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HOURS in the Out-of-Doors

SAMPLE

**A CHARLOTTE MASON
NATURE STUDY HANDBOOK**

Hours in the Out-of-Doors: A Charlotte Mason Nature Study Handbook is . . .

- **Complete**

Details Charlotte's comments about nature study along with their corresponding passages from Charlotte's writings.

- **Practical**

Presents Charlotte's writings in bite-size chunks with summary statements and quick personal review questions. Modern-day examples offer additional insight into applying CM principles today.

- **Organized**

Arranges all of Charlotte's nature study comments by topic, such as When to Do Nature Study, the Nature Notebook, and What Nature Study Looks Like.

- **Encouraging**

Motivates and inspires you with wonderful nature quotes from Charlotte Mason and many other great men and women of history, like Claude Monet, Helen Keller, Ralph Waldo Emerson, George Washington Carver, Albert Einstein, and more!

- **Easy to Use**

Acts as a quick and easy reference book to help you get started in nature study and keep going on the right path.

- **Convenient**

Published in both printed and electronic (e-book) format.

Thank you for your interest in *Hours in the Out-of-Doors!* This document contains the Table of Contents, an excerpt from the Benefits of Nature Study chapter, and a portion of the Appendix that details what science students were expected to learn in Charlotte's schools. Feel free to duplicate and share this file with your friends.

We hope you will enjoy this sample.

Visit www.SimpleCharlotteMason.com to order the complete

***Hours in the Out-of-Doors: A Charlotte Mason Nature Study Handbook* today!**

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Chapter 1

Benefits of Nature Study

“So are you ready to narrate your science lesson?” Stephanie inquired of her son Eric.

He nodded. “I really like this botany book. Today I read about the different shapes of leaves.”

“Oh, what did you find out?”

“Well, there are basically two main categories when you look at leaf shapes: conifer and broadleaf. Conifers are needle-like leaves, like the pine trees in our backyard. I know how pointy those needles can be from helping Dad trim the branches!”

“I know what you mean. Those pine needles can really prick,” agreed Stephanie.

“Then the broadleaf kinds of leaves are flat. Some are narrow and some are broad, but they’re all flat. And broadleaves can be divided into either simple or compound leaves. Compound leaves actually have several little leaflets, like that ash tree at the park. Remember? I traced a leaf from it in my nature notebook,” Eric explained.

“Oh, yes,” Stephanie remembered.

“The simple leaves aren’t divided into leaflets. They’re just a whole flat leaf.”

“So let me see if I understand this correctly. A maple leaf would be a type of broadleaf, right? Not a conifer.”

Eric nodded.

Stephanie lowered her eyebrows. “But would it be a compound or simple broadleaf?” she puzzled. Eric smiled but kept silent. Stephanie spoke her thoughts. “I’m trying to picture the tree at Grandma’s house. Its leaf has all those fingers, but are they considered leaflets?”

“Want to know how to tell?” Eric offered.

“Yes, how do you tell?”

Eric grabbed a piece of paper and a pencil and started drawing some examples. “If the section of the leaf comes all the way back to the stem, it’s considered a leaflet. But if the section stays out here and doesn’t touch the stem, it’s a simple leaf—all-in-one.”

“Then a maple leaf would be a simple broadleaf, right?” asked Stephanie.

“Right!” replied Eric.

“Hurrah!” Stephanie grinned. “Anything else?”

“I figured out that we have mostly conifer-type trees in our yard, but Grandma has mostly broadleaf-type trees,” added Eric. “I know I’ve drawn leaves from maple, oak, and walnut trees in my nature notebook when we’ve visited her house.”

“Yes, I think that’s true,” Stephanie confirmed. “Good job.”

“Let them *consider* the lilies of the field and the fowls of the air.”

Notes

Charlotte's Thoughts on the Benefits of Nature Study

1. Nature study lays a solid foundation for formal science studies.

"The child who sees his mother with reverent touch lift an early snowdrop to her lips, learns a higher lesson than the 'print-books' can teach. Years hence, when the children are old enough to understand that science itself is in a sense sacred and demands some sacrifices, all the 'common information' they have been gathering until then, and the habits of observation they have acquired, will form a capital groundwork for a scientific education. In the meantime, let them *consider* the lilies of the field and the fowls of the air" (Vol. 1, p. 63).

"The child has truly a great deal to do before he is in a condition to 'believe his own eyes'; but Nature teaches so gently, so gradually, so persistently, that he is never overdone, but goes on gathering little stores of knowledge about whatever comes before him" (Vol. 1, p. 66).

"Of the teaching of *Natural Philosophy*, I will only remind the reader of what was said in an earlier chapter—that there is no part of a child's education more important than that he should lay, by his own observation, a wide basis of *facts* towards scientific knowledge in the future. He must live hours daily in the open air, and, as far as possible, in the country; must look and touch and listen; must be quick to note, *consciously*, every peculiarity of habit or structure, in beast, bird, or insect; the manner of growth and fructification of every plant" (Vol. 1, p. 264).

"And this is the process the child should continue for the first few years of his life. Now is the storing time which should be spent in laying up images of things familiar" (Vol. 1, p. 66).

"That the child should be taken daily, if possible, to scenes—moor or meadow, park, common, or shore—where he may find new things to examine, and so add to his store of *real* knowledge. That the child's observation should be directed to flower or boulder, bird or tree; that, in fact, he should be employed in gathering the common information which is the basis of scientific knowledge" (Vol. 1, p. 177).

"Thus our first thought with regard to Nature-knowledge is that the child should have a living personal acquaintance with the things he sees. It concerns us more that he should know bistort from persicaria, hawkweed from dandelion, and where to find this and that, and how it looks, living and growing, than that he should talk about *epigynous* and *hypogynous*. All this is well in its place, but should come quite late, after the child has seen and studied the living growing thing *in situ*, and has copied colour and gesture as best he can" (Vol. 2, p. 231).

"Now the knowledge of Nature which we get out of books is not real knowledge; the use of books is, to help the young student to verify facts he has already seen for himself" (Vol. 2, p. 261).

"Out-of-door nature-study lays the foundation for science" (Vol. 3, p. 281).

In situ means "in the place."

"Out-of-door nature-study lays the foundation for science."

2. Nature study makes science interesting.

“But for the most part science as she is taught leaves us cold; the utility of scientific discoveries does not appeal to the best that is in us, though it makes a pretty urgent and general appeal to our lower avidities. But the fault is not in science—that mode of revelation which is granted to our generation, may we reverently say?—but in our presentation of it by means of facts and figures and demonstrations that mean no more to the general audience than the point demonstrated, never showing the wonder and magnificent reach of the law unfolded” (Vol. 6, p. 318).

“All the time he is storing up associations of delight which will come back for his refreshment when he is an old man. With this sort of appreciative knowledge of things to begin with, the superstructure of exact knowledge, living science, no mere affair of text-books and examinations, is easily raised, because a natural desire is implanted” (Vol. 3, pp. 77, 78).

3. Nature study increases your child's capacity to understand the unknown.

“By-and-by he will have to *conceive* of things he has never seen: how can he do it except by comparison with things he has seen and knows? By-and-by he will be called upon to reflect, understand, reason; what material will he have, unless he has a magazine of facts to go upon? The child who has been made to observe how high in the heavens the sun is at noon on a summer's day, how low at noon on a day in mid-winter, is able to *conceive* of the great heat of the tropics under a vertical sun, and to *understand* that the climate of a place depends greatly upon the mean height the sun reaches above the horizon” (Vol. 1, p. 66).

4. Nature study cultivates a love of investigation.

“It is infinitely well worth the mother's while to take some pains every day to secure, in the first place, that her children spend hours daily amongst rural and natural objects; and, in the second place, to infuse into them, or rather, to cherish in them, the love of investigation” (Vol. 1, p. 71).

5. Nature study gives your child a sense of ownership and stewardship of the Earth.

“Geology, mineralogy, physical geography, botany, natural history, biology, astronomy—the whole circle of the sciences is, as it were, set with gates ajar in order that a child may go forth furnished, not with scientific knowledge, but with, what Huxley calls, common information, so that he may feel for objects on the earth and in the heavens the sort of proprietary interest which the son of an old house has in its heirlooms” (Vol. 3, p. 79).

“Every child longs for intimacy with the creatures about him; and—
 ‘He prayeth best, who loveth best
 All things both great and small;
 For the dear God who loveth us,
 He made and loveth all’ ” (Vol. 3, p. 80).

“[The child] should know by name, and where and how they live at any rate,

Notes

Avidities means “ardent desires or cravings.”

“We were all meant to be naturalists, each in his degree, and it is inexcusable to live in a world so full of the marvels of plant and animal life and to care for none of these things.”

Science in Charlotte's Schools

So what kinds of science did the children in Charlotte's schools learn? Remember that she used a mixture of living books, laboratory experiences, and nature study. Here are some exam questions and answers that give us a peek into Charlotte's expectations for the various grades.

Exam Questions and Answers from Lower Grades

(taken from Vol. 3, pp. 274–285)

Question: What have you noticed (yourself) about a spider?

Answer (aged 7 3/4): We have found out the name of one spider, and often have seen spiders under the microscope—they were all very hairy. We have often noticed a lot of spiders running about the ground—quantities. Last term we saw a spider's web up in the corner of the window with a spider sucking out the juice of a fly; and we have often touched a web to try and make the spider come out, and we never could, because she saw it wasn't a fly, before she came out.

I saw the claw of a spider under the microscope, with its little teeth; we saw her spinnerets and her great eyes. There were the two big eyes in one row, four little ones in the next row, and two little ones in the next row. We have often found eggs of the spiders; we have some now that we have got in a little box, and we want to hatch them out, so we have put them on the mantelpiece to force them.

Once we saw a spider on a leaf, and we tried to catch it, but we couldn't; he immediately let himself down on to the ground with a thread.

We saw the circulation in the leg of another spider under the microscope; it looked like a little line going up and down.

Question: Gather three sorts of tree leaf-buds and two sorts of catkin, and tell all you can about them.

Answer (aged 6): (1) The chestnut bud is brown and sticky, it is a sort of cotton-woolly with the leaves inside. It splits open and sends out two leaves, and the leaves split open.

(2) The oak twig has always a lot of buds on the top, and one bud always dies. Where the bud starts there is a little bit of knot-wood. The oak-bud is very tiny.

(3) The lime bud has a green side and a red side, and then it bursts open and several little leaves come out and all the little things that shut up the leaves die away.

(4) Golden catkins and silver pussy palms of a willow tree. The golden catkins have stamens with all the pollen on them. They grow upwards, and two never grow opposite to each other. The silver pussy palms have seed boxes, with a little

“What have you noticed (yourself)?”

Notes

tube growing out, and a little sticky knob on the top. The bees rub the pollen off their backs on to the sticky knob.

Question: Gather three sorts of tree leaf-bud and two sorts of catkin and tell all you can about them.

Answer (a cottage child aged 9): Beech Twig—It has rather a woody stalk, and it is a very light grey-brown stalk, and it is very thin, and the little branches that grow out are light brown and it is thicker where the buds are and it is a lighter brown up at the top than it is at the bottom, and the buds are a light reddy-brown and very pointed, and they are scaly. The bark is rather rough and there is a lot of little kind of brown spots on it.

Lime Twig—It is called Ruby-budded Lime because the buds are red, and they are fat rather, and they have got some green in as well, and they come rather to a point at the top, they grow alternately and the little stalk that they grow out of is reddy-green, and the top part of the stalk is green, and it is woody, and it is rough, and it is a reddy-green at the bottom. Where the buds come out it is swelled out, the bark has come off and it has left it white and woody. At the top of one of the stalks the bud has come off.

Sycamore Twig—Well, the back is *very* woody, and it is a brown stalk and it is rough and there is a little weeny bud growing out of the side, and the buds grow out two and two, and there are a lot of little buds.

Willow—Well, the stalk is a dark brown, and is very smooth and it will bend very easily, and the buds when they first come on the stalk are little brown ones, and then a silvery-green comes out and there is a scale at the bottom, and then they get greyer and bigger with little green leaves at the bottom, and then it comes yellow, and there is a lot of pollen on it. If you touch it the pollen comes on your finger.

Hazel—Well, the stalk is a dark brown, something the colour of the willow, and it bends easily, and the buds are green and there is little scales, and then the catkins come and they grow very long, and there is a lot of little flowers in one, and there is pollen in that, and the stalk is rather rough, and there are some big buds at the top just bursting, and the leaves are coming out, and the buds are very soft and glossy, and the scales are at the bottom.”

Question: What have you noticed about a thrush? Tell all you know about it.

Answer (aged 8): Thrushes are brown birds. They eat snails, and they take the snail in their mouths and knock it against a stone to break the shell and eat the snail. I found a stone with a lot of bits of shell round it, so knew that a thrush had been there. Where we used to live a thrush used to sing every morning on the same tree. The song of the thrush is like a nightingale. We often see a lot of thrushes on the lawn before breakfast or after a shower. They have yellow beaks and their breasts are specked with lovely yellow and brown. Once we found a thrush asleep on a sponge in a bedroom and we carried it out and put it on a tree. Thrushes eat worms as well as snails, and on the lawn they listen with their heads on one side and go along as the worm gets under the ground, and presently, perhaps, the worm comes up and they gobble it up, or they put their beaks in and get it. Thrushes build their nests with sticks at the bottom and line them with little bits of wool they pick up, or feathers, and they like to get down very much.

“Tell all you know about it.”

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