



# Play The Wild Cards

By Amy Grisak

Implementing permaculture techniques can be intimidating when you look at the big picture and try to do it all at once. But Paul Wheaton, who preaches the permaculture gospel from his property at what he calls Wheaton Labs outside of Missoula, Montana, breaks it down into manageable bites through the classic-looking playing cards he developed years ago. Wheaton believes the cards are a terrific way to introduce these concepts to those unfamiliar with permaculture.

The general idea of permaculture is the development of agricultural systems that follow the natural pattern of the land with the goal of sustainability. “Permaculture, in my opinion, is a more symbiotic relationship with nature so I can be even lazier,” he laughs. On a more serious note, he says, “It will benefit humans who live on the property and the Earth as a whole.”

Permaculture techniques can touch any and every part of your life, from how you garden and cook to how you heat your home or manage your lifestyle, but for those who want to dip their toes into permaculture techniques, the playing

Paul Wheaton’s permaculture tools and techniques to bet your garden on



The large hugelkultur berm around their home provides a place to grow a variety of plants.

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PHOTOS BY AMY GRISAK

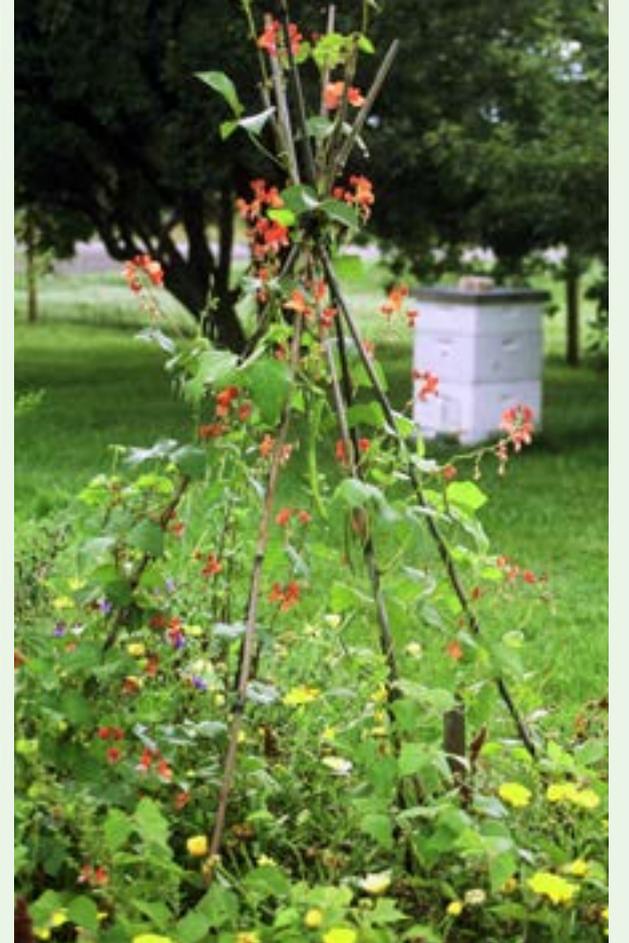
Honeybees visit the garden for the sedum flowers throughout the season.



A delightful harvest of greens from the hugelkultur bed.

A single hive situated near the fruit trees and garden with scarlet runner beans in the foreground.

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cards offer excellent suggestions. And whether you have 1,000 acres or 1,000 square feet, Wheaton is confident that small steps make a difference. “I want people to put into their mental toolbox a hundred different bits and bobs you can do with your property,” he says. “Anything you do in the world of permaculture makes a difference.”

Wheaton thinks that permaculture is more than a single course of action. It is implementing ways to save time, energy, money and resources to improve your life and make it more luxurious. “You can start slow and easy and just implement one thing at a time,” says Jocelyn Campbell, Wheaton’s longtime partner and permaculture aficionado. Little steps lead to great progress for those who want to learn more about permaculture.

Use each card, which discusses a permaculture element, to make your life easier while doing your part to make the world a better place. Here are some of the topics the cards cover.

## HUGELKULTUR

Hugel means “hill” in German, so hugelkultur describes creating a hill when you bury wood debris to form the ultimate raised bed that not only extends the season but also self-waters the plants.

Wheaton and Jocelyn created enormous, 12-foot-tall hugel beds around their home to grow food right outside their door and to minimize the sound from a nearby road. It’s working on both accounts. “The Lab is quiet and peaceful, and base camp has a road,” says Wheaton, who was constantly bothered by the

sound of cars driving past. “The big berm has reduced the noise [from the vehicles] by 90 percent.”

It also significantly reduces the impact of the wind. “Wind is desiccating, drying and cooling,” says Wheaton. “If we want to extend our growing season, we want it to be a little warmer and a little wetter.” And this means watering the berm maybe once or twice a year.

“We’re still building the soil on top of it, yet we have food growing on it,” says Campbell.

## HONEYBEES

Honeybees are a valuable piece of permaculture design. Not only do they pollinate plants, but honey is also extremely beneficial as a food and medicine, and the wax is useful for many projects.

“Most permaculturists will have



one or two hives and, I suspect, because they're bonkers about bees, will also have planted a three-season nectar source," says Wheaton. This nectar source should be part of a mixed planting incorporating trees, shrubs and flowering plants, giving the bees options from as soon as the weather warms in the spring to the first hard freeze of autumn.

Wheaton recommends raising local bees that are acclimated to your unique conditions and sheltering them from prevailing winds and harsh conditions. Don't take so much honey that you have to feed them sugar water, which is an inferior food source, and if the hive dies, consider it a benefit. In permaculture, as in nature, the strong thrive.

### MASON BEES

For those who can't, or don't want to, have a hive, creating a space for wild bees, such as mason bees, is beneficial to everyone. From

A mix of chard and calendula is a good example of polyculture plantings

Wasps and yellowjackets may not seem like welcomed guests, but they are powerful allies in pest control.



bumblebees to leafcutters or mason bees, Wheaton believes encouraging them to take up residence on your property is a good way to have your pollinating bases covered.

"Solitary bees like mason bees will pollinate 100 times more than a single honeybee," he says, although

he also notes that when you have thousands of honeybees in a hive, it evens out. He noted that since solitary bees are busy pollinating early in the spring, often earlier than honeybees, they are a valuable resource.

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Many of the solitary bees nest in holes. Provide them with bee nests or leave plants or brush piles that offer them the accommodations they desire. Industrious and gentle, they are key members of anyone's permaculture plan.

### POLY CULTURE

At the heart of permaculture is polyculture, which is planting multiple species together to the benefit of one another. This diversity extends beyond learning which plants give each other what they need, such as the classic "three sisters" concept



All creatures have a place in the permaculture concept, even these rodents with hooves.

where corn, squash and beans are grown together. The beans grow up the corn stalks, providing nitrogen to the soil, while the squash covers the ground, reducing evaporation. In permaculture, multiple species thrive with one another not just because they confuse insects that might eat your veggies, but also because every plant takes and gives something different to the soil.

Variety is the spice of polyculture, and Wheaton encourages people to plant trees, shrubs, berry bushes and various flowering plants—from spring bulbs to long-lasting perennials—within a guild, which is a grouping of plants, trees, animals, insects and other components that thrive by living in close proximity to one another. He cautions not to expect things to stay the same, as a guild's diversity changes the soil and what will grow best in it.

"We don't have a fixed guild. The guild you're going to have the first year is very different than the third year and beyond," he says. "I'm making diversity in the soil."

Campbell notes, "We've had a lot of variety in just a few short years. We really like the perennials. I tend to focus on the herbs, both medicinal and culinary."



**“The more plant diversity you get, the more bug diversity you get. That diversity makes the healthiest systems.”**

### COMFREY

Within these guilds, there are some plants that are powerhouses, and comfrey is one of them. “Rhubarb and comfrey are at the tippy top of my guild list,” says Wheaton.

Comfrey is a champ because it grows even in hard soil, breaking up and aerating it with its massive taproot that provides an excellent habitat for worms. The root pulls valuable nutrients from deep within the soil, and when you chop and drop the leaves (as you’ll want to do before it flops and takes over) on the soil in the area, these nutrients are readily available to the plants around it. The chopped leaves form a natural mulch that reduces evaporation while improving soil tilth and health.

### DANDELIONS

These happy flowers are one of the unsung heroes of a healthy landscape. Their long taproots bore through difficult soil and bring nutrients to the surface. They are excellent sources of food for us, as well as an early nectar source for many bees. Instead of spraying out dandelions, we should grow them.



Dandelions are our friends in the world of permaculture.

### WEEDS & OTHER UNDESIRABLES

When it comes to permaculture, balance prevails in the end, and diversity is the key to achieving this goal. In a permaculture system, common “problems” in conventional gardens are viewed as benefits. Weeds, which often thrive in poor soil where they can break through the clay or difficult terrain when other plants can’t, give back to the ground. Many, such as lamb’s quarters and dandelions, are also good foods.

“The more plant diversity you get, the more bug diversity you get. That diversity makes the healthiest systems,” says Campbell. As an example, Wheaton offers yellow-jackets. He battled them for years, even collecting and feeding them to the chickens. Now, he realizes that they are champion broad-spectrum omnivores. When he was working on a project one year, earwigs darted out from underneath the wood, and Wheaton noticed a yellowjacket that came along, grabbed an earwig and



Diatomaceous earth can be used to cut down damage from soft-bodied insects.



Cast iron has been around for over a century for good reason.

Think of a variety of insects as a means to encourage predatory insects and birds to live in your garden. They need something to eat, too.

ate it. Now he welcomes them.

This applies even on a larger scale. Wheaton says that at one point they had a lot of rabbits, and then the predators arrived and kept them in balance. It’s the same with many of the other inhabitants of the area, although the resident deer, which he calls tall rats, do tend to give him fits on occasion. But even the deer serve some purpose, pruning back bushes and fertilizing along the way.

### DIATOMACEOUS EARTH

Fossilized remains of ancient sea life, diatomaceous earth (DE) is used to combat parasites in animals, such as skin problems on chickens, and pests on plants. Although balance is the ultimate goal, at times caterpillars and other insects are just too much, which is when DE comes in handy. Wheaton cautions to be sure to use food grade DE, particularly on anything you’re going to eat.

### ROCKET MASS HEATER

Keeping ourselves from freezing to death, particularly in northern climates, is a major use of power in the world. “A lot of our biggest problems are with energy,” says Wheaton, and a highly efficient and economical way to resolve the heating issue is with a rocket mass heater (RMH).



Fueled by a small amount of wood or other combustible source, the concept behind the RMH is warming a large thermal mass and allowing it to release the heat slowly, rather than attempting to heat the air in the room. A mass heater is even more useful when it becomes part of the living space within the home. Even the most cold-blooded person can’t help but feel warm and toasty relaxing on the heated surface of the RMH.

### CAST IRON

No one wants to have to scrub out pots and pans on a regular basis,

which is why Teflon and other non-stick coatings have risen in popularity over the decades, often with unhealthy results. “Teflon is nasty,” says Wheaton. “Cast iron is dramatically superior. It takes a little knowledge to make cast iron really sing for you.” But once you have the hang of it, you won’t give it up. It heats and cooks evenly; after being properly seasoned, food does not readily stick, and, if it does, it’s often easily scraped away.

So, draw a card and try your hand at some of these permaculture techniques. Wheaton guarantees there’s something for everyone in his deck. ♻️