

# LESSON 1 APPROACHES TO GARDENING

*This course is all about what gardeners do, and how those things can be done better. It is aimed at all gardeners, whether amateur or professional.*

In a nutshell, gardeners improve and protect soils and plants and when necessary remove and replace plants. There may be other things they do such as maintenance of paving, garden furniture and structures in a garden but it is the care and management of the plants that is usually the biggest challenge because these are living things. They are constantly changing, growing, being attacked by pests, becoming reinvigorated, or dying and decomposing.

Gardens are made up of lots of different living things besides plants, including animals, fungi and microbes. This mass of life, called a “biomass”, is dynamic. It interacts with the non-living environment – everything from soil and stone to water and air. The interactions that happen are affected by environmental characteristics including temperature, humidity, air impurities and wind.

Gardening involves understanding all these things and more, in order to grow and care for plants.



*Oriental Garden*



*Working with nature-improve soil, and smother weeds with mulch*

## Ways to Garden

There are lots of different ways of gardening.

### Where you Garden

Most people think of a garden as the area to the rear of a 'typical' house, but there are all sorts of types of garden. A garden may be as small as a balcony, or as large such as acreage. Anywhere where plants are grown and tended may be considered a garden. Whilst most are at home, other gardens include community gardens, gardens around work premises, botanic gardens, national trust gardens and public parks. Gardening practices can be undertaken in orchards and vineyards through to green walls on city buildings to the plantings in streetscapes. Gardening can also be indoors from green office spaces through to potted plants on a window sill.

## Working with Nature

There are different approaches to working with nature. Some gardeners choose to try to understand and harness nature and work with it. They might, for example, choose to allow predatory insect populations to build up in the garden to control pests rather than resort to spraying with insecticides, or they might select plants to suit the microclimates within the garden.

Some gardeners prefer to control nature in order to control how their plants grow. This approach involves things like amending the soil to alter its level of alkalinity, targeting pests and diseases as soon as they emerge, and watering and feeding plants regularly.

Others just accept whatever nature does, and have a much freer approach to gardening. This sort of approach is likely to result in the loss of many plants

but it could lead to having a garden in which plants suited to the local climate and conditions survive.

## Influence of Garden Design

How you go about gardening is also determined to some degree by the type of garden you are working in. Some gardens may be considered as high maintenance. These are likely to be gardens with very specific pruning requirements i.e. plants which must be pruned regularly or in a particular way in order to contain them, remove dead stems or foliage, or to encourage flowering and fruiting. A high maintenance garden might also have a lawn which needs to be mowed

and maintained regularly and perhaps other garden components which need looking after e.g. timber furniture which needs oiling seasonally, paving which needs to be jet washed every so often, or a preponderance of deciduous plants which drop their leaves each autumn.

Conversely, a low maintenance garden might have mostly evergreen plants and few garden components which needed to be maintained. A very low maintenance garden is likely to have no lawn in favour of garden beds, paths and paving. The plants might only need watering occasionally e.g. cacti and succulents, and there may be relatively few of them.



*Gardens should fit the conditions*

## Garden Planning

Given there are so many different ways to garden, and a range of different garden styles, the garden can be planned to suit the desires of the owners, and the location. Some people don't like to spend much of their spare time gardening so will prefer

a low maintenance garden with few plants, whereas other people cannot wait to get into their gardens to do tasks. Others may use their garden primarily for entertaining with plants a mere afterthought. Regardless of the garden style, some degree of planning is needed. The garden environment is a key element of planning.

## Suggested Tasks: ▼

*Throughout this course you will be provided with suggested tasks and reading to aid with your understanding. These will appear in the right hand column. Remember: these tasks are optional. The more you complete, the more you will learn, but in order to complete the course in 20 hours you will need to manage your time well. We suggest you spend about 10 minutes on each task you attempt, and no more than 20 minutes.*

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### Suggested Tasks

Search the internet for videos with the search term 'The ecosystem of a garden'. Watch 3 videos for up to 30 mins.

Next time you visit a garden (or use your own) make a list of the living and non-living components in that garden – think about how they interact i.e. how one component influences the life of another to make a healthy ecosystem.

## The Garden Environment

The environmental conditions of a garden will affect the type of plants which can be grown there, and the plants that grow there will in turn affect the environment. Conditions such as light, shade, temperature, humidity, frost, and wind can change throughout each day as well as over the course of the year. If the amount and frequency of change is greater, the stresses upon the plant will be greater; hence the resilience of the plants you choose to grow will need to be more considered.

When a garden is young, without mature trees, all of the plants are exposed to wind and full sun, but as the trees grow shade is created, wind is screened, and other environmental conditions are changed. When a canopy develops, it can act as an umbrella, catching water as rain falls reducing the chances of erosion. Developing root systems also bind soil together to resist erosion. Leaves fall from all plants, not just deciduous trees. As they fall, they decompose adding organic material to the soil, replenishing fertility and increasing the soil's capacity to hold moisture.



*Modern minimalist garden*

## Planning What to Plant

The first thing to consider with plant selection is the conditions where the plant is expected to grow. Environmental factors that influence the selection of plants include:

**Climate:** plants that originate from the same or a similar climate will be suited to the conditions. Extreme conditions such as snow and drought will prevent some plants from being grown in a given area.

**Latitude:** the closer to the equator means that temperatures are likely to be hotter and day lengths will be more even (variation in day length triggers flowering in some plant species).

**Altitude:** areas at higher altitudes generally experience cooler temperatures.

**Oceans and lakes:** large bodies of water alter growing conditions by moderating temperatures.

**Soil:** soil type, drainage and nutrition will influence plant growth and species choices.

**Winds:** strength and direction of winds is important. Sites prone to strong cooling winds at various times of year may not be ideal for tender species.

**Microclimate:** the microclimate is the climatic factors that influence growing conditions in a specific area such as shade from large trees, reflected heat from hard surfaces and buildings, or protection from winds by fences. In most gardens, no matter how small, there can be several different microclimates.

Plants can be chosen to suit these microclimates. For example, shade-loving plants may be grown beneath a shade tree.

**Water:** rainfall and irrigation are both sources of water. A garden which is unlikely to be watered by hand, or via an irrigation system, will only support the growth of certain types of plants, such as succulents or very hardy plants.

**Pests and diseases:** the presence of pests and diseases will change with the plants present. Sometimes an area has a problem with a particular pest or disease which could affect plant choices. For example, some areas are prone to elm leaf beetle or citrus gall wasps. If a particular soil-borne disease

has been present then it may be best to avoid some vegetable crops.

**Weeds:** some weeds are pervasive and extremely difficult to control. For example, if someone wishes to have a prize lawn it may not be worth the effort if their plot is overrun by couch grass unless they are prepared to start the garden from scratch.

**Human activities:** although gardens are primarily for people to enjoy, overuse can be a problem. Pedestrians may walk on turf excessively, children play ball games on it, vehicles may be driven over it depending on location, and so forth. A garden for entertaining may have to focus on plants which are not going to take over or take up too much room.



*Higher maintenance garden needs regular attention*

There are many reasons why plants do not grow well in a particular garden or in a particular place. Most of these are caused by a combination of local climate and soil conditions. Some common problems include:

- **Alkaline soils:** these are soils with a pH greater than 7.
- **Waterlogged soils:** where drainage is poor, generally due to the site being in a low lying area, or because of poorly structured soils, such as heavy clays.
- **Salinity:** in some parts of the world, this is a problem not just in agricultural areas, but increasingly in urban fringe areas.
- **Coastal location:** strong winds, poor soils and salty conditions are typically associated with coastal areas.
- **Windy areas:** winds not only cause plants and soils to dry out but can cause physical damage and destroy buds, young leaves and flowers.
- **Hot, dry areas:** heat causes plants to lose moisture and this may occur faster than they can take it up. Excessive sunlight causes foliage, flower and stem tip burn which distorts or halts growth.

There are two main ways to overcome such problem areas in the garden:

- Modify local conditions to better suit the plants you wish to grow - such as providing irrigation in hot and dry areas, growing or building a windbreak in windy areas,

improving drainage in wet gardens, or lowering soil pH in alkaline soils. Such remedies can often be very difficult to achieve, time consuming, or expensive.

- Grow plants which suit, or will cope with the conditions present in the garden. If you choose plants carefully you can often create a garden that is very rewarding in terms of its appearance and its hardiness.

## Deciding on Garden Needs

The selection of plants, garden components and features is also influenced by the needs and preferences of the garden owner. These can be many and varied. For example, do they want to use the garden to relax in, for entertainment, recreation, for children to play in, to make the house cooler inside, to grow flowers, food crops, or as a place to grow rare or unusual plants? Often people have several desires they wish to fulfil, and these can be prioritised. Sometimes several wishes can be fulfilled in one part of a garden. For instance, a herb garden can provide herbs for the kitchen but also an attractive flower display at various times of the year. The flowers may also attract bees, butterflies and birds to satisfy a desire to attract wildlife to the garden.

## Garden Themes

Once the garden owner's priorities are known it is possible to decide on a garden theme. A garden theme or style is what provides a sense of harmony to a garden. A garden without any underlying theme can look like a

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### Suggested Tasks

Using the previous information as a guide (plus any extra that you think is important) list information that you would need to consider when planning a garden in your region. Spend about 10 minutes on this task.