ACKNOWLEDGMENTS

The Randall’s Island Urban Farm was constructed by the Randall’s Island Park Alliance with special thanks to GrowNYC, Manhattan Community Board 11, and our many program partners and supporters.
The Randall’s Island Park Alliance (RIPA) works with the City and local communities to provide an innovative and exciting destination through a wide range of sports venues, cultural events and environmental exploration. As the dedicated steward of Randall’s Island Park, the Alliance sustains, maintains, develops and programs the Park to support the wellbeing of all New Yorkers.

Park improvements fostered by RIPA include: Icahn Stadium track & field facility; Sportime Tennis Center; the renovated golf center; more than 60 new playing fields; nearly nine acres of renovated wetlands; miles of waterfront pathways; and the Urban Farm. RIPA hosts numerous free public activities and events on the Island, and brings thousands of children to the Park each year for sports and educational activities — including gardening at the Farm.

Current RIPA goals include improved access, increased outreach, and new, innovative programming to make the most of the Park’s amazing resources. The Alliance is especially committed to providing health and wellness activities for the local community, including expanded drop-in programs at the Urban Farm.

**History and Mission of the Randall’s Island Urban Farm**

Through educational programs, volunteer opportunities, tours and public events, RIPA’s Urban Farm aims to foster increased understanding of and appreciation for food which promotes health in ourselves, our communities and our environment.

The Urban Farm was first conceived by RIPA in 2006, and began as a children’s sensory garden. This first garden included plantings designed to inspire children to see, hear, smell, feel and explore their landscape. Over the years, RIPA’s Horticulture Crew shifted the focus to edible crops, expanded the garden’s size, and began to provide educational programming to NYC public school children. Lessons were first designed in partnership with GrowNYC, and later developed into RIPA’s independent programming. RIPA’s Urban Farm now hosts a number of programs and contributes in a variety of ways to its larger community.

The Urban Farm’s main focus is on providing free hands-on outdoor education in nutrition and agriculture to local K-12 students. During field trips, students harvest and cook simple meals using the seasonal produce available during their time in the garden. More recently, RIPA has worked to expand programming to allow for college-level and adult workshops as well as free weekend Exploration Days, when the Farm is open for drop-in visits by the public in season.

The Urban Farm produces even more fresh food than the education program can use. Every year, RIPA donates thousands of pounds of fruits and vegetables to local food pantries, senior centers, and other non-profits working locally on food-related issues. Their support helps RIPA ensure that local communities are served by the food grown at the Park, in keeping with Farm’s mission.

This booklet will help you learn about farming and about the Urban Farm at Randall’s Island. You will learn about the gardens, the soil, the plants, and the animals, and learn how you too can become an Urban Farmer!
The Randall’s Island Park Alliance began caring for the Island’s parkland in 1992, and joined its agricultural history in 2006 by creating a Children’s Garden with a wide variety of vegetables and herbs. By 2011, RIPA started to use the garden as an outdoor classroom, where local students can learn more about farming. Today, RIPA cultivates a wide variety of fruits and vegetables at the Urban Farm — bringing Randall’s Island back to its agricultural “roots” so that modern New Yorkers can learn more about where our food comes from.

Randall’s Island Park has a long, rich history of farming. The Island used to be two separate islands before the 20th century, when the City connected them by filling in a channel with debris from large construction projects. Both the original Randall’s Island, making up the north end of the Island now, and Wards Island, making up everything south of Icahn Stadium, were used for agriculture for much of the 17th, 18th and 19th centuries.

Before Europeans came to the region, the local Algonquin tribe of Native Americans called Randall’s Island Minnahanonck, or “pleasant island,” and Wards Island Tenkenas, which translates roughly into “wild lands.” Wouter Van Twiller, the Director General of the Dutch colony of New Netherlands, acquired both islands from the Algonquin in 1637, and converted about 240 acres into pasture for his cattle. In 1665 the British took over New York, but it wasn’t until 1772 that Randall’s Island was sold to John Montresor, an engineer with the British army. Montresor built a home on the Island and began farming the property — until it became a site for the British to stage attacks on Manhattan during the Revolutionary War! After the War, the Island was once again divided up into farmlands. Its uplands became famous for their crops of cherries and apples — both of which we grow at the Urban Farm to this day! It is not hard to imagine that the Island hosted some of the earliest Newton Pippins, a variety of apple we still grow, and which were first bred right across the river in Queens. Along the way, Randall’s and Wards Islands were bought — and farmed — by Jonathan Randel and Jaspar Ward, owners who gave them their lasting names. In 1835, New York City bought both islands and began using them for public services rather than farmland, though some of the public buildings maintained smaller garden plots through the 20th century, including a decorative “Sunken Garden.” Most of the land finally became a public park in the 1930s.

The Randall’s Island Park Alliance began caring for the Island’s parkland in 1992, and joined its agricultural history in 2006 by creating a Children’s Garden with a wide variety of vegetables and herbs. By 2011, RIPA started to use the garden as an outdoor classroom, where local students can learn more about farming. Today, RIPA cultivates a wide variety of fruits and vegetables at the Urban Farm — bringing Randall’s Island back to its agricultural “roots” so that modern New Yorkers can learn more about where our food comes from.
Farm

WHAT IS A FARM AND WHY IS IT IMPORTANT?
A farm is a managed ecosystem where people grow food, fiber or medicines. By working with nature we can help grow more food or more helpful plants than would exist on their own. People have been changing their environment to produce more food for tens of thousands of years. Managing a farm ecosystem is an important aspect of agriculture.

By growing healthy food on farms, we can help ensure that the people who eat from it are healthy too. Healthy plants take many different vitamins and minerals from the soil and use them to build leaves, stems, and fruit. When we eat a wide variety of plants we are eating all the same vitamins, minerals, and nutrients too.

By cultivating the land carefully, we can help the farm be fertile and healthy for ourselves and other living organisms for generations to come. We do this by understanding the relationships between plants, animals, and microorganisms, paying close attention to the effects they have on each other, and making changes which promote the health of the ecosystem as a whole.
Agriculture provides a crucial link between our natural world and the world created by humans. At the Urban Farm, we aim to grow food in ways that are healthy for both our environment and ourselves.

The Randall’s Island Urban Farm provides its visitors with a chance to learn more about agriculture, the environment, and how to eat in healthy ways — just like you are doing now!
WHAT IS SOIL?

Soil is a mixture of small pieces of minerals, water, air and organic matter that form a very thin layer on the top of the earth. Soil supports all the living things in and on top of it. Caring for the soil is one of the most important parts of farming! Soil can be very delicate. It is easily washed downhill into rivers or oceans along with the nutrients that plants and people need to eat through a process called erosion. Healthy soil is made up of both mineral and organic parts. Minerals are particles of larger stones and bedrock that have been broken into very, very small pieces. Clay, silt and sand are made up of these different-sized particles, and could be made of any number of different types of rock.

WHAT IS IN SOIL?

1. Clay is made up of the smallest particles, and feels sticky.
2. Silt is made up of medium particles, and feels slick or slippery.
3. Sand is made up of larger particles, and feels rough and bumpy.
4. The rest of soil is made up of things that used to be living — for example, plant pieces like dead leaves, old branches or roots, or the remains of animals, like dead insects or worm castings. We call all of these things organic matter. Organic matter is often eaten by other things living in the soil. As insects, bacteria, and fungi eat the other organic matter, they make nutrients available for plants to absorb with their roots.

Compost is an important type of organic matter. It has already broken down into very small pieces. These pieces are very lumpy and bumpy. These lumps provide places where nutrients and water can be stored in the soil for other organisms to eat. They are also a habitat for some of the smallest members of the soil ecology.

Dirt is different from soil because dirt only has minerals in it. At the Urban Farm, we often say: “Soil is alive, but dirt is just soil waiting to be born!”

Our Urban Farm is “organic”, which means that we encourage many different things to live in the soil and on top of it. That way we have lots of organic matter. Healthy soil is important because it is the foundation of our food chain.

EROSION

Erosion is the process of wind or water moving soil. If erosion happens at the farm we can lose many of the nutrients the plants need along with the soil. We prevent erosion by growing plants to hold onto the soil with their roots or keeping the soil covered with mulch.
**Activity 1**

3 Peas in a Pod

Take 3 different samples of soil and grow three pea plants in each sample. As the pea plants get older they will appear different because there are more or fewer nutrients in each sample of soil.

1. Take 3 plastic cups and poke 3 holes in the bottom of each to allow extra water to drain away
2. Fill the first cup 2/3 full with sand; label it “Sand”
3. Fill the second cup 2/3 full with compost; label it “Compost”
4. Fill the third cup 2/3 full with soil from outside; label it “Soil”
5. Push 3 pea seeds into each cup about 1 knuckle deep
6. Water your cups every day and put them on a windowsill
7. As the pea seeds grow, note which grow faster or taller or have thicker stems. Do any have colored spots, or are any wilting?

Some soils allow plants to collect more nutrients and resources than others. On the farm we look for ways to help soils support stronger, healthier plants.
PLANTS

WHAT IS A PLANT?
Plants are all around us. They help provide habitat for people and animals, they produce the oxygen that we use to breathe and they are the source of most of our food.

Plants all have some traits in common:

1. Roots - The roots of plants hold them firmly in the ground and act as giant straws which the plants use to drink water and nutrients.
2. Stems - Stems help hold plants upright so that their leaves can capture sunlight.
3. Leaves - Leaves are the powerhouses of the plants! They take energy from the sun and through photosynthesis turn it into food. At the same time, they give off oxygen, which we need to breathe.

4. Flowers - Many plants have flowers which help pollen to pass from plant to plant. Pollen allows plants to make new seeds and future generations of vegetables and fruit. Some very beautiful flowers attract insects who then spread the pollen around. Other flowers allow the wind to blow pollen from one plant to the next.

5. Seeds - Plants grow from tiny seeds. Each seed contains a small embryo or baby plant and enough food for that embryo to grow its first roots and leaves.

All plants are made up of different parts, and we often eat only one part. We eat the roots of carrots and beets, the stems of onions and leeks, the leaves of spinach and kale, the flowers of nasturtiums and broccoli, the fruits of cucumbers and tomatoes, and the seeds of rice and wheat.
What does a plant need to grow?

WATER
All living things need water. Water allows food to move between different parts of the plant — like blood moves nutrients throughout our bodies.

AIR
Plants breathe in carbon dioxide and breathe out oxygen. Without plants we would not be able to breathe, and without animals plants would not be able to live either.

SOIL
Soil provides a strong foundation to hold plants in place. It is also a reservoir of all the food and water plants need. Soils help make sure that plants are healthy. Good soils are filled with many of the bacteria, animals, and fungi that help plants grow. When we cultivate healthy soils, we cultivate healthy plants.

SUNLIGHT
Plants need plenty of sunlight for photosynthesis. Photosynthesis is the process through which plants take carbon dioxide from the air and water from the soils to make sugar, which is filled with energy and feeds their growth. Sunlight makes it all possible.

PHOTOSYNTHESIS
Photosynthesis is the PROCESS that plants use in their green leaves and stems to capture and store ENERGY from the SUN. Some of this energy they use to GROW new stems, leaves, fruit and roots. We can use this energy too, when we EAT the plant.
ACTIVITY 2

Plant Observation

Choose one fruit or vegetable that we tasted as we walked around the garden today.

Name __________________________

What is one other plant this is related to?

Use all five senses to observe your fruit or vegetable:

What color is it?

What does it feel like?

Does it make a sound?

What does it smell like?

What does it taste like?

What other food does it taste like?

Circle words that describe the flavor:

Salty  Sour

Bitter  Sweet

How does it feel in your mouth?

Crisp  Dry

Slimy  Moist

Crunchy

What other adjectives describe this fruit or vegetable?

After tasting this fruit or vegetable carefully, do you like it?

VEGETABLE

A vegetable is any part of a plant that we eat for food. Stems, roots and leaves like the parts we eat of celery, carrots and kale plants are all vegetables. Some fruits are also called vegetables by cooks. Cucumbers and tomatoes are two fruits that are also thought of as vegetables by many people.

FRUIT

A fruit is the part of a plant where the seeds grow. Because many plants want animals – like us – to eat the seeds and move them to a new place, fruits are often filled with nutrients and sugars to encourage us to eat them. All fruits grow from a flower that has been pollinated.
ANIMALS

WHAT IS AN ANIMAL?
An animal is a type of living thing. Animals are very good at moving around the world. They can travel by walking, running, slithering, swimming or flying. As you explore the farm try to find example of animals moving in different ways.

Humans are one kind of animal. Animals can’t make their food from the sun like plants, so they need to eat other animals or plants in order to grow. We cultivate the Urban Farm so that we can eat all the different things that grow there. We also have to make sure there is plenty for the other animals to eat.

Animals also need to breathe oxygen. Animals breathe in the oxygen that plants breathe out. Working together, plants and animals live well together!

What animals are in the Urban Farm?

CHICKENS
Chickens at the Farm play an important role. They eat different types of food, as do we: vegetables like cucumbers, seeds like corn, and animals like bugs. They also make eggs for us to eat. Chickens rely on us to help them live, and we rely on them to help feed us.

INSECTS
Insects are everywhere on the farm! Insects all have six legs and three body sections. They have many different roles in the farm. Some insects eat the vegetables, some insects eat other insects, and some insects, like bees and butterflies, help move pollen between plants. All of these insects are important to growing food. We try to make sure that there is food and shelter for as many different insects as possible.

WILDLIFE (Mammals, Birds, & More)
The Farm also hosts a large amount of wildlife. Birds, squirrels, amphibians, and snakes all live at the Farm. While they sometimes nibble on the vegetables, the animals help control the number of insects and pests that would otherwise eat all of our food.

PEOPLE
People are the most important animals at the Urban Farm, because people are why we have a farm! People come to the Farm to learn in many different ways. Through our influence, we keep the various elements of the ecosystem in a balance that will produce a large amount and variety of healthy food. What is a way that you can help the Farm’s ecosystem?

ECOSYSTEM
An ecosystem is everything, LIVING and NON-LIVING, that interacts within an environment. Ecosystems can have many different parts, including some that are so small we cannot see them without the help of microscopes. When we affect ONE part of the ecosystem, we can create changes that also affect EVERYTHING ELSE living in it.

ANIMALS
ACTIVITY 3

Animals

Choose an animal at the Urban Farm.

1. Paint or draw a picture of your chosen animal in the box at right
2. Pay close attention to its coloring, how it moves, and what it needs to survive
3. Draw the animals or plants that it depends on for food or shelter

How can we help that animal live at the Farm?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________
On the following pages, you will find descriptions of some of the plants grown at the Randall’s Island Urban Farm.

Families are a way of GROUPING species that have a similar ANCESTORS and similar NEEDS and ADVANTAGES. Lions, tigers and house cats are all in the same family. They are different species but they all eat similar food and look alike. Families are important because as Urban Farmers we treat many of the vegetables in the same family the same way. We give them the same amount of WATER or look for the same PESTS on each member of that family.

Apple

Apples are members of the Rosaceae family. Apple trees are some of the first plants in the garden to bloom, but the fruit is not ready until the fall. Apple trees first grew in the wild in Kazakhstan, south of Russia and north of India. Some of our apples were first bred in Queens three hundred years ago near Newton Creek; they are now called Newton Pippins.

Basil

Part of the Lamiaceae family, basil is related to mint and many other strongly-flavored herbs. Very important in Italian cooking, basil is used to make pesto. It has such a strong smell that it can be planted alongside tomatoes to confuse pests, so they can’t find the tomatoes.

Beans

Beans are members of the Fabaceae family. Members of this family are special because, working together with bacteria, they can add nutrients like nitrogen to the soil. By growing beans, we not only get a delicious vegetable — we also don’t need to fertilize plants grown in the same place next year!
Part of the *Brassica* family, broccoli is special because we eat the flower bud. If we let broccoli keep growing, the head will open up into many small yellow flowers which attract bees and other pollinators. Cauliflower and brussel sprouts are also flower buds.

Corn is a member of the *Poaceae* family, and is also a grass. Compare the leaves of the rice plants to the corn, and see how similar they are. Corn is an important food in our diet because it supplies much of the energy we use throughout the day.

A part of the *Cucurbit* family, cucumbers look like a vegetable but are actually a type of fruit. They are filled with seeds and hold a lot of moisture. If we store the cucumbers in vinegar and herbs they will last a very long time and become pickles!

Eggplants are members of the *Solanaceae* family. They can be large with bright purple skin and white starchy flesh. While eggplants grow delicious fruit, they protect their stems and leaves with sharp spines.

Gourds are part of the *Cucurbit* family and grow on long vines. The vines can crawl up other plants or trees in the wild, and they grow along a trellis at the Urban Farm. The gourd is a large fruit, but we don’t eat it. Instead, we let it ripen until it fills with seeds and the skin hardens; then we make bowls, water bottles, or even birdhouses out of it.

Part of the *Allium* family, leeks have tall spiky-looking green leaves. We eat the bright white part of the stem. While leeks are a little bit tougher than their relatives, the onions, they have a much milder flavor.
Onions are in the Allium family. They have a very strong flavor. Many people think that the part of the onion we eat is the root because it grows in the ground. But we eat the bulb, which is actually part of the stem! The roots are much smaller and grow down from the base of the bulb.

Part of the Asteraceae family, lettuce is harvested for its leaves. The fresh crisp leaves make a wonderful salad and can be eaten when they are very small as “baby greens” or can be cultivated to grow into a large dense head. If we don’t harvest the head of lettuce, it will grow many small yellow flowers, which will produce seeds for next year.

Part of Lamiaceae family, mint has a very strong flavor that many people like. Try putting a small stem in your water bottle and shaking it up!

Onions are in the Allium family. They have a very strong flavor. Many people think that the part of the onion we eat is the root because it grows in the ground. But we eat the bulb, which is actually part of the stem! The roots are much smaller and grow down from the base of the bulb.

Part of the Solanaceae family like eggplants and tomatoes, peppers have edible fruit. Some peppers have a chemical called “capsicum” that makes them spicy.

Radishes are part of the Brassica family and have many little flowers, like broccoli and kale. As radishes grow, they store extra minerals and nutrients along with water in the big taproot. That root is like their refrigerator — saving food for another day. When we eat the radish we are eating all of that saved-up nutrition.

Rice is a type of grass from Poaceae family. We eat the seeds of the rice plant — as we do with its relatives, wheat and oats. The rice is unusual at the Urban Farm, because it grows all summer long with its roots under water. Rice is grown and eaten around the world, from East Asia to India, Italy, Africa and the United States. It is one of the most important staple foods in the world.
Zucchinis, in the Cucurbit family, are actually a type of squash. They are eaten when very young, when their green skin is still tender and soft. Be careful — they have many small spines along their leaves and stem, to make sure that animals like us don’t eat the leaves when we are looking for the fruit.

Squash is also in the Cucurbit family, similar to cucumbers and gourds. It is often grown on vines along the ground, and comes in many different sizes, shapes, and colors. Some of the more common types are butternut squash and yellow summer squash.

Part of the Solanaceae family, the tomato plant bears a fruit that comes in many different sizes and colors. We need to be careful, because the leaves and stems will make our stomachs ache. Tomatoes grow on long vines or dense small bushes and need to be replanted every year.
NUTRITION FROM THE FARM

EAT THE RAINBOW
Many of the nutrients in vegetables and fruits are stored in the plant’s color. We call these phytochemicals.

1. Red colors have phytochemicals that keep us healthy and fiber for digestion.
2. Orange colors are high in Vitamin A (which helps our eyes see) and antioxidants which clean the inside of our bodies.
3. Yellow and white vegetables and fruits are high in Vitamin C, which is good for the immune system. They also have B vitamins and antioxidants, which are good for our hearts and minds.
4. Green fruits and vegetables are high in calcium for strong bones and teeth, and in antioxidants that clean the inside of our body. They also have lots of Vitamin A, Vitamin C, and Vitamin K.
5. Blue and purple have many antioxidants, that protect against disease, and lots of flavonoids (a kind of phytochemical), which improve memory.

By eating many different colors at every meal, we can make sure that we eat all the different nutrients we need to grow.

EAT SEASONALLY
Healthy eating also means eating vegetables and fruits at the time of year they are ripe. If we eat plants when they are ripe they have more of the vitamins and minerals that our bodies use to grow.

Some of our food comes from very far away so that it can be grown when it is cold here. If we eat less of that food, people will not have to use as much energy to move the food to us. Eating from your own community or school garden is not only fun but uses the least amount of energy of all. It helps to keep you healthy, and the planet healthy too!

EAT DIVERSELY
In order to be healthy we need to eat as many different types of food as possible. Each type of food only has part of all the vitamins and nutrients that we need. When we eat many different fruits and vegetables, we make sure that we get all the nutrients we need.

Nutrients are like legos. Each different vitamin or nutrient, like Vitamin C, is like a different kind of lego block. When we want to build something large (like kids!) we need a lot of different blocks. Different vegetables and fruits are made up of different kinds of blocks. When we eat them, our stomachs take apart the blocks and reuse them to build up our bodies. We need many different kinds of lego blocks to build a person, so we need to eat many different types of fruits and vegetables to get those different legos. We also need to eat lots of them!
PESTO RECIPE
Make pesto at home with your family!

You will need to gather some ingredients:
1. 1 or 2 cloves of garlic
2. 2 cups of green leaves with a lot of flavor
   • Make sure you pack it tightly into the measuring cup!
   • Try basil or arugula or beet greens (an excellent way to reuse another part the beet!)
   • Or experiment with something new!
3. 1/2 cup of oil
   • You can use olive oil, flaxseed oil or avocado oil
4. 1/4 cup of nuts
   • Pine nuts or walnuts or cashews all work
   • Experiment with something new here too!
5. 1/4 cup of parmesan cheese

In a blender or food processor, chop up the garlic into small pieces. Afterward, add the leaves, oil, and nuts and blend until smooth (about 2 minutes). You can always add a little more oil if it is chunky. Once it is smooth, add the cheese and mix for 1 more minute.

Spread your pesto on toast or add it to rice or pasta. Try eating it with other vegetables that have different colors for a healthy snack!

ACTIVITY 4
Cooking Activity

NUTRITION
In a blender or food processor, chop up the garlic into small pieces. Afterward, add the leaves, oil, and nuts and blend until smooth (about 2 minutes). You can always add a little more oil if it is chunky. Once it is smooth, add the cheese and mix for 1 more minute.

Spread your pesto on toast or add it to rice or pasta. Try eating it with other vegetables that have different colors for a healthy snack!

URBAN FARMERS
You can help at the Urban Farm! Remember: “Eating is an agricultural act.” There are many different ways you can help farmers, your food, and yourself grow healthy.

1. Cultivate the soil wisely
2. Protect and support the ecosystem we are cultivating
3. Make good choices that have a beneficial impact on our environment
4. Eat healthy plants and animals so we can be healthy
5. Eat many different kinds of food
6. Eat food that is growing right now
7. Help your friends learn to eat healthily too!
The paragraph below describes a season in the Randall’s Island Farm and many of the different kinds of plants and animals living there. After reading about the Farm, see if you can find the BLUE words in the word search. The words are hidden diagonally, across and down — nothing is backwards!

The farm is home to many different vegetables, fruit and animals. Some of our first flowers to open in the spring are on the apple trees. Bees and other insects visit the flowers and move pollen from flower to flower. While the ground is still cold, onions, radishes, and peas are all planted. As the seeds sprout they start to make little leaves. In the spring we add compost and organic matter to the soil in order to feed the new vegetables all year long. In June, the rice paddies are filled with water and the baby rice plants are put into the soil. All summer, we harvest tomatoes, lettuce, cucumbers and okra. As the fall starts to get cold, we stop planting most of vegetables — except for one. Garlic is special because it is planted in the fall and stays underground all winter before we pick it the next summer. During the fall we harvest our apples, rice and squash and collect eggs from the chickens. We then add a deep layer of mulch to the garden in order to protect the soil life over the winter.
agriculture  the practice of managing plants, animals, or fungi and their ecosystem to grow food, fiber, fuel, and medicines

animal  a living organism that feeds on organic matter

antioxidant  a type of nutrient that helps prevent cells in our bodies from being damaged or destroyed

carbon dioxide  a gas in the air around us; plants breathe carbon dioxide in and breathe out oxygen

compost  decayed organic material

cultivate  to prepare; e.g. to prepare and use land for crops or gardening

dirt  minerals that are broken down into many small pieces by the process of erosion; the different-sized pieces form clay, silt, and sand

diverse  made up of many different types of things

ecosystem  a biological community of plants, animals, fungi, and bacteria and their environment

embryo  an immature organism that either has not been born, in animals, or has not yet sprouted, in plants

erode  to gradually wear away; e.g. to wear away soil, rock, or land

flavonoid  a type of chemical in plant pigments that can help animals stay healthy

habitat  the natural home or environment of an animal, plant, or other organisms

mineral  a solid inorganic substance of natural occurrence; stones and metals are both examples

nutrient  a substance that provides nourishment essential for growth and the maintenance of life

organic matter  anything that is living or was part of something that used to live

oxygen  a gas in the air around us; humans, animals, fungi and soil all need oxygen to live

photosynthesis  the process by which green plants use sunlight to make food from carbon dioxide and water; plants “breathe” in carbon dioxide and “breathe” out oxygen to make food for themselves

phytochemical  any of chemicals or nutrients found in plants

plant  a living organism that absorbs water and minerals through its roots, and makes nutrients in its leaves through photosynthesis

pollen  a course, often yellow powder which contains half of a new plant’s DNA; when it lands on a part of flower called the pistil it helps to produce a new unique seed

seasonal  related to a particular season of the year

soil  the upper layer of earth in which plants grow; soil is a mixture of organic matter and mineral particles

vitamin  any of a group of organic compounds that are essential for normal growth and nutrition and are required in small quantities in the diet because they cannot be built by the body
Seed Sizes

Families of Crops at the Urban Farm

- **Allium** (Lettuce Family)
- **Apiaceae** (Carrot Family)
- **Aster** (Lettuce Family)
- **Brassica** (Broccoli Family)
- **Chenopodiaceae** (Beet Family)
- **Cucurbit** (Cucumber Family)
- **Fabaceae** (Bean Family)
- **Lamiaceae** (Mint Family)
- **Poaceae** (Grass Family)
- **Solanaceae** (Eggplant Family)

**Seed Spacing**

- **Baby Greens (Lettuce)**
- **Carrots & Radish**
- **Turnip & Beets**
- **Beans, Peas, Garlic, Onion, & Sorrel**
- **Leek**
- **Chard & Basil**
- **Collards & Kale**