

BUGS, CHICKEN, AND COMPOST, OH MY!

Focus Lesson: Bugs, Chicken, and Compost, OH MY!

Materials:

<http://www.backyardchickens.com/a/composting-with-chickens>

Information about composting with chickens, also attached

Books on reading list

K-W-L charts

Larger poster paper for class K-W-L chart (or chalkboard)

Paper

Colored pencils

Chicken resources:

Include books from Reading List

Printed pictures of chickens

Newspaper articles about chickens

Information from the internet

Time: 1 hour

***Common Core Standards:**

CCSS.ELA-Literacy.RI.5.3

Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Thinking Skill: Inference, Critical Thinking, Problem Solving, Evaluation of Non-fiction

Objective:

Students will participate in an inquiry based lesson to uncover the relationships between chickens, bugs, and compost. Students will create a K-W-L chart about compost. Students will also evaluate the format of a nonfiction text.

Connection:

Begin with a compost brainstorm. Allow students time to fill in their K column (what a student knows) with things they already know about compost. Ask for some examples and begin a class K-W-L chart on larger paper or a chalkboard. Allow students time to fill in their W column (what a student wants to know).

Explicit Instruction:

Begin reading *The Secret Lives of Backyard Bugs*. Read pages 1-7 as a group. Focus especially on compost, page 7.

What do you notice about the text on this page? There is a main paragraph in black, and photo captions in white. How do you like to read this type of page? Why do you think the author chose to set it up this way? How do the photographs add to your understanding of the text?

Guided Practice:

Allow students time to add to their L column (what a student has learned) with information they learned from reading.

We now know something about how compost is made, but there are other factors that can contribute to compost. One of these is the chicken.

- How do you think chickens and composting relate to one another?
- Have chicken resources available: Include books from reading list, printed pictures of chickens, newspaper articles about chickens, and information from the internet.
- Give students time to look through resources (could also give specific different resources to students to analyze), gathering information about chicken behavior and composting.
- Guide students to the article “Composting with Chickens,” which talks about chickens’ love for digging and scratching, as well as their desire to search for tasty bugs.

Discuss: What beneficial things do chickens do? How do they help farmers?

Independent Practice:

Fold a piece of paper in half. On one side, draw a compost pile with chickens. On the other side, draw one without chickens. Write 2 facts about each compost pile.

Use the information you’ve gathered to draw how compost, bugs, and chickens are connected. Be sure to illustrate how chickens are useful to the compost pile!

Reflection – Group Share:

Share drawings with classmates.

If you were a farmer, would you want chickens in your compost pile?

Reading list:

The Secret Lives of Backyard Bugs by Judy Burris and Wayne Richards

Chicks and Chickens By Gail Gibbons

Chick Days by Jenna Woginrich

Where Do Chicks Come From? by Amy E Sklansky

Website Resource:

<http://www.backyardchickens.com/a/composting-with-chickens>

Teacher Note:

One of the Many Benefits of Raising Chickens: Composting with Chickens SOURCE: <http://www.backyardchickens.com/a/composting-with-chickens>



Recently delivered 30 yard dumpster of hay, shavings & manure - 8-27-2011



After four months of the chickens working the compost - 12-31-2011
(this picture was taken where those trees are in the first picture)

Regardless of whether you would like to start raising chickens or have been raising them for decades, it's a known fact that chickens love to scratch. That's how many once green fenced chicken yards become barren brown wastelands. If they free range, they most likely love to scratch in your garden, often digging up precious plants. They will scratch up nice dust bathing holes, eventually making a chicken-style moonscape. Some have even dug their way out of their enclosures. They scratch litter into their food and water dishes, out of the coop onto the ground, making a mess of everything. 😊 By now, you must be thinking, *this article is about the benefits of raising chickens, not their downsides*. Yes, that's true, but the point is: while chickens loving to scratch can be detrimental, it can also be used to our benefit.



Because part of the chicken yard is on a slight side hill, the chickens kept on scratching everything downhill,
I added boards to "terrace" the compost area.

Chickens and compost are “a match made in heaven”, because of their love of digging and scratching. You know all that labor-intensive, back-breaking work of having to turn your compost pile? Chickens will gladly do it for you! Or if you’re like me, I didn’t bother to turn my compost, so it took six months to a year to fully decompose. But, now with the chickens doing the work, I can have usable compost available any time of the year.

Not only do I derive benefit from it, but the chickens find great pleasure in digging

through the compost in search of “goodies”.  The high protein bugs and beneficial microbes are a favorite “snack”, as well as, the weed seeds, food scraps, and any edible green plant tossed into the compost pile. This free food not only improves the quality of the eggs, but it also reduces the amount of feed you have to buy. Because of their constant scratching, the raw compost materials break down a lot faster.



Vermont Composting Company



Karl Hammer of Vermont Compost Company (vermontcompost.com) doesn't feed any purchased feed to his flock of several hundred chickens. Instead, they free range on his mountains of compost, gleaning all their nutritional food from the compost made from food scraps, cow manure, and hay. Most of the food waste comes from local restaurants, schools and other institutions. Our family visited Vermont Compost Company in 2011, and it was incredible to see first-hand. These photos are ones that we took while on the "tour". The healthy and happy chickens were all busily working for their food, while helping to turn and aerate the compost. The covered area is to prevent crows from raiding the compost piles, which would spread disease and pests to the chickens. The chickens are guarded by two German Shepherd dogs.



Since it's not usually possible for every backyard chicken raiser to have such a large supply of compostable materials, there are several other ways to accomplish the same thing. Whether you have a large or small chicken yard, just a couple chickens or hundreds, you can still have chickens help you with your compost. The best way is to just throw all your compostable materials right into the chicken yard. It will better utilize their manure by incorporating it with the other materials, instead of causing mud, rain runoff and compacted dirt & manure. The finely shredded materials will decompose much faster, as it allows for surface area for the micro organisms to work. It's best to start with several inches of high carbon material, such as hay, straw, leaves, etc. Then, throw your food scraps on top, and let the chickens do their work. Whenever you have more compost material, add it to the pile. If the pile starts to get really compacted or the chickens show little interest in digging in it, throw some scratch grains on it. Even if they don't initially show interest, they will once the pile starts getting more biologically "active".



If you already have an existing compost pile, you might want to just empty it into the chicken yard as a “starter” compost pile. Yes, they’ll probably love eating all the worms and goodies they find in it, but as least it will keep them busy. As the compost pile grows in depth, the worms and other bugs will hide deeper in the pile and visit the top occasionally to provide a free snack for your chickens. Some people have provided a safe “hiding place” for earthworms by covering with food or fencing off a small section of the compost area. I have found that there are always more bugs where they come from, even when the chickens help themselves on a daily basis. The compost pile in the chicken yard won’t be like the “traditional” one that’s built up until it’s several feet thick. The chickens will spread it all out into a thick “mulch” that they will usually keep scratching through until it’s turned into dark, rich compost.



If you don't want your current compost pile to be "disturbed", but you still want the chickens to have access, you can enclose it with pallets, wire, or some other structure. That way it can still "heat up" and fulfill all the normal "requirements". The chickens won't be able to get as much use or enjoyment out of it, but they would still enjoy scratching through the top layer. Another option is to have the compost contained on three sides, and let the chickens scratch through it. Then, if you want, you can shovel the compost they scratched around back into the pile. But, that kind of defeats the purpose of the chickens doing "all" the work.



My personal favorite is where the compost pile is actually a thick “mulch” on the chicken yard that’s routinely added to. My goal is to have no bare dirt in any part of the chicken yard. Preferably, at least part of the compost chicken yard should be covered with a

roof, so that the chickens can “work” it through all kinds of weather. As an added bonus, I like two or more fenced off “pasture” areas into which the chickens can be rotated for grazing. With their compost area to scratch in, they will be less likely to dig up the grass and other greens in the “pasture” areas. That way they get the best of both worlds - scratching in “dirt” & eating fresh greens.



For “harvesting” the compost, some people scoop all the organic material out of the chicken yard on a routine basis. The other way is to move the course material on the top aside and scoop up the finer composted material beneath, on an as-needed basis, and put it directly on the garden. Others will remove it once the materials are shredded finely and move it to a “normal” compost pile to finish decomposing.

Some people are against chickens working with compost, and they have their “legitimate” reasons. If you like a neat compost pile and one that stays in its container or heap, I’m sorry, but chickens won’t be able to help you very much. Those earthworms that the chickens go crazy for, can be a host for gapeworm larvae, so they prefer to just feed them GMO commercial feed in a barren dirt yard. They also say that you also shouldn’t let your chickens near your compost pile, because it *may* contain moldy or rotten food scraps, moldy chicken feed or other harmful things that the chickens *may* eat. What I have found is that chickens *are* smart enough to know what is good to eat and what isn’t, provided there are other food options available to them. If you’re really concerned about the risk, you can put the moldy food in a compost pile that is not accessible to the chickens, and later move it to the chickens’ compost once the food scraps have decomposed. Personally, I think if you use common sense and are careful what you put into your compost pile, it will be just fine. Otherwise, Vermont Composting Company wouldn’t still be raising chickens on compost.



To summarize, whether you decide that composting with chickens is for you or not, it's up to you. While everyone's setup is different, I believe that this can be incorporated into nearly every situation. I read that it used to be in the "olden days", many rural farms and homes didn't have garbage disposal – they had chickens and pigs, which ate all their food waste. Talk about recycling! Plus, they got protein in the form of meat & eggs in return for their "garbage disposal". I think that's a lot better than having to pay to get rid of that food waste. About 97% of the 350 million tons of food waste generated in 2010 was thrown away into landfills, even though most of it could have been used for livestock feed or been composted. While we can't all "recycle" the food waste generated by large food institutions, we can at least do our part in reducing the local waste in our home, our neighbors, possibly even our town.