

A Child's Guide to

Riverhill



Farm

by Merry's Crew at Grass Valley Charter School

Grass Valley Charter School is a K-8 School located in downtown Grass Valley. Our school is an Expeditionary Learning School, which means that we study a topic for a long time to learn everything we can about it. This year my third and fourth grade crew decided to study food and water, so we spent a lot of time visiting and learning about Riverhill Farm. We loved every minute of our time at the farm, and we created this *Children's Guide to Riverhill Farm* so that other kids who visit the farm could learn about it and learn to appreciate it like we have.

We hope you will enjoy reading about some of the things you might find at the farm.

We also hope you will have fun coloring our drawings and the pictures we drew of ourselves.

If you purchased this guide at a farmers market, then the proceeds from the sale of the guide will go to help low income families and children get boxes of fresh produce from the farm.

If you would like more copies of our guide, you can contact us at Grass Valley Charter School by visiting our website, grassvalleycharter.org or emailing me at merrydaly@gmail.com

Merry Byles-Daly



About Riverhill Farm, by Alyse

Riverhill Farm is an amazing place, full of wildlife. They have all kinds of plants, and more animals than you would expect. Yes, Alan and Jo have two dogs, Simon and Spike, but there are also wild ducks, tons of raptors and songbirds, and even a frog in the homemade outhouse. They have gopher snakes and Russian Honeybees. Alan and Jo also have 7,000 onions and thousands of crop plants, including beets, lettuce, tomatoes, potatoes, chard, carrots, cabbage, broccoli, strawberries, peaches, sunflowers, and more.

Riverhill is always peaceful and something is always happening, even at night. But despite that, it is very quiet (unless Alan is running the tractor). It is always beautiful at Riverhill. In the spring, birds are chirping, the flowers are always blooming, and it is like the world is being reborn. The beneficial insects are out, and if you sit in front of the tool shed and be completely silent, you can hear the bees' wings buzzing. Spring is the time of beauty at Riverhill.

In the summer, the fruits and vegetables are ripe and a few flowers are still out. The baby animals are all grown up and the bees are still pollinating. The sun is very hot, but the sunflowers and trees give nice, cool shade. Summer is the time of labor at Riverhill.

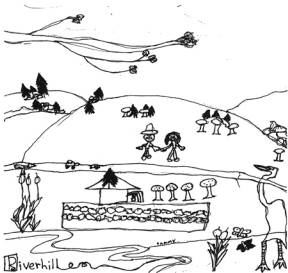
In the fall, the trees' leaves turn red, orange, yellow, and brown, and dangle from the twigs until they break off and float to the ground. Autumn vegetables grow and bees are scarce. Fall is the time of peace at Riverhill.

Winter at Riverhill brings cold winds and blows the farm's vegetables, animals, and leaves from the trees of the farm. The air is chilled and everything is gone. Winter steals the farm's insects and leaves a trail of snowfall. Yet inside the cozy house, Alan and Jo are happy and warm. Winter is the time of rest at Riverhill.

After winter, spring comes again and Alan and Jo plant all of their seeds and the cycle starts over. The world is reborn. And Riverhill farm is truly a magical place.



Riverhill Farm History by Samantha 3rd Grade



Riverhill Farm was not always on the land it is on now. In the 1800's an Italian family owned the land at the end of Cement Hill Road. They had a different farm on the land, with plants and animals. Then Riverhill came in 2001. Even before the Italian family, Native Americans used to live there. How do we know? We found grinding stones! Then Alan and Jo became farmers because they love nature.

Every farm needs to know before planting how to decide what plants to raise. Riverhill Farm needed to know too, but, how? Before planting, Alan and Joe needed to know the climate of the area. Some of their plants need a warm climate and some need a cold climate. Most of Alan and Joe's fruit needs a warm climate. Alan and Joe's plants also need good soil. Different crops have different soil needs. The plants also need plenty of shade and sun. Riverhill Farm has smart and thoughtful ways of raising plants.

Riverhill Farm partners with many local restaurants by selling organic fresh produce to them. One of my personal favorite breakfast hangouts is Summer Times. They make delicious goods that come from Riverhill Farm's fresh produce. Ike's Quarter Café is a cute little place in Nevada City. They also use Riverhill Farm's glorious vegetables and fruit in many of their menu items. A local bakery, Flour Garden also enjoys Riverhill Farm's excellent harvest. Last but not least is New Moon, a perfect late dinner to fill your stomach with good stuff from Riverhill Farm.



Another way Riverhill Farm sells it's vegetables and fruit is at seasonal stands, markets, and the C.S.A. (Community Supported Agriculture). Local farmer's markets sell not only Riverhill Farm's produce, but other smaller and bigger farms' produce. Riverhill Farm's CSA means people come there and trade their money in the winter for boxes of produce all spring and summer long. They give you whatever fruits and vegetables were grown that particular week. Riverhill Farm really reaches out to the community by helping people with good healthy food.

Bees by Suraya, 3rd Grade



About Bees

There are three parts to a bee: the head, the thorax, and the abdomen. Other animals know they can sting so they go away and leave bees alone. Other bugs try to look like them so they don't get killed. Queen and drone bees fly higher than other bees, but you do not see them as much, and they barely leave the hive.

Queens and Drones

The queen and drone bees almost never leave the hive and fly like other bees. The drones get kicked out of the hive in winter and die. The sister bees don't feed them and then they die. The drones mate with the queen. The queen lays over 2,000 eggs.

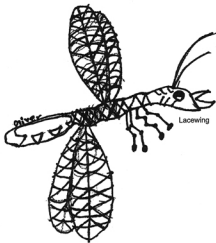
Drones are the only boys in the hive. Girl bees dance to tell other bees there are flowers and good pollen nearby. Then other bees look at them and know where to go because their head points to the flowers. They cluster to get warm in the winter. That means they all clump together. In the summer, to get cool, they fan with their wings.

Life Cycle of a Bee

A queen lays an egg in a wax cell. On the first day the egg is straight. On the second day the egg goes a little bit to the side. On the third day the egg is on its side. On the fourth day the egg is hatching into a larva. The larva sheds its skin 5 times before hatching into a pupa. A pupa builds a cocoon. Then the head pops out of the cocoon. Then comes the thorax and finally the wings. An adult comes out and cleans its cell. Then it's ready to go pollinate. If you go to Riverhill Farm you will see bees pollinating all over the place, but especially in the Herb Garden and in Insect Alley.



Beneficial Insects by Oliver, 3rd Grade



Dinner

Mealy Bug Destroyers

Well, let's start out with the word **BENEFICIAL**, which means helpful. An insect is a bug, right? Right. So it is a helpful bug that helps the plants on the farm by eating pests like MEALYBUGS! This beneficial insect is called a MEALYBUG DESTROYER. It prevents the MEALYBUG from destroying the farmer's crops. Bugs like these help Riverhill Farm in many ways.

Insect Bodies

Eggs are like beetles because they're hard on the outside and soft on the inside. An adult can't grow any larger because of their skeletal structure. Caterpillars can climb because of suction cups on their feet. Some bugs have stingers, mandibles, and wings for escape or to fight.

Predatory Mites

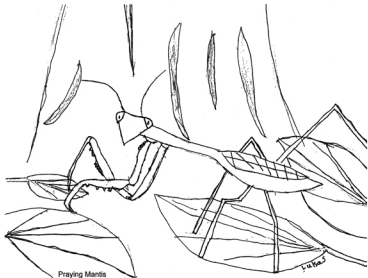
A predatory mite looks like a red pear with six legs, it's the red itty bitsy spider...NOT! This harmless looking bug will eat every pest in your garden. They're one bug no pest wants to mess with. A predatory mite will eat any bad bug that hurts the garden. A predatory mite is almost at the top of the list for farmers' helpers.

Lacewings

Another example of a beneficial insect is a lacewing, which pollinates and eats pests. A lacewing is one inch long, has mandibles and four big clear wings. It is a bug that pollinates, takes pollen from plants and spreads it all over the farm, which helps the crop. An aphid eats crops and a lacewing eats aphids, which saves the crop. If there were no beneficial insects farms would die.



Beneficial Insects by Lukas, 3rd grade



Ladybugs

There are 5,000 different species of ladybugs in the world. They eat aphids and other plant-eating pests. One ladybug can eat up to 5,000 insects in its lifetime. Ladybugs are most active from Spring until Fall.

As ladybugs age the color of their spots fade. They are also known as lady beetles or lady bird beetles. If you touch a ladybug they will fly away but if you let them crawl on you they will stay. Ladybugs fly from leaf to leaf until they find aphids or other pests. As you can see ladybugs help the farm.

Predators for Insects

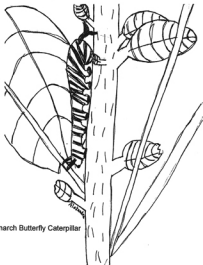
Some people use pesticides to kill bad insects, but it also kills good insects. Nature has many different natural pesticides. One natural pesticide is pyrethrum, which comes from flowers. It kills only certain insects, which are leaf hoppers, thrips, flies, aphids, and other flying insects. Birds are always trying to find insects to eat. Many bugs work at night or they just stay under leaves.

Praying Mantis

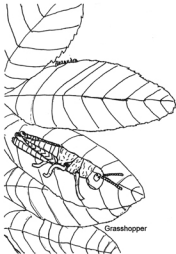
Praying mantises are carnivores eating mainly insects. Mantises also eat spiders, frogs, lizards, and even small birds. Mantis's front legs have spines to help catch their prey. Praying mantises can catch their prey in one second. That's very fast. Mantises do not eat dead insects. They eat alive insects. Mantises have green skins to help catch their prey. They are camouflaged, blending in with the plants they live near. You can buy praying mantises egg cases at the store or in the mail. At Riverhill Farm they don't need egg cases because the insects come to the farm. Alan and Jo welcome praying mantises because they eat insects that hurt crops. As you can see, mantises help the farm in many different ways.



Problem Insects at Riverhill Farm By Alexandra 3rd Grade



Monarch Butterfly Caterpillar



Grasshopper

Aphids and Grasshoppers

There are many different harmful insects to farms. But, I'll just tell you about two of them: aphids and grasshoppers. They both affect the farm, yet in different ways. But, they both do it for one reason: they are hungry. I'll tell you about aphids first. Aphids are known to eat plants. Aphids eat using a sucking mouth, which is called a stylet. The plants they harm the most are beets, which are delicious to aphids. But their favorite plant of all is cabbage. They have different tastes than humans. Personally, I would have chosen pizza. They have soft bodies, which can be green, black, and even pink. They like to eat plant sap. Animals that eat aphids are ladybugs, hoverfly larva, and parasitic wasps, although Alan and Jo say that the most common predator for insects are birds and beneficial insects. There are plenty of those on the farm.

More About Grasshoppers

Now I'll tell you a little bit about grasshoppers. A grasshopper is a green or brown insect that is harmful to plants. Sometimes this can be helpful, but now it is not. Grasshoppers are eating the food! Grasshoppers chomp away happily on the plants. Oh, its time to jump! Grasshoppers use large springy hind legs that can catapult them away from their crime scene. But, some predators like birds, lizards, mice, and praying mantises might catch it! So now you know a bit about some criminals for plants, although grasshoppers are not really a big problem at Riverhill Farm. There are too many birds!



How do Earwigs and Caterpillars Affect Farms?

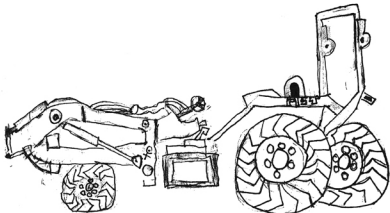
Harmful insects can hurt the plants on farms. Earwigs, caterpillars, and mealy bugs are some of the most common. Earwigs get their reputation by eating small holes in the leaves of the plants. Bigger and stronger plants can tolerate it, but smaller weaker plants can't. They have to defend themselves somehow, so they use pincers for that purpose. The plants at Riverhill Farm are healthy and the mealy bugs and earwigs are not a big problem.

Caterpillars chomp almost the whole leaf of a plant instead of eating tiny holes in the leaf. While they're still in caterpillar form, they have three body parts: a head, a middle section, and an abdomen. Caterpillars eat their fill from leaves all over Riverhill Farm and then they start to on their cocoon journey.

Are you wondering what a cocoon journey is?

Of course caterpillars have to hatch from something. What does a caterpillar become when it comes out of its cocoon? That's right, a butterfly. So a caterpillar hatches from a butterfly's egg. However, they are not a big problem at Riverhill Farm because there are too many predators that eat them.

Tractors by Elijablue 3rd Grade



Elijablue

Alan's Kubota 34

The first tractor was made in the 19th century. They were like steam engines on wheels for working on the farm. Around 1850, new tractors with more efficient wheels were used on farms.

In 1892, John Froehlich invented the first fuel-powered tractor.

Two of these tractors would plow side by side because the lengths of the plows were not big enough for one tractor to plow the field.

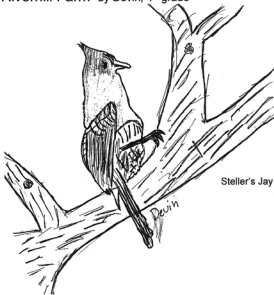
At River Hill Farm Alan uses a Kubota 34 horsepower tractor and was built in 2006 this tractor helps Alan in many ways. His Kubota has no cab and is open at the top. It has a front-end bucket that is basically a bucket in the front. This can be used for many purposes like moving piles of fertilizer, gravel, and more. This tractor is used on the farm for lots of things. It is a useful tractor.

Until 1950 plow and other farming equipment were always attached to the tractor by a drawbar. The traditional draw bar is a steel connected to the tractor. The hitch of the attachment or implement was basically loop or a pin. The attachment or implement could be attached or taken off allowing the tractor to be used for other purposes. If the tractor was equipped with a swing draw bar could be set in the center or off set of the center to let the tractor run outside of the implement. The draw bar system made sure the implements has its own gear for when its running. In the case of the plow, chisel, cultivator or harrow, some kind of lifting mechanism to lift it out of the ground was needed. Draw bars posed a big risk depending on how the implement was put on.

Draw bars are a really interesting subject.



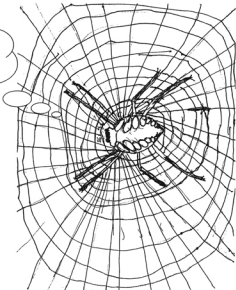
Birds at Riverhill Farm by Devin, 4th grade



Steller's Jay

Do You Know What a Phidippus Audax Is? by Eli, 3rd grade

How are spiders beneficial to plants at Riverhill Farm? Spiders eat insects such as aphids and mosquitoes. Spiders eat by paralyzing their prey. They bite their prey and injecting venom with their fangs. Then they spit on it to start digesting it. They suck liquid out to start digestion.



Acorn Woodpeckers

If you go up to sit in the shade of the big oak trees on the farm, you might see acorn woodpeckers. This bird is found a lot in the west. In parks and towns this bird is most common in oak trees. In the summer it eats insects from the tree. In the fall, the acorn woodpecker drills holes and stores its acorns. This bird eats acorns, corn, sap, and fruit. It also stores nuts like walnuts in wooden structures.

It has white wing patches and a black back and chest. It has a white belly and black lateral stripes. It has a white forehead and a yellowish to white throat. It has a black stripe around the eye and the crown is distinctly red. These birds are very distinct. You see them around Riverhill farm all of the time!



Steller's Jays

Steller's Jays are most common in the forest. They also live in public areas like campgrounds, parklands, and your backyard. They go for birdfeeders and stray picnic food. If you are nearby you will hear their harsh, bold calls. Sometimes they mimic the sounds of hawks. It is easy to identify them because of their rich black and blue color and the wings shimmer a little bit.

These birds are very intelligent! They spend their time flying over the forest canopy with patient wing beats. They have long legs to hop on the forest floor and look for food. Sometimes they get really close and try to steal your food. Steller's jays are very fun to see!

Scrub Jay

The scrub jay is a little bit bigger than the Steller's jay. The scrub jay has a longer tail and rounded wings. The sides of the head are deep dark blue. Some scrub jays have a white stripe around the eye and dark ear covers. Their breast also has white and gray. They have a dark blue tail, a blue head, and black feet. These birds are very blue.

House Finch

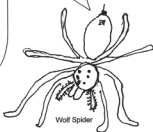
These birds are very small! The adults have a square tipped brown tail, a brown back, and gray on the wings. These birds have long beaks and a small body and a red fat head. The house finch has a notched tail and small wings. The eggs are pale bluish green and a glossy smooth surface with few black spots. I like this bird because it makes a lot of graceful noises. At Riverhill Farm, you can see house finches easily by looking at the bird feeder or the sunflowers.

Two types of spiders common in California are Black and yellow garden spiders and jumping spiders. Black and yellow garden spider lives in fields and between stems of plants. They eat bees, wasps, aphids, and flies. They eat their web and build a new one every day. They are most active in the day. *Argiope trifasciata* is the most common garden spider in the Western U.S.



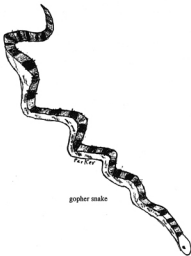
Phidippus audax is a common type of jumping spider. They do not build webs, but they do have silk. They use the silk to build domes for shelter and traveling. They are known for their spectacular leaps. The leaps are useful for hunting. They stalk their prey and leap on top of them. Then they bite and inject venom to paralyze them for eating. They possess eight eyes and are known for the sharpest vision of all spiders, which helps with hunting. Four eyes are located on their faces. They are the sharpest. The others are on the top of their heads. They are used for seeing things that will attack from above.

The wolf spider is a spider that hunts on the ground and does not build webs. Some wolf spiders hunt in the day time and others hunt at night. The ones that hunt at night rest during the day. They have six eyes. The eyes are placed in a diagonal line with three eyes on each side. Wolf spiders carry their egg sacks on their back when they hunt. When the young hatch the mother carries them everywhere on her abdomen. Wolf spiders live everywhere in the world except the Arctic. Look for wolf spiders in holes or running around on the ground at Riverhill Farm. They don't build webs.



Snakes on the Farm

by Parker, 3rd grade



The Gopher Snake

Alan and Jo saw a gopher snake crawling up the post to a bluebird house. They saw the snake eat the bird's eggs. Snakes have to eat! Gopher snakes are gentle and they don't have venom. They are prey to Red-tailed Hawks, Kit Foxes, and Coyotes. If in danger they act like a rattlesnake by hissing and flattening their head. The hissing has the same sound as a rattlesnake's rattle. They are good at swimming, climbing, and digging burrows. There are two different types of bites from a Gopher Snake. There is the strike bite and the feeding bite. You know when a snake will do a strike bite, when they hiss and flatten their heads. They usually live in their burrows in grasslands and in bushes. They hibernate in winter and fall. They can be 36-96 inches long. Adults eat mammals, birds, eggs, mice, kangaroo rats, gophers, ground squirrel, rabbits, and ducks. They kill their prey by constricting.

The Garter Snake

The garter snake eats slugs, leeches, fish, frogs, lizards, snakes, birds, mice, and bats. You can see why it is helpful to have them on a farm. Garter snakes might bite, but they won't hurt you. The common garter snake has three stripes on its back. The stripes are usually yellow and black. There can be red or black spots in between the stripes. They live in grasslands, woodlands, and around wetlands. Of course, they live on farms too. The red-sided garter snake lives in meadows, ditches, ponds, and stream-sides. They don't lay eggs. They have 10 to 40 babies. They hibernate in the day. They hibernate in the winter. They're cool blooded. They have to be in 60 to 90 degrees Fahrenheit. They swallow their prey whole.

Western King Snake

Another one of the snakes you might see at Riverhill Farm is the Western King Snake. King snakes can grow 3 to 4 feet long. They eat other snakes! They're not very dangerous because they don't have venom. The mountain king snake is up to 30 in. The California king snake is 3 to 4ft. long. They hibernate in the day. King snakes lay eggs. They live from Canada to South America. They like to live in areas that are 70 to 90 degrees Fahrenheit. Alan and Jo haven't seen any on the farm yet, but they could be there. They eat rattlesnakes. Alan and Jo have seen rattlesnakes on the farm, but not very often.



Flowers on Riverhill Farm by Alyse, 4th Grade



Flowers at Riverhill

There are many types of flowers on Riverhill Farm, and they can be found almost anywhere on the farm. Purple Verbena is one of my favorites. These are delightful little bunches of small purple flowers. One bunch is on a stalk and at least two smaller stalks branch off of the main one. Each new stalk has another smaller bunch of flowers. The stalks can get to be 8 inches tall and 3 to 4' long! Verbena likes partial shade or full sun. One good thing about Purple Verbena is that it attracts butterflies.

The second flower is a zinnia. These flowers are extremely beautiful, and I love them. They stand up to be about 3 ft. tall. Zinnias sit on one thick stem with big leaves. Many petals dance around the middle, a small ring of yellow disk flowers. Bees land on these and extract pollen and nectar from them. In the middle, when the flower dries out, the seeds form. Zinnias are magnificent because of their colors. They can be a multi-colored flower or just one solid color in every shade except blue. Zinnias bloom in June through September and like full sun.

Those are just two of the flowers that keep Riverhill infested with beneficial insects and make it beautiful!

You can usually harvest seeds from the flowers at Riverhill to have seeds for new flowers. Here is how to harvest sunflower seeds: Step 1: wait until the third week of September. Step 2: look at the seeds in the middle of the flower. If the seeds have stripes, they are ready to harvest. You will also know they are ready because, the back of the flower will turn brown, the flower will start curling its' petals inward, and the leaves will start to crumble and fall off. Step 3: hold a bowl under the flower and rub the seeds so they fall out. Step 4: wait until the next planting season to plant seeds.

Our class got to harvest zinnia seeds at Riverhill Farm, and we are growing zinnias in our classroom.



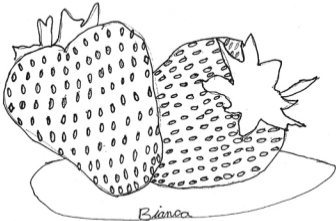
Sunflowers

The sunflowers at Riverhill were planted to attract birds. The birds come for the seeds and they end up eating the harmful insects. Alan and Jo like the sunflowers because in the fall all the birds come and they just love watching the birds eat the seeds. Some sunflowers are edible. One of them is called the Jerusalem artichoke.

There are 67 species of sunflowers. 40 of them live in the Rockies. Common Sunflowers can grow to be 12' tall but the average sunflower grows to 2 to 6' tall. Sunflowers love the sun so much their heads follow it wherever it goes in the daytime. They also like grasslands and meadows so they can see the sun at all times. Sunflowers are actually wildflowers.

The sunflower's scientific name is *Helianthus*.

Strawberries and Weather By Bianca 3rd Grade



How Weather and Seasons Affect Strawberries

It is good to start growing strawberries in the spring when the soil is soft and warm. In the spring the plants need full sun to grow. In the winter the plants sleep and they aren't growing. In the spring when the weather is warmer the plant grows a flower and then the bees visit and collect the pollen. In the summer, strawberries get ripe and the farmer workers put them in boxes and go to the market and sell them. In the winter the plant stops growing and rests, because it is cold!!!

How Strawberries Grow

Strawberries have roots that are white with little hairs that help them collect water and minerals to feed the plants. When they grow out from the ground the leaves start to use the sunlight to make food for the plants.

Then they want to bloom. When they bloom, they have little white flowers with orange in the middle. The insects like bumble bees like to collect pollen for them to bring to their hives. At Riverhill Farm you can come and pick your own strawberries when you pick up your box of vegetables. You might have to pop one or two of them in your mouth when you are picking them!



How Does Weather Affect Farming?

In the mountain area the climate will freeze making it hard for farmers to grow their food. In the desert the weather is hot and dry so they have a hard time growing their food. Farmers need to irrigate to get water to their plants. In the springtime, it is a scary time for the farmer because they don't know if the weather will change and get cold and kill their plants. The summer can be hard if there is no rain. The plants need water to survive. In the fall the weather starts getting cold, so the farmers need to work fast. As you can see, weather can be a big worry for farmers.

The foothills have four seasons. Summer starts in June. Fall starts in September. Winter starts in December. Spring starts in March. But sometimes it rains in June. Hail sometimes hurts the plants because it can freeze and it can get so hard that it ruins the plants. If the sun is too hot it can burn the plants. Weather can really help when it rains and you forget to water the plants. In my dad's farm he relies on the N.I.D. water to irrigate his farm. In the foothills it is known as one of the only places where there are seasons. Some plants need the seasons to live. Farmers work hard to make sure that they give the plants the right amount of water. And they sometimes have to put their food in a greenhouse so they can keep the plants alive when it is really cold.

Spring Vegetables by Sebastian 3rd Grade



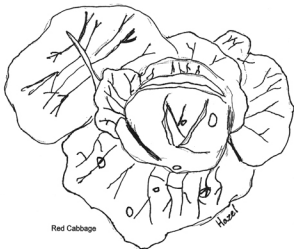
Spring Vegetables

There are many seasons that you can grow many vegetables in, Fall, Winter, spring, and summer, but I am talking about spring vegetables. Some spring vegetables such as carrots grow underground and take a long time to grow and take up a lot of water. There are many varieties to chose from, early spring or late spring. Here are some of the spring vegetables that I now about: beats, carrots, spinach, and onions. Other vegetables that you plant during the spring are: asparagus, celery, cucumber, leek, pumpkin, tumip, and that's about all I can think of. One thing is that spring vegetables love soaking up the sun, so give them a nice little' patch of sunshine.



Soil gives substance for vegetables to grow in. It also lets it get the air, water, and nutrients it needs. To start a compost pile is easy. All you have to do is dig a hole and throw in your leftover fruits and vegetables. The only thing that's bad about compost piles is how they smelt: p-u.

Vegetables at Riverhill Farm by Hazel, 3rd Grade



Red Cabbage

There are lots of vegetables that can be harvested in late Summer. Squash, tomatoes, cucumber, basil, okra, peas and many others are harvested in late Summer. In the Fall we can harvest Cabbage, Brussels Sprouts, Broccoli, Endive, Cauliflower, Onions, and of course Pumpkins.

At River Hill Farm they have many kinds of potatoes. Two of them are Yukon Gold and Fingerling potatoes. Yukon Gold Potatoes are golden in the inside and brownish on the outside. Fingerlings are kind of a red orange color. There are lots of different kinds of potatoes that grow all over the world!!!



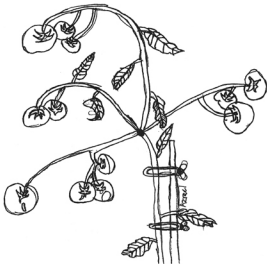
How To Grow Cabbage

At River Hill they have great cabbages. I saw them myself. Early cabbages like light dirt or soil. Fall cabbages like heavy damp soil. Plant the cabbage seeds 1/4 to 1/2 inches deep. Transplant the cabbage plants 15 to 18 inches apart. Do this after the seeds pop up. If you want you can use a starter fertilizer. I recommend organic. You can plant cabbage until late June then you will have a nice big harvest. The soil temperature should be about 21 to 25°C. When you are going to harvest cabbage, chop off the top. Sometimes three or four small heads will grow to replace the big one. Those small heads are useful in lots of recipes. Cabbages have short roots. Be sure to dig a deep hole so they have a chance to grow. Now you should know how to grow cabbage.

More About Potatoes

The best time to plant potatoes is Spring. You're supposed to harvest potatoes in late Summer. A lot of plants can start from seed. Some plants don't need to though. Like potatoes, they grow from these things called tubers. They have sprouts that are called eyes. You can plant slices of potato with eyes in it and it grows. Riverhill grows 15 different kinds of potatoes. Some of them are Yellow Finn, Cracked Butterball, Purple Viking, Red Thumb, and Kennebec. If you want to have a good crop the potato should be buried all the way. After you plant the potatoes they will go through growing stages. The first is forming roots. Then stems and leaves. The last stage is growing flowers and tubers.

Cherry Tomatoes By Azrael, 4th grade



Some Summer Vegetables

Tomatoes

At Riverhill Farm they plant about 3,000 tomato plants a year. That's a lot of tomatoes! Tomatoes can be different sizes, some small, others big, and they can be different colors too. Some are red, some are orange or even yellow!

One kind of tomato is the cherry tomato. It got its name because it is the size of a cherry. A cherry tomato is bright red, orange or yellow. They are small, but known to grow in clusters on a single branch. A cherry tomato seed is smaller than a regular tomato seed. They both grow the same way. A cherry tomato plant is big, but it grows small tomatoes. Isn't that weird? A fascinating fact is that a single branch can grow more than 6 tomatoes! If some tomatoes didn't have time to ripen, you could put them in a sunny spot to ripen up.

At Riverhill Farm they let kids pick and eat the cherry tomatoes right off of the vine. Yum!

Peas

Peas are really good freshly picked from the plant. So if you want to plant peas make 2 inch deep rows and plant the seeds. Water after a while and then just watch them grow. Then when ready pick a pod and taste!

Carrots

Carrots are easy to plant. First you make 1/2 inch deep rows. Then you plant the seeds. After a while you can water them. Then just watch them grow. See the cycle. When your carrots are ready, you can harvest them, wash them off, and eat them, or you can save them and cook them in a dish. When carrots are fresh from the ground at Riverhill Farm, they taste sweet and crunchy. They are a popular item at the farm stand. You have to get there early if you want those carrots..



Azrael



Herbs At Riverhill Farm

by Irish, 3rd Grade



There are lots of herbs like mint, dill, basil, rosemary, sage and lavender at Riverhill Farm. Some herbs are for medicine and calming down like lavender. Culinary herbs are for cooking. Aromatic herbs are not as popular for growing as cooking herbs but the bees love them! Ornamental herbs are very colorful. Some herbs have healing properties. Medicinal herbs have to be used very carefully.

Herbs can be used to make gifts. Some people weave lavender stems to make lavender baskets. Lavender can be woven into lavender wands, too. The blossoms of the lavender plant can be dried and put into sachet bags. In some gift stores, there are bundles of dried sage. These are used to smudge houses. Smudging means the sage is lit until it smokes, and then the smoke is waved around in a room. Then the room is supposed to be clear of things that were bad.

Herbs can be annuals, perennials, or biennials. Herbs seeds are very tiny. When you're done leveling out the soil, very lightly sprinkle on the seeds. Cover with soil.



What does soil do for Riverhill Farm? By Audrey 4th grade

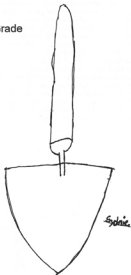
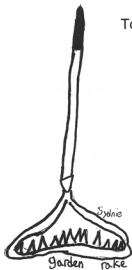


Soil is very helpful to the farm. We couldn't live without soil. It helps a lot of food grow, so that we can eat it! Soil is made when dirt, sticks, tiny rocks, minerals, and leaves join up. Soil can also be mud, because mud is wet dirt and dirt is soil. Soil is used for many things, such as humans, animals, houses and planting. Soil is mostly used for vegetables and fruits. It is very important. Most insects need soil such as worms, ants, grasshoppers and several others. Soil and worms are like glue and paper, they need each other. Worms use soil as a home. Worms add nutrients from their poop and they add air, which helps plants grow. They help everyone on planet earth. Without soil and worms we couldn't live.

Riverhill Farm can work with nature to build good soil by making good compost, which makes good soil. Another way Farmer Alan makes good soil is by planting cover crops. Cover crops are planted in the soil in the winter and plowed into the ground in the spring. They add nutrients that help plants grow. Alan also adds fertilizers to the soil. He adds oyster shell calcium, bone meal (animal bones), rock phosphate (little ground up rocks) and manure (animal poop). Riverhill Farm loves the earth!



Tools by Sydnie, 3rd Grade





Garden Rake

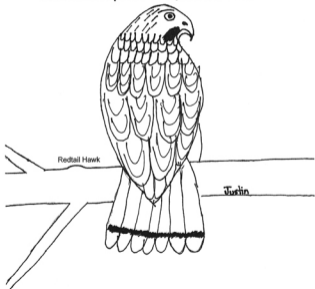
You can use a rake for moving a pile of leaves. Turn the rake upside down and push the pile of leaves. To rake up leaves, move backwards while you rake backwards.

Spades

Spades have special purposes a long narrow one is for soil that has more rock. Short ones are for lighter soil. A spade is for scooping when you are transplanting.

Riverhill Raptors

By Justin, 3rd Grade



Did you know that raptors build their nest at River Hill Farm? Most raptors build their nests in the tops of trees so other animals can't get to their babies. To make a nest they have to have an area big enough area to put their nest in. The nest has to be big enough for the father, a mother, and about 4 babies. If any other bird approaches their nest the raptor will come behind the bird and do a bomb dive, aiming for the back of their head. If you get too close to a raptor it will spread out its wings to make itself look big and scary.

Redtail Hawks

Redtail hawks are awesome. Redtail hawks mainly live in North America. They live in the valleys, flat lands, and mountains. They are seen mostly on trees or on utility poles. Red tailed hawks are large. They have a dark color on top and a light color on the bottom. Their wings are 19 inches wide 48 inches long. Their favorite foods are rodents, small mammals, birds, reptiles, amphibians, and insects. To call each other they have a sharp, raspy scream. They help Riverhill Farm because they eat things that are trying to eat the plants. I think they're amazing!



Osprey

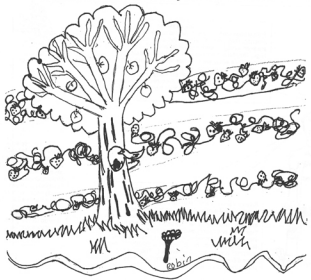
The osprey is also called the fish hawk. That is because it only eats fish. The osprey is the only hawk that dives feet first when they are chasing after a fish. It always holds a fish with the fish head forward. Sometimes eagles chase away ospreys to get their fish. Ospreys are usually seen over water looking for fish. Their wings are 23 inches wide and 63 inches long. Their call sounds like a whistle. They don't usually fly in a pack. They go on their own to find fish. Sometimes Alan and Joe see ospreys flying around the pond at their farm.

Red Shouldered Hawks

Did you know there are red-shouldered hawks at Riverhill Farm? The red-shouldered hawk is also called the swamp hawk because it likes to go to fields and sit next to swamps or ponds. They fly above fields or meadows. Once they see something to eat they attack it and pick it up with their claws and then fly away to their nest. The length of their wings is 19 inches wide and 40 inches long. Their favorite foods are mammals, reptiles, amphibians, insects, and small birds. Their call is very loud. They call several times if they're in danger or if they find food. They mostly stay in the valleys year round.



Trees on the Farm by Robin 3rd Grade



Trees on the Farm

On Riverhill Farm there are tons of trees. One of my favorite trees on the farm is the plum tree. On the farm there are also willows. They help the wetlands. Merry's class planted some on the farm in 2010. This year our class took cuttings and we helped them grow back at school. Now it is our turn to plant willows in the wetlands at Riverhill Farm. The roots of the willows help clean the water in the wetlands. We are being stewards of River hill Farm, and we think it is a lot of fun to do that!

Why are trees good for the Farm

Most people love trees because of shade, fruit, or nature. It depends on the type of tree. Trees are good for the farm because they make the soil more soft so other plants can have more roots. Trees are also good for the farm because they provide oxygen and make the farm more beautiful. Trees help the farm by providing air for the other plants.

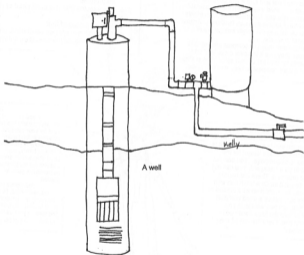
Parts of a tree

Leaves get food and water for the tree especially when it rains. Leaves also let out air to make room for the food and water. Buds grow flowers and leaves. Stems are attached to the branch that takes the food and water from the leaves and delivers it to the branch. The branch takes them to the trunk and into the bark. The bark carries water up the trunk to the leaves. The center of the tree is called the heartwood. It helps the tree stand straight and tall.



Water at Riverhill Farm

by Kelly, 4th Grade

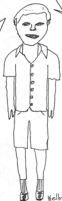


Riverhill's Water Supply

Riverhill Farm gets its water primarily from a well, which is located at the bottom of a hill. They pump from it during the night to fill their four storage tanks, which they draw from to use during the day. A well is a hole in the ground that has a PVC pipe casing it, and a sturdy cover. The bottom of the well, which reaches down into fractured rock, has slits in it that only lets in water. A pump is lowered into the pipe and pumps out the water into a storage tank. That's where Alan and Jo get the water to run a farm. Water supply is a very important part of farming. You need water for plants, livestock, and for the houses that the farmers live in. Riverhill's well has its advantages and disadvantages. Wells are good because, since you get your own water, it costs less, but it is harder to get water when the water table is low. This and its limited supply might make the well look bad, but all in all, it is a good source of water.

Riverhill's Water Stewardship

The water that Riverhill uses needs to be cleaned somehow, of the dirt and sediment that it picks up during irrigation. Their answer is a wetland. The water coming off the fields flows into a pond, then a marshy area. These slow down the water so the dirt and sediment settle out. This makes it so that the water entering the river is clean, so the river is not polluted because of the farming. Another way that Riverhill Farm lessens their environmental impact is not using any pesticides or unnatural fertilizers. This makes it so they don't need to treat their water with chemicals. This and using wetlands makes it so they don't harm the environment.




Irrigation

Getting the water to your plants is an important part of farming. Riverhill Farm mainly uses drip irrigation. Drip irrigation is a network of plastic tubing that has different types of attachments that apply the water to the plants. Some will drip the water directly on to the base of the plants, while others will mist the water over a large section. Drip is usually set on a timer so it will water the plants at a certain time each day, but Riverhill doesn't use timers because the farmers are there to turn the water on and off at the right times. Drip is good for small farms like Riverhill.

Riverhill Farm Interns by Fiona, 4th Grade



Farm interns are people who work on a farm, right now I'm going to tell you some facts about interns who work on Riverhill Farm. When people become farm interns they learn how to tend and harvest the crops, sell the vegetables to restaurants, farmers markets, and Co-ops. Interns on Riverhill Farm do mostly the same thing as interns do on other organic farms. They do normal things you usually see being done on a farm. People become interns usually because they don't know how to garden and they want to learn or because they did it before and think gardening is fun and interesting or because when they have to get a job they think farming would be an interesting career or they are just a couch potato and need something to do and think that farming is an interesting and active thing to do that will pull them off the couch and actually get them outside. Riverhill Farm interns begin work at 7:30 in the morning. After five hours they have lunch break at about 12:30 and then they continue working until 4:30 p.m. being an intern must be hard work. It was hard work to even work on this paper, but I'm glad my subject is interns. And one more thing that has nothing to do with interns, but it does have to do with farming. ... KEEP ORGANIC FARMS ALIVE!!!



At Riverhill Farm there were 7 interns in 2010 and most of them came from all over California. Only one of the interns came from Nevada County. Riverhill Farm has inspired me to be an intern when I grow up.

How Long it Takes to be a Intern
New interns usually learn to farm by watching the farmers on the farm and doing research. It takes an intern a whole year to learn all the techniques of farming. Interns become interns because they want to have a farm of their own in their home town. At Riverhill Farm most of the interns favorite thing to do is to plant or be in the green house. The interns at Riverhill Farm live in what once was the barn, but is now a bunk house. They don't make as much money as regular farm workers, but they get a place to live, they are well fed, and they are learning how to farm.

Did you know that Alan and Jo grow over 30 kinds of vegetables? Here is a place where you can draw some of your favorite vegetables or fruits, or even some critters you see on the farm.