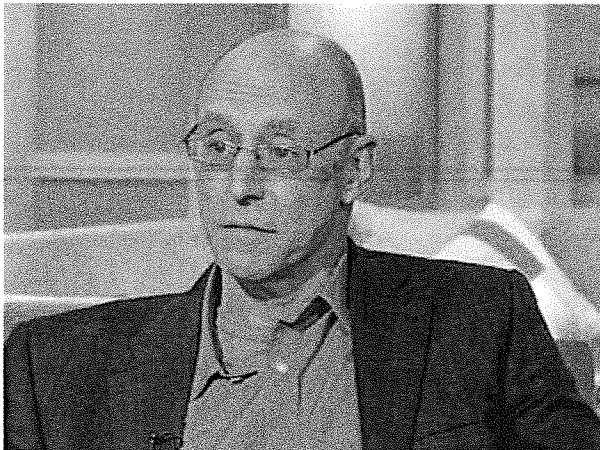


Journalist Michael Pollan, who has unearthed new details of where our food comes from, has written "The Omnivore's Dilemma: The Secrets Behind What You Eat." In the book, Pollan urges young people to weigh the personal and worldwide health consequences of what they choose to eat. Photos, graphs and other visuals help illustrate his point: All of us must take control of our dietary habits.

Excerpt

INTRODUCTION

Before I began working on this book, I never gave much thought to where my food came from. I didn't spend much time worrying about what I should and shouldn't eat. Food came from the supermarket and as long as it tasted good, I ate it.



Until, that is, I had the chance to peer behind the curtain of the modern American food chain. This came in 1998. I was working on an article about genetically modified food—food created by changing plant DNA in the laboratory. My reporting took me to the Magic Valley in Idaho, where most of the french fries you've ever eaten begin their life as Russet Burbank potatoes. There I visited a farm like no farm I'd ever seen or imagined.

It was fifteen thousand acres, divided into 135-acre crop circles. Each circle resembled the green face of a tremendous clock with a slowly rotating second hand. That sweeping second hand was the irrigation machine, a pipe more than a thousand feet long that delivered a steady rain of water, fertilizer, and pesticide to the potato plants. The whole farm was managed from a bank of computer monitors in a control room. Sitting in that room, the farmer could, at the flick of a switch, douse his crops with water or whatever chemical he thought they needed. One of these chemicals was a pesticide called Monitor, used to control bugs. The chemical is so toxic to the nervous system that no one is allowed in the field for five days after it is sprayed. Even if the irrigation machine breaks during that time, farmers won't send a worker out to fix it because the chemical is so dangerous. They'd rather let that whole 135-acres crop of potatoes dry up and die.

That wasn't all. During the growing season, some pesticides get inside the potato plant so that they will kill any bug that takes a bite. But these pesticides mean people can't eat the potatoes while they're growing, either. After the harvest, the potatoes are stored for six months in a gigantic shed. Here the chemicals gradually fade until the potatoes are safe to eat. Only then can they be turned into french fries. That's how we grow potatoes?

I had no idea.

A BURGER WITH YOUR FRIES?

A few years later, while working on another story, I found myself driving down Interstate 5, the big highway that runs between San Francisco and Los Angeles. I was on my way to visit a farmer in California's Central Valley. It was one of those gorgeous autumn days when the hills of California are gold. Out of nowhere, a really nasty smell assaulted my nostrils—the stench of a gas station restroom sorely in need of attention. But I could see nothing that might explain the smell—all around me were the same blue skies and golden hills.

And then, very suddenly, the golden hills turned jet-black on both sides of the highway: black with tens of thousands of cattle crowded onto a carpet of manure that stretched as far as the eye could see. I was driving through a feedlot, with tens of thousands of animals bellying up to a concrete trough that ran along the side of the highway for what seemed like miles. Behind them rose two vast pyramids, one yellow, the other black: a pile of corn and a pile of manure. The cattle, I realized, were spending their days transforming the stuff of one pile into the stuff of the other. This is where our meat comes from?

I had no idea.

Suddenly that "happy meal" of hamburger and fries looked a lot less happy. Between the feedlot and the potato farm, I realized just how little I knew about the way our food is produced. The picture in my head, of small family farms with white picket fences and red barns and happy animals on green pastures, was seriously out of date.

THE OMNIVORE'S DILEMMA

Now I had a big problem. I went from never thinking about where my food came from to thinking about it all the time. I started worrying about what I should and shouldn't eat. Just because food was in the supermarket, did that mean it was good to eat?

The more I studied and read about food the more I realized I was suffering from a form of the omnivore's dilemma. This is a big name for a very old problem. Human beings are omnivores. That means we eat plants, meat, mushrooms—just about anything. But because we are omnivores we have very little built-in instinct that tells us which foods are good for us and which aren't. That's the dilemma—we can eat anything, but how do we know what to eat? The omnivore's dilemma has been around a long time. But today we have a very modern form of this dilemma. We have a thousand choices of food in our supermarkets, but we don't really know where our food comes from. As I discovered, just finding out how our potatoes are grown might scare you off french fries for the rest of your life. In the past, people knew about food because they grew it or hunted it themselves. They learned about food from their parents and grandparents. They cooked and ate the same foods people in their part of the world had always eaten. Modern Americans don't have strong food traditions. Instead

we have dozens of different "experts" who give us lots of different advice about what to eat and what not to eat. It's one thing to be crazy about food because you like to eat. But I found I was going crazy from worrying about food. So I set out to try to solve the modern omnivore's dilemma. I decided to become a food detective, to find out where our food comes from and what exactly it is we are eating. My detective work became the book you now hold in your hands.

FOUR MEALS

As a food detective, I had to go back to the beginning, to the farms and fields where our food is grown. Then I followed it each step of the way, and watched what happened to our food on its way to our stomachs. Each step was another link in a chain—a food chain.

A food chain is a system for growing, making, and delivering food. In this book, I follow four different food chains. Each one has its own section. They are:

Industrial: This is where most of our food comes from today. This chain starts in a giant field, usually in the Midwest, where a single crop is grown—corn, or perhaps soybeans—and ends up in a supermarket or fast-food restaurant.

Industrial Organic: This food is grown on large industrial farms, but with only natural fertilizers, and natural bug and weed control. It is sold in the same way as industrial food.

Local Sustainable: This is food grown on small farms that raise lots of different kinds of crops and animals. The food from the farm doesn't need to be processed, and it travels a short distance—to a farmer's market, for example—before it reaches your table.

Hunter-Gatherer: This is the oldest type of food chain there is. It's hardly a chain at all, really. It is made up simply of you, hunting, growing, or finding your food.

All these food chains end the same way—with a meal. And so I thought it important to end each section of the book with a meal, whether it was a fast-food hamburger eaten in a speeding car, or a meal I made myself from start to finish.

THE PLEASURES OF EATING

When I was ten years old, I started my own "farm" in a patch of our backyard. From that age until now, I have always had a vegetable garden, even if only a small one. The feeling of being connected to food is very important to me. It's an experience that I think most of us are missing today. We're so confused about food that we've forgotten what food really is—the bounty of the earth and the power of the sun captured by plants and animals. There were parts of this book that were difficult to write, because the facts were so unpleasant. Some of those facts might make you lose your appetite. But the point of this book is not to scare you or make you afraid of food. I think we enjoy food much more if we take a little time to know what it is we're putting in our mouths. Then we can really appreciate the truly wonderful gifts that plants and animals have given us. To me, that's the point of this book, to help you rediscover the pleasures of food and learn to enjoy your meals in a new way.

Resource # 9

STRATEGY: **Coding Text**

From Subjects Matter by Daniels
+ Zemelman

FOCI: **Reading as Thinking**
Inferring, Interpreting, and Drawing Conclusions

WHEN TO USE: Before Reading **During Reading** After Reading

DESCRIPTION:

A quick way for students to capture and record their mental responses to their reading is to use a simple coding system. While she is reading, if a student notices a connection to another unit in your course, to another subject, or to something in her life, she jots a **C** in the margin; if she has a question, she jots a **?** If she runs across something new and exciting, she'll put down a **!** Students may add brief phrases or comments to explain their thinking. If the book belongs to the school, or if the teacher wishes students to be able to spot their notations quickly during class discussion, the codes can be placed on the Post-it notes as we described previously.

Why Use It?

Coding is basically a speedier form of marking text that achieves the same goals as annotation—getting kids to stop, think, and react as they read. If students are not accustomed to thinking their way through texts, they need to make conscious efforts to do so, but the marking should not be so laborious as to totally interrupt the flow of their reading. Symbols help students remember a strategy, notice when their thinking has followed it, and then very briefly note the spot in the text where that thinking occurred. If we want students to think more deeply as they read, we need to provide explicit mechanisms for them to do this, rather than just exhort them to "really think about this material."

react
sketches
any
how to react?
fast
try
parts

How Does It Work?

1 Choose some codes that would work well in your subject area. Here is one generic set called INSERT (Interactive Notation System for Effective Reading and Thinking) that many content area teachers have found useful:

- ✓ Confirms what you thought
- X Contradicts what you thought
- ? Puzzles you
- ??? Confuses you
- ★ Strikes you as very important
- ! Is new or interesting to you

You can also invent your own coding system that matches the subject matter at hand.

2 Project a short text and model your own coding process for the class. Teachers at Downers Grove South High School have students use text coding extensively in their classes. But as reading coach Amy Stoops and science department chair Karen Eder explain, without this initial modeling, the students dutifully insert the codes—without realizing their purpose. Because the teacher is usually well acquainted with the material she's teaching, it can be difficult to realize the challenge students experience when the same information is often so new to them. Without some demonstration and guidance, students can have difficulty understanding what to mark and how to think about it.

3 Have students share their coded responses with a partner as they work through the selection. Then gather the whole class by asking, "Look through the reading and see if you've put any exclamation points in there for new and exciting information. Good, who'd like to share one?" For math application problems, students in pairs can compare their coding of information provided or requests for solutions in order to learn problem-solving processes. In book or article discussion circles, the codes can help students refer back to relevant information or evidence to support the ideas they are sharing. For reading support activities like KWL, students can mark spots in the material where their questions get answered or where new questions come up. In studying for tests or performance evaluations, the codes can help students spot important information or ideas they need to remember.

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VARIATION: At Downers Grove South High School, the application of text coding varies widely across various subjects. With physics problems, for example, codes can help students to identify relevant information and figure out what result they are seeking. In biology, students may be looking for evidence of a particular phenomenon or concept, or the use of a particular vocabulary term. And as the students grow expert with the strategy, teachers invite students to create their own sets of codes. These young people enjoy including colors, emoticons from the text messaging world, and symbols they make up.

TO LEARN MORE

Buehl, Doug. 2009. *Classroom Strategies for Interactive Learning* (3rd ed.). Newark, DE: IRA.

Vaughn, Joseph, and Thomas Estes. 1986. *Reading and Reasoning Beyond the Primary Grades*. New York: Allyn and Bacon.

A wide variety of websites provide explanations of the strategy—including one at www.famlit.org/free-resources/educator-resources/educator-resources-adult-learners that includes video clips showing a teacher introducing coding with an adult literacy class.