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One day, Helen Keller who could neither see nor hear, was visited by a very dear friend who had just returned from a long walk in the woods. She asked her friend what she had seen, to which she replied, "Nothing in particular."

Helen exclaimed, "I might have been incredulous had I not been accustomed to such responses for long ago I became convinced that the seeing see little. How was it possible, I asked myself, to walk for an hour through the woods and see nothing worthy of note? I who cannot see find hundreds of things to interest me through mere touch. I feel the delicate symmetry of a leaf. I pass my hands lovingly about the smooth skin of a silver birch, or the rough, shaggy bark of a pine. ...I feel the delightful, velvety texture of a flower, and something of the miracle of Nature is revealed to me.

"At times my heart cries out with longing to see all these things. If I can get so much pleasure from mere touch, how much more beauty must be revealed by sight. Yet, those who have eyes apparently see little. The panorama of color and action which fills the world is taken for granted. It is human, perhaps, to appreciate little that which we have and to long for that which we have not, but it is a great pity that in the world of light, the gift of sight is used only as a mere convenience rather than as a means of adding fulness to life."

This section is dedicated to raising a generation of children who will never walk through the forest and see 'nothing'. Many of the ideas I'll talk about have come from a little book written in 1904 called 'How Nature Study Should Be Taught' by Edward Bigelow. You might enjoy reading it. I included sections of it in the Mother's Learning Library book on nature.

The objective of Nature Study is not the same as science. "Nature study is not a systematic study of nature, for that is science. Nature study is emotional. Science is intellectual." Professor Bailey of Cornell University said, "Nature study is a revolt from the teaching of mere science in the elementary grades. ...Nature study is not science. It is not fact. It is spirit. It is concerned with the child's outlook on the world....Nature study is not to be taught for the purpose of making the youth a scientist. Now and then a pupil will desire to pursue a science for the sake of the science, and he should be encouraged. But every pupil may be taught to be interested in plants and birds and insects and running brooks, and thereby his life will be the stronger. The crop of scientists will take care of itself."

Longfellow understood the objective of Nature Study:

And Nature, the old nurse, took
 The child upon her knee,
Saying, "Here is a story book
 They Father has written for thee."

Wordsworth knew:

To know Nature is to know God.
The world is too much with us; late and soon,
Getting and spending, we lay waste our powers,
Little we see in nature that is ours.

Shakespeare knew about the:

“...tongues in trees, books in the running brooks,
Sermons in stones and good in every thing.”

Nature is God's university. John Burroughs, the great naturalist, said, “I would, by all means teach the young people the elements of the great sciences...I would also inculcate the scientific habit of mind, accuracy of observation, care in reading conclusions...But I would not encourage the young people to think they can dissect their way into the mystery of Nature, or reach her through the laboratory.”

The objective of nature study for the well educated heart is pure and simple joy. This is what nature study looks like:

First, from the life of the great painter, Jean Francois Millet:

One day little Francois stood at his father's side. They were watching the setting sun sink into the waves. The western sky was all aglow with purple and deep crimson. Great bars of golden light were stretched across the horizon. The boy felt the glory of the scene. The father lifted his hat and bowed his head, saying gravely, “My son, it is God.” The boy never forgot.

Second, from the life of Henry Arthur King, an Oxford trained professor, whose writings have inspired me greatly:

“My first real discovery of nature in life came one morning in April 1916. My father put me on the back of his bike where I had a little seat and said, “Off we go.” And then he turned in the wrong direction, for I thought he was taking me down to “Quakers' meeting—it was Sunday. “No,” he said, “we are going somewhere else today.” And we rode for about eight miles, and we stopped at a wood...We went into the wood, and there, suddenly, was a great pool of bluebells stretching for perhaps a hundred yards in the shade of the oak trees. And I could scarcely breathe because the impression was so great. The experience then was just the bluebells and the scent; now, when I recall it, it is also the love of my father who chose to do that that morning—to give me that experience. I am sure he had been there the day before, found it, and thought, “I'll take my son there.” As we rode there and as we rode back, we heard the distant thud of the guns at the Battle of the Somme, where thousands were dying every day. That overwhelming experience of a natural phenomenon, a demonstration of beneficent creation, and at the same time hearing those guns on the Somme—that experience has remained with me almost more clearly than anything else in my life.”

This next experience is related by Lucy Maud Montgomery who gave us Anne of Green Gables: “I had always a deep love of nature. A little fern growing in the woods, a shallow sheet of June-bells under the firs, moonlight falling on the ivory column of a tall birch, an evening star over the

old tamarack on the dyke, shadow-waves rolling over a field of ripe wheat—all gave me “thoughts that lay too deep for tears” and feelings which I had no vocabulary to express. I was very near to a kingdom of ideal beauty.”

And finally, my most memorable nature study lesson took place on a Saturday night when I was a young girl. I had just gotten out of the shower and my hair was still wrapped in a towel. As I walked past the front door, I noticed my dad out on the front porch sitting alone in the dark. I went out and sat next to him. He smiled at me but didn’t say anything. He was just staring up at the sky. I looked and looked to see what he was looking at, but all I could see were the stars on a warm summer night. Finally he sighed a deep sigh and said, “Do you ever wonder what’s out there?”

And then the two of us sat there together for the longest time in silence—just wondering.

From my notes: “To teach young people or old people how to observe nature, is a good deal like trying to teach them how to eat their dinner. The first thing necessary in the latter case is a good appetite; this given, the rest follows very easily. And in observing nature, unless you have the appetite, the love, the spontaneous desire, you will get little satisfaction. It is the heart that sees more than the mind. To love nature is the first step in observing her..”

“I would have the boys and girls rush over to the apple tree, pick up handfuls of apples, putting some in pocket and munching the rest. That is nature study. I would have those same boys and girls sit at a table and make cross sections and vertical slices of some of those apples, noting the structure, the relation of seeds, cases, pulp and epidermis. That is science.

I would have them climb on the ledge, stand near the boulder, and have a general good time in fun. That is nature study. I would tell them a little of the history of this ledge, its relations to the surrounding country, its geological structure and perhaps its chemical composition. That is science.

Enjoy the beautiful moonlight; note the bright stars and planets, and construct the fanciful pictures of the constellations. That is nature study. Tell of the surface of the moon, the distance of the stars, the various physical characters of the planets. That is science.”

The learning tools for a successful nature study program are: “fresh air, sunshine, trees, flowers, birds and all the other happy life of the fields and forests. Weave in generous proportions. Do not skimp and carve, and trim, and minimize, and scrutinize too much. Pour in the generous cupfuls, hours rather than minutes...Let them have them in their fullness of enjoyment.”

Loving nature is as simple as loving your mother. And happens just as naturally when a child spends time with her.

“Oh no,” Edward Bigelow says with tongue in cheek, “some scientific appreciator of a mother may say, that is crude; it flavors of the Middle Ages, of the amateur, of those who love their mother from the heart. This is an age of scientific spirit, an age of the intellect rather than of the

affections.

Do nothing so simple as that; learn really to know your mother, and then you can love her with solid, intellectual appreciation.

First collect some pictures and drawings of all the mothers you can find; arrange them side by side and compare your mother with them. That will add to your knowledge of the comparative merits of your mother's appearance.

Devote a half-hour at a certain time every day to the study of mothers. Draw pictures of them; make a detailed list of color of hair, number of eyes, nostrils, ears; length of chin, height, weight, number of fingers on each hand; state the age, past history and a hundred or more other facts. Arrange these details under a few heads, draw a bracket before each, and collocate these in line under one big brace, with the word Mother written in capital letters.

Make a drawing of your own mother standing erect, and also bending down to kiss you as you start for school in the morning. Sketch in detail her eyes, fingers and nose.

Write a list of nouns, adjectives, verbs and adverbs that will apply to your own mother, and from these compose ten sentences each day from 10:15 to 10:45 a.m. in connection with your drawing work, and if the task is completed before the time has expired, we will fold our arms and sing about our mothers. Bear in mind that you must never really go to see your mother for the enjoyment of seeing her, nor only for the enjoyment of her loving presence, but you must learn to love her, and to let her influence permeate every fiber of your life, by noting down with pad and pencil, all possible details of her physical structure."

A love of nature? Too much detail, too much method, too much correlating kills it.

At the turn of the 20th century when schools were feeling like they needed to add nature study to their curriculum, and adding it the only way they could justify it, by presenting it with measurable outcomes, which means facts and testing, this little interchange was posted in a local New York daily paper. (Pardon my German accent in advance.)

The principal of a large grade-school in that city was sitting in his office intently poring over reports and excuses, when the janitor swung open the door and announced:

"A lady to see you, sir."

A German woman of ponderous size and waddling gait strode into the room. Both sleeves were rolled up to her elbows. In her right hand, by her side, she carried a huge lobster, just touching the floor, and swinging in accompaniment with her every pacing step. Her appearance indicated that it was indignation which had separated her from the wash-tub.

She swung the lobster over her head, and slapped it down on the table near his desk with a bang that made the absorbed mind of the principal leap from mental to physical matters.

“Vat ish dat?” shouted the belligerent visitor.

“Why-wh-y, that, madam is a lobster, but--”

“How many leegz has it?”

“Strictly speaking there are ten, but only eight are--”

“How many claws has it?”

“The first pair of the ten legs have large claws, the next pair have small claws, and the other two have only--”

“How many eyeez has it?”

“The lobster has two eyes--”

“Vat color is--”

“But wait, madam; before I answer any more questions, please explain why--”

“Dat’s vat I vant to know–vat for ish dat our teacher ask my Shonny all dese fool questions. I vork so hard at mine vash-tub all day long, send my boy Shonny here to larn, and your teacher tell him all dat shruff, and ax him all dese fool questions. Vat for ish dat?”

That is a good question. What for is that when children are little?

Too much lobster spoils their appetite.

Save the systematic unfolding of facts and information for when they’re ready for science and they’ve got a deep emotional base to plant it in. Charles Kingsley observed, ‘No amount of book learning will make a man a scientific man; nothing but patient observation and quiet and fair thoughts over what he has observed.’

Nature study is all about patient and quiet observation.

And a generous dose of wonder and curiosity.

So the number one method of teaching Nature Study is direct immersion. Translation: Outdoor play and discovery without making a lesson out of everything. I took a couple of my granddaughters to a little park here in Appomattox a little while back. It wasn’t long until they got tired of the swings and slide and one of them had gotten some dirt on her hand, so we found a little stream to wash it off. Then the real fun begun. I just sat and watched over the next hour as they dug in the mud with little sticks and raced leaf boats down the stream and watched the dragonflies landing here and there.

Lesson objective achieved: Pure and simple joy.

Little children love naming and learning the names of everything, so that's a second natural part of Nature Study. My father loved flowers just like his father. He taught me all their names when I was a little girl. I loved the hydrangeas that grew by my father's office, the gardenias by the back door, the hibiscus by my bedroom window. I looked forward to the johnny-jump-ups that popped out each spring with the apricot blossoms. I cut pyracantha berry branches with my mom every Thanksgiving to decorate the Thanksgiving table. By the way, fairies definitely do not dance on zucchini—they only dance on rose petals and hollyhocks. I can still feel the excitement of running out to the back yard in my pajamas because my dad told me the Pink Lady had opened up. And I remember clearly feeling God's love while lying in the grass beneath the camellia bush.

On May Day we used to make little paper baskets and fill them with flowers from the garden. Then we'd hang them on the doors of some of the older neighbors in the neighborhoods, ring the doorbell and then run and hide in the bushes so we could watch their reactions. My oldest daughter emailed me a picture of the little Mayday baskets she made with her little girls this year. She told me that while she was combing little 6 year old Madison's hair that night, Madison said, "I feel so happy inside! I just love doing things for other people and I was thinking to myself, 'I'm so glad my mom made up this plan.'"

I call that a successful heart-based education nature lesson plan.

You can also help open eyes by sharing Nature stories. They don't necessarily have to be told while you're out in nature. Your children will carry the impressions made by the stories with them while they're out in nature. As I've read the books I've been gathering to our Nature Library, I've been astonished at how my eyes have been opened as I'm out walking in our neighborhood. I notice things I've never noticed before. Even the songs of the birds have taken on new meaning.

For the familiar years, start with stories of how mother birds, insects and animals take care of their children; the homes they build for them; how they feed them. Those are the stories I've tried to start each of our nature books with in the Nature, Art and Music Series. Many young children thoroughly enjoy Thornton Burgess' nature stories or the Clara Dillingham Pierson books, all found in the Nature Stories Library. These stories are much different than the facts and information books so common for children today. The facts books will continue to feed the fire that's already burning. Right now we're trying to get the fire started.

From my notes: "If the trees and flowers, the clouds and the wind, all tell wonderful stories to the child he has sources of happiness of which no power can deprive him."

We've become accustomed to associating nature and science studies with experiments for children. But can anything reveal the wonder and mystery of nature more than watching a beautiful flower grow from a tiny seed? Don't make your children measure and record the growth in the beginning. Let them enjoy and be amazed. We've become so practical, I see lots of mothers grow vegetable gardens with their kids. But I have yet to see the four year old who

laughs with delight at the plate of freshly grown spinach on his plate. Let them grow flower gardens when they're little! The more the better. The flower industry is as huge as it is because flowers speak to our hearts. Is there anything more exquisite in color or texture or fragrance than a flower? In the Nature, Art and Music Series, I dedicated a whole book to growing flowers. The writers speak to the children directly, instructing them how to take some dirt and transform it. Nothing fancy. Very basic. But highly rewarding.

Corrie Ten Boom in her book, *The Hiding Place*, wrote: "People can learn to love, from flowers."

Eventually keeping a Nature Journal will deepen their connection with Nature. Unlike a Science Journal where you might draw plants and diagram its parts and add Latin names, the Nature Journal is purely emotional. John Ruskin, when the camera arrived on the scene in the mid 1800s, warned people to keep sketching; that if they stopped, they would lessen their ability to see the beauty in the world. Sketching nature will open that part of the heart and will help us remember what we see. What will you sketch? Flowers in fields, a butterfly on a flower, sunsets and sunrises, trees and the bark on trees, birds, squirrels, ponds, clouds, bees, ants. When you re-create a leaf, you notice the shades of color, the intricate vein work, the fringe designs around the edge that might all bypass you when you just look at a photo. By sketching and later coloring, you start noticing the panorama of color all around and the beautiful contrasts.

The worst thing I would suggest is to give your children a journal and say, "Draw". The way to inspire them is to let them see you keeping yours. They may watch you for months before they finally say, "I'd like to try that." And that's perfectly fine. You may be saying that you can't draw. That's common. But the truth is, everyone can draw. It's a skill like learning to write. I can't recommend John Muir Laws enough. He offers so many free videos to help us learn to sketch from nature.

I love his passion for it. He wrote:

"When we see with clear eyes, we know that we are surrounded with beauty. Let yourself fall in love with your life by paying attention. As David Steindl-Rast says: It is not happiness that makes us grateful. It's gratefulness that makes us happy." As you record what you see in your journal, give thanks for what surrounds you. When you celebrate the world through the ages of your journal, every stroke of your brush or pencil can be a song of gratitude for the opportunity to be alive.

"Love can be defined as sustained, compassionate attention. Nature journaling will slow you down and make you stop, sit down, and look again. Engaging in this process helps you to organize your thoughts, piece together answers and ask richer questions. Once you slow down and look long enough to record observations in your journal, mysteries will unfold before you....I draw to see."

Keep in mind—the objective is love of nature, not perfect journals. Edward Bigelow said he was once asked to judge a nature journal contest. As he looked over the entries, he found beautiful,

perfect handwriting and beautiful drawings in all eighty of them. But all eighty of them were all alike. This is how he described the winning entry:

“Next I picked up an unattractive letter written on the leaves of a pocket note-book. The drawing that accompanied it was crude and the paper was soiled by finger marks. With difficulty I read it, but was fascinated as I deciphered the story of a boy’s seaside investigation of the fiddler crab. He wanted to know how they lived underground; what they did; what food they ate; what kind of quarters they occupied. He made inquiries of the fishermen. No one knew. He said, “I’ll find out if it takes a week.” He borrowed pick, shovel and crowbar. He went to work and he found out. Then he wrote the story, as he sat beside the hole that he had dug after several hours’ hard work. He made the drawing after careful watching of the living object. I was sorry that I had not a basketful of prizes to give that boy, because he wrote his letter for the love of it.”

For the love of it. That’s the most critical component.

So how will you know if your children have successfully passed the objectives of Nature Study? The following test questions are suggested in the little book I’ve been quoting from:

Q: Do you enjoy going on rambles across the fields, through the woods and down the ravines to the meadows and swamps?

Do you like to pick the flowers, hear the birds sing, and watch all forms of life?

Do you read outdoor books that tell of nature’s interesting plants and animal life?

A yes to these 3 questions earns a 100%.

And I would say the child is now ready to move on to Science.

John Burroughs said, “Unless science is mixed with emotion and appeals to the heart and imagination, it is like dead, inorganic matter.” The child who has successfully passed a course in Nature Study will be well prepared for his next studies in Science.

One of my daughters just returned from the Amazon Forest in South America. She told me that just prior to venturing into the forest, a teacher in the group shared a pattern in nature for them to watch for. And then turned them loose to discover the pattern for themselves which stirred up all kinds of questions --naturally. She was amazed at how many practical lessons she walked away with when she asked her own questions and paid attention to her own observations. It was a much different experience than the usual lecture on species and facts. She loved it.

A couple of closing thoughts: I’ve been re-reading the Four Gospels and this time through, I noted how much Jesus loved being out in nature. He taught by the seashore, retired to the mountain, prayed in the garden. The biggest troublemakers were in the crowded cities! He frequently sought the solitude of nature to restore His soul. His earthly ministry was just three years, and what did He leave us? A handful of stories, and so many of them tied into nature:

Consider the lilies of the fields; if you have faith the size of a mustard seed; even a sparrow does not fall unnoticed; the fields are white and ready to harvest; a sower sowed seeds that fell on the wayside; He spoke of wheat and tares and living waters. There is an important lesson in His example to us.

Louisa May Alcott wrote:

“My wise mother turned me loose in the country and let me run wild, learning of Nature what no books could teach, and being led-as those who truly love her seldom fail to be-‘through Nature up to Nature’s God.’

“I had an early run in the woods before the dew was off the grass. The moss was like velvet, and as I ran under the arch of yellow and red leaves I sang for joy, my heart was so bright and the world so beautiful. I stopped at the end of the walk and saw the sunshine out over the wide ‘Virginia meadows’.

“It seemed like going through a dark life or grave into heaven beyond. A very strange and solemn feeling came over me as I stood there, with no sound but the rustle of the pines, no one near me, and the sun so glorious, as for me alone. It seemed as if I felt God as I never did before, and I prayed in my heart that I might keep that happy sense of nearness all my life.”

To that entry there is a note added, years later: “I have, for I most sincerely think that the little girl ‘got religion’ that day in the wood, when dear Mother nature led her to God.”

That’s Nature Study for the Well-Educated Heart.