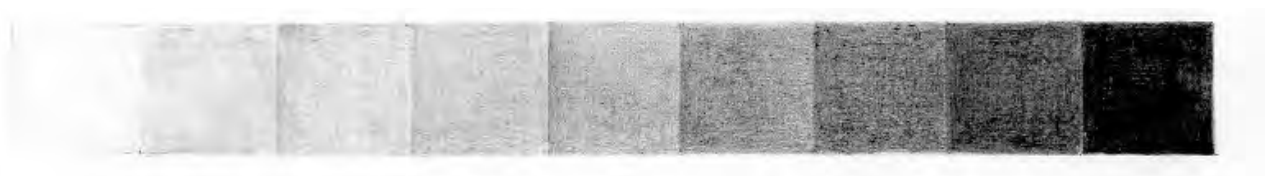


1. Pencil Drawing

In this chapter we will show you how to develop observational techniques, working in pencil to draw a specimen in line and tone. Because a pencil is such a basic tool, many people fail to explore its possibilities. But pencil, with the wide range of tone it offers, is a fantastic medium for developing your understanding of form. Before you can move into colour, you must first discover the shapes and tonal patterns that are the basis of any good botanical illustration.



Tonal test strips exercise

This exercise will heighten your awareness of the capability of both you and your pencils. Tonal strips are test strips that can help you understand just what your pencil can do, and they are useful tools when you come to evaluating and translating the tonal strengths in any given specimen.

Make a tonal strip for each pencil you are using. It is a good idea to do this in your sketchbook so that you can keep a record showing the range of tones each pencil can give. Working across the page, produce blocks of tone, shading lightly at first and then working progressively darker as you move across the page. (See the diagram above.)

Experiment with different types of shading: use hatching, cross-hatching or non-directional pencil strokes and see how this affects the tones you produce and the smoothness of the tonal transitions. Non-directional shading emulates watercolour techniques in that it blends smoothly from light to dark without showing any lines. The movement of your hand is almost like a circular, burnishing movement, which has the effect of smoothing out the shading.

Left: As these studies by different students show, the apple has a relatively simple shape, which is ideal for exploring form through markings.



Above: Examples of different types of shading.

Separating the mid-tones is difficult, but this is an important skill that allows you to identify tones in botanical specimens, using your pencil work from very light to very dark. Many people find that their first attempts at drawing display a lack of contrast, with most of the shading in the mid-tones. Experimenting with tonal test strips enables you to be more adventurous in your drawing, using extremes of light and shade to bring out the tonal contrasts.

Observational drawing

Your first task is to choose an apple and study it. The apple has a relatively simple shape, which is ideal for exploring form-building.

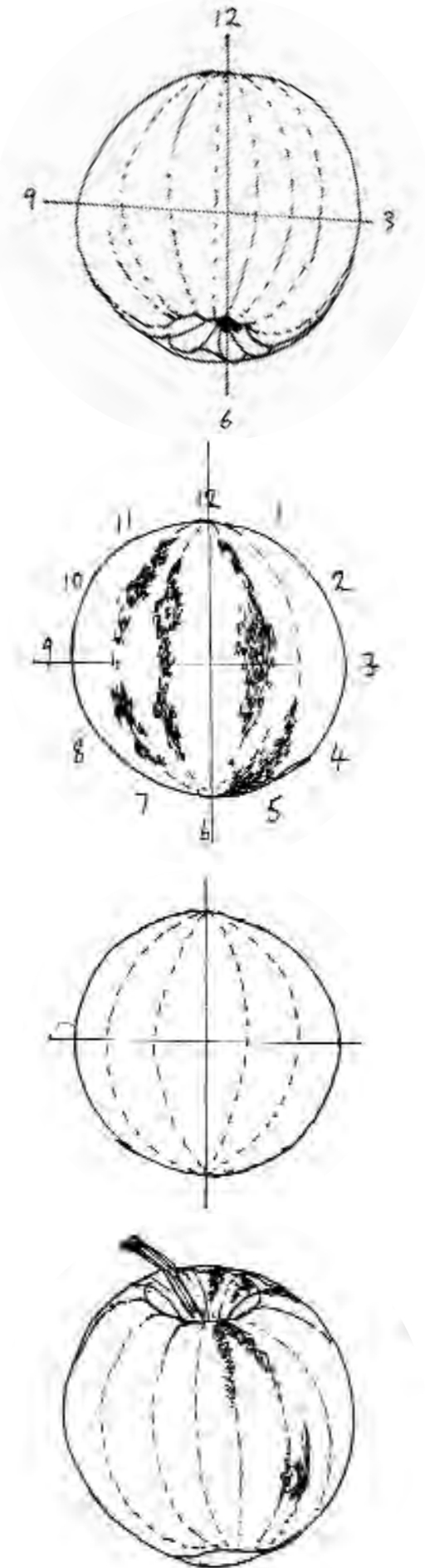
One of the most important lessons you can learn from this introductory chapter is to slow down sufficiently to examine specimens in depth; to look, to understand and not to rush. In order to look harder at a subject, you will find you have to look longer and make a conscious effort to slow down before starting. Really look. Quality of observation always counts far more than quantity in this case.

It is important to tune yourself into observational technique. Simply sitting and quietly contemplating the subject in all its aspects is the best way of getting acquainted. Your knowledge and understanding of the subject will increase many times as a result of close, reflective contemplation. Check your light source, as this too will help you to understand form. If necessary, light your apple with artificial light (table light, desk light or spotlight). Try lighting it from the top, the side or below and consider what difference this makes.

While you are contemplating, ask yourself what sort of form the apple has and where any lumps, bumps and directional changes occur in it. Place the apple in one position and study it. Continue to change its position until you are happy with a particular aspect.

Think about whether the apple is large or small. Use dividers to check its size from top to bottom, from side to side, from its core to its outer points, and transfer the measurements to the paper. Your drawing should be life-size. Try initially to sum up these points without the help of drawing aids, as this will hone your powers of observation. This may take longer but ultimately you will become a better draughtsman.

Right: Use an imaginary clockface or an imaginary segmented sphere like a beach ball to track form through markings.



Don't be confused by surface markings on the fruit. Any surface pattern will usually follow the form of the apple. Use an imaginary clockface divided into four sections to track form through markings, or an imaginary segmented sphere rather like a beach ball. Notice in which sector any marks, blemishes or striations occur. For instance, there may be a blemish at '10 o'clock' or a stripe finishing at '3 o'clock'. This way of looking at your subject will help you to define the exact positions of any characteristics. In the case of an even-coloured fruit such as a Granny Smith, there are no surface markings to guide you, so a clockface approach, radiating from the core, can be helpful.

Blemishes often run contrary to skin pattern and can give a false impression of correct form. Check what you are seeing and consider carefully the visual information that is being given.

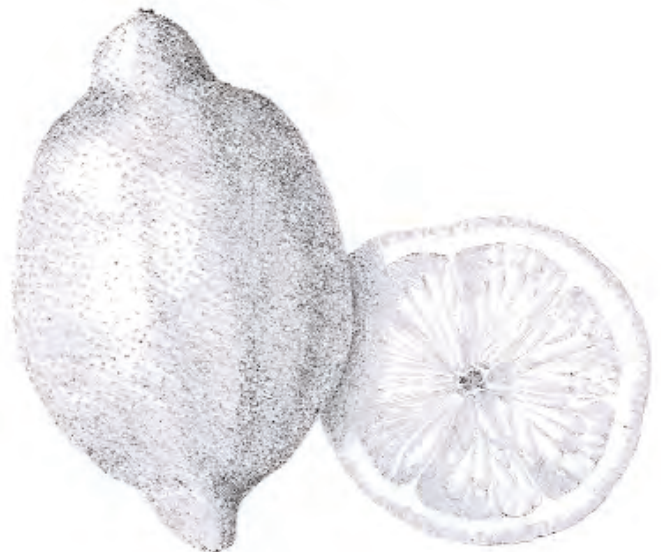
Write down a list of adjectives that describe the apple: consider words like hard, soft, shiny, matt, smooth, knobbly, heavily decorated, plain, bright or dull. Keep your word list nearby or in your sketchbook. Then, at regular intervals during your observation and drawing, you can stop to compare your descriptive words with your drawing. Is it soggy, woolly and limp when it should really be crisp, smooth and solid? Do the words match the picture? It can be helpful to look at plants as people: think about characteristics like prickly, suave, sinewy, brittle, craggy, smart, scruffy, bold, shy, obvious, ostentatious, retiring, simple or complex. Apply this exercise to your apple and write down a few words. This list will be invaluable when assessing and creating the correct character and attitude of any plant.

'Profound pencil' and its place in botanical art

The next step, after making your observations, is to begin to explore the concept of line and tone, or shading, to create form. You will need to think about how pencil work can create a three-dimensional effect on a two-dimensional surface (the paper) and explore what works and what doesn't – and why.

'Profound pencil' is what we as artists aim for when using pencil to describe something. As botanical painters we need to develop accurate representations and strive to make every mark count, thus making our pencil interpretation 'profound'. It defines us as draughtsmen and underpins our seeing and doing.

Right: Subtle pencil work has been used to give this lemon a three-dimensional effect, texture and form. Note the contrast in treatment of the skin and the flesh.





Discover what a pencil can do. See what kinds of marks it will make and what they will convey. You may need to use your pencil sharpener or knife very frequently. Note the difference between a freshly sharpened lead and one where the tip has been smoothed down by use. It can be useful to have several pencils ready sharpened so you can quickly change pencils without losing concentration.

Above: How many ways of showing pattern and texture can you discover by making different pencil marks?

Think about how best to illustrate surface pattern and how you can show form and texture. See how many ways of showing pattern and texture you can discover by making different pencil marks. Try overlaying successively deeper tones from pale grey to deep black, using non-directional shading. You will find that beginning with the light areas and building up tone by tone until the darkest tone is finally reached is similar to layering up tones in watercolour (see chapter 6 for more on this). Experiment by overlaying with a slightly darker tone where shadow falls more heavily or where markings cause darkening or deepening of one tone to another. Detail and decorative markings such as striations, blemishes, holes and pits can be built into the drawing as it progresses, or you can leave these until the very last stages. As you gain confidence, you will naturally select the method you prefer. However, do not be tempted to put in details and embellishments before fully understanding the structure, form and habit. Don't be afraid to make mistakes – trial and error are great teachers.

While you are working, there are four specific areas to consider:

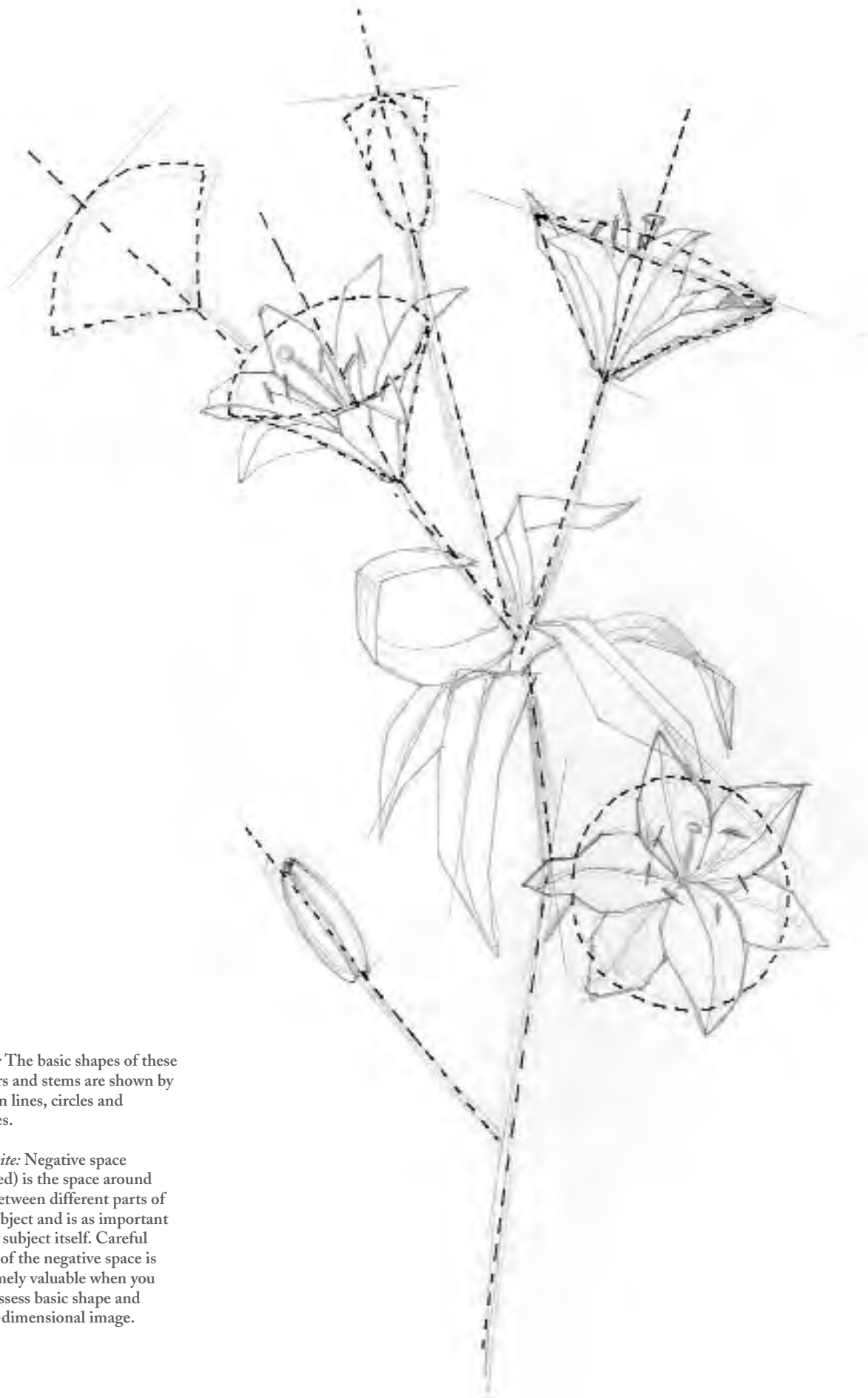
- **Accuracy:** Make sure the viewer understands and recognizes the subject. Botanical subjects are always depicted life-size, unless they are extremely large or extremely small. A large subject could be shown half-size or less, in which case you would mark your drawing x0.5, x0.25, etc. A small subject could be shown twice or three times the size, or more (x2 or x3 and so on).
- **Form:** Make sure the subject's basic shape and three-dimensional image are correct. Nothing is worse than spending hours over a picture only to find that its proportions have been wrong from the beginning.
- **Structure:** Make sure the subject's basic structure and the relationship of one part to another are correct, such as the distance from the core to the edges. Consider the angle at which the specimen is presented and whether the various parts correspond.
- **Character:** For this exercise, sum up the differences between various types of apple (there is a big difference between, say, a 'Russet' and a 'Cox's Orange Pippin'). What are they and how do they help differentiate one cultivar from another? What gives one cultivar its distinct individuality?

Sketchbook work

Start to build up a sketchbook, using a number of plants as your specimens. Include stems and leaves, paying particular attention to leaf types and how they vary, their shapes, undersides, arrangement of veins, edges and so on. You will also be looking at foreshortened shapes and how to make the best of them in compositions (see chapter 2).

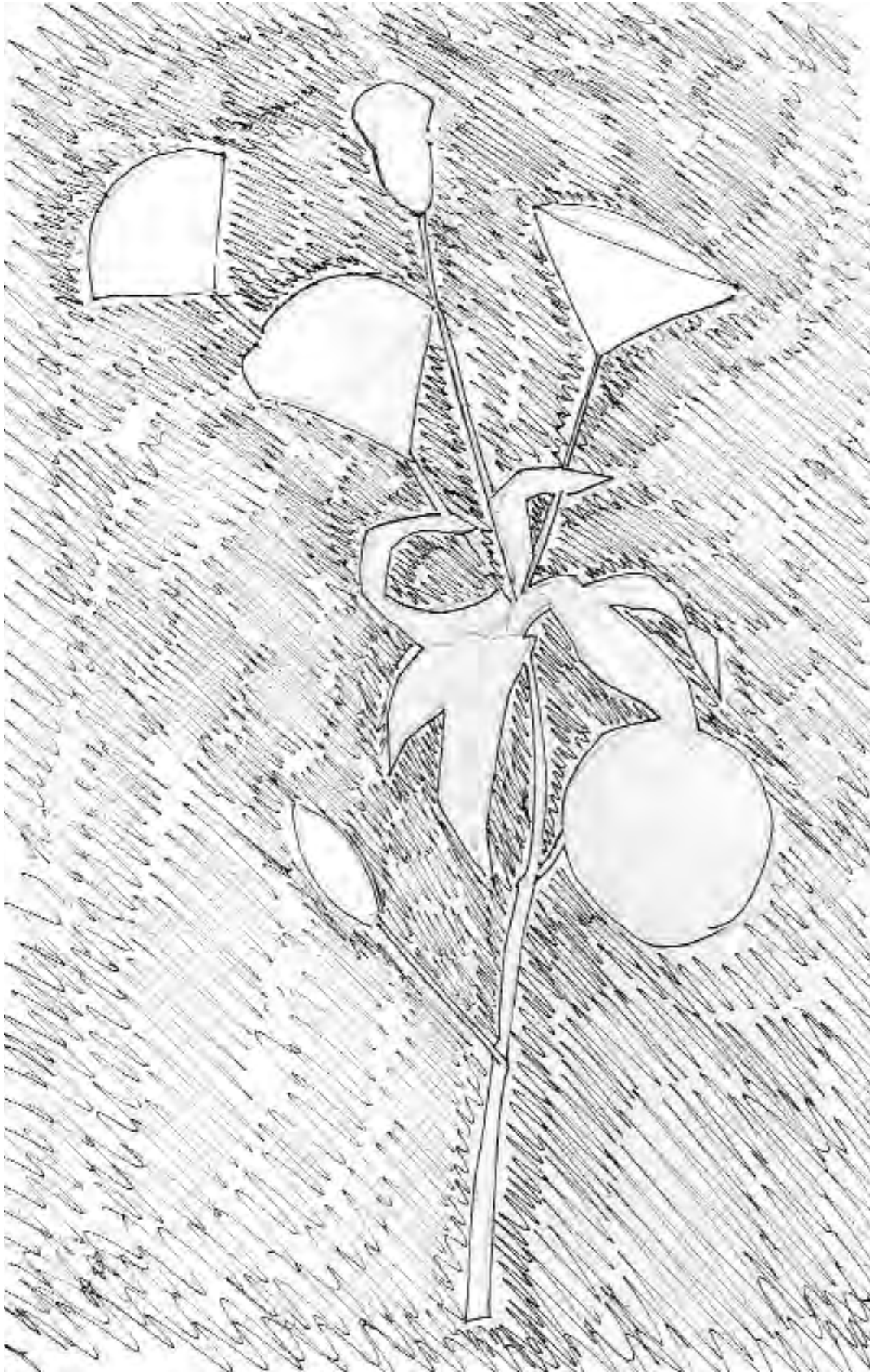
Your first task is to examine the basic shapes, structures and positioning of your stems and leaves. Describe the physical features of the plants in words, as you did for your apple, and think about how they apply in visual language. Look for the basic shapes within the plant. Can you see circles, triangles or squares? Make a note of the shapes you identify. Your stems might be shiny, knobbly, sinuous or spiny. The character or habit of the whole plant might be alert, wild, dancing (fuchsias are often seen as 'dance partners'), stilted, stiff, slimy (in the case of some foetid fungi), drooping or entwining (clematis, vines).

Then make preliminary sketches in which you assess the values of your specimens and the relationship of stems to leaves. It is easy to get too involved with detail before an overall assessment of the general design and placement has been made. Do preliminary drawings in your A3 layout paper pad. These allow for quick, summing-up studies, which determine important points such as size, proportion, structure, growth pattern, attitudes, angle, geometric shapes (see chapter 2) and habit of specimens. Layout pads can be used for working out, placing in the format and moving elements around to compose the picture. This involves structuring the angles and proportions, and assessing spatial relationships and negative space (the spaces in between and around the specimen).



Right: The basic shapes of these flowers and stems are shown by broken lines, circles and ellipses.

Opposite: Negative space (shaded) is the space around and between different parts of the subject and is as important as the subject itself. Careful study of the negative space is extremely valuable when you first assess basic shape and three-dimensional image.



In your preliminary drawings of a leaf, check the overall size and shape, including its widest points and its tips or apexes, and its venation; the leaf bases and how they relate to and join the stem; then the leaf margins or edges, whether unbroken, smooth-sided, or serrated, spiny or jagged. It is very easy simply to overlook the finer points of a leaf and end up misrepresenting a species due to lack of observation and inaccurate recording.

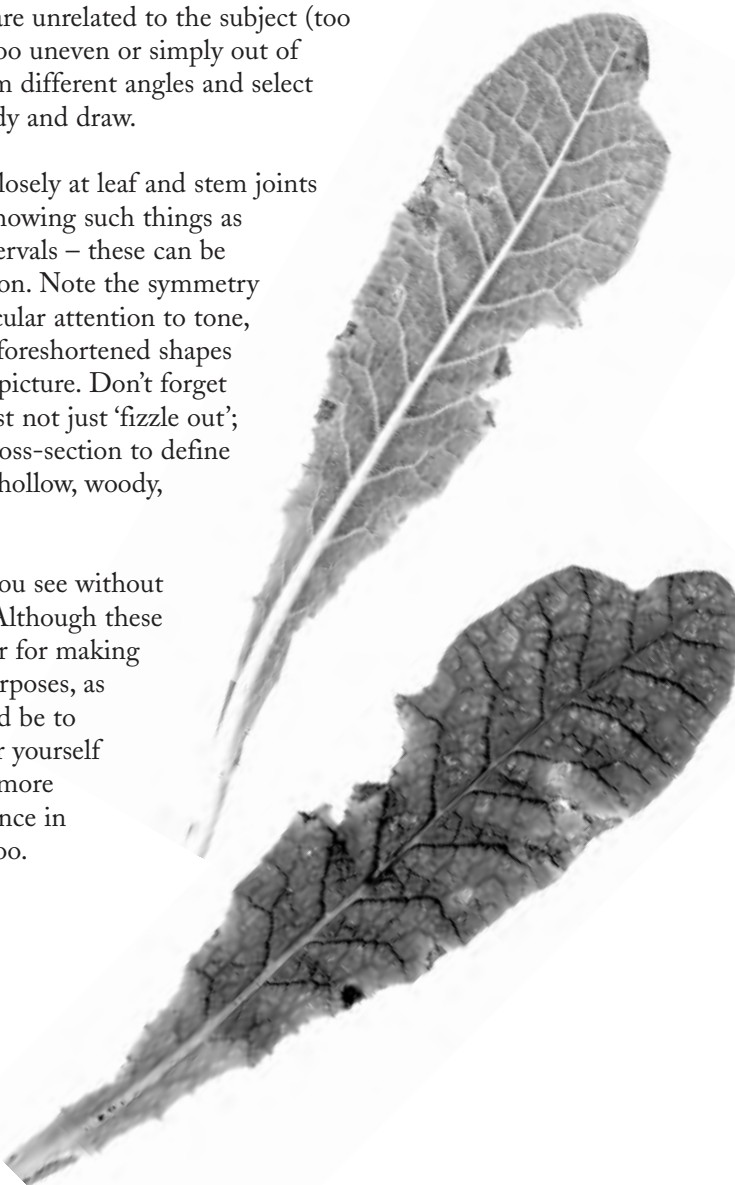
If you have a complicated leaf, such as that of a primrose (*primula vulgaris*) or foxglove (*digitalis purpurea*), taking a photocopy or scan of the leaf can help you to work out the pattern of the veins (see right).

When drawing stems, remember that they are critical to any plant because they support the flowers and are the plant's food carriers. Many a decent painting has been let down by stems that are unrelated to the subject (too thin to be able to support a flower-head, too uneven or simply out of character for the plant). Look at them from different angles and select one from its most favourable aspect to study and draw.

When working in your sketchbook, look closely at leaf and stem joints and plant parts. Make detailed drawings showing such things as where leaf junctions occur and at what intervals – these can be critical characteristics for plant identification. Note the symmetry or asymmetry of the plant parts. Pay particular attention to tone, texture and pattern of your leaf. Note any foreshortened shapes and decide how to manage them within a picture. Don't forget to examine the stem's structure. Stems must not just 'fizzle out'; traditionally they are shown ending in a cross-section to define not only the form but also the structure – hollow, woody, pithy, sappy.

At this early stage, look and record what you see without the use of aids such as dividers and ruler. Although these tools are important to the botanical painter for making precise measurements for identification purposes, as a draughtsman-in-training your aim should be to observe well and try to work things out for yourself in the first instance. As your eye becomes more attuned to observing properly, self-confidence in your own ability to see and record grows too.

Right: Primrose (Primula vulgaris). Photocopying or scanning a leaf can help you to work out the pattern of complicated veins.





Above: Pencil can be a rewarding medium for a delicate plant such as a primrose. This student's drawing accurately describes the intricate venation of the leaves.



Above: These complex leaves of the primrose (*primula vulgaris*) took four days to paint! This gives an idea of the time many artists invest in botanical painting. The pale yellow flowers really stand out against the dark foliage. The impact would be lost if they were against a white background.

A good quality magnifying glass is a valuable tool at this stage, as it can help to identify areas that are simply too small to see properly with the naked eye. These details need to be portrayed accurately right from the start.

As you continue with your preliminary drawings, it can be useful to keep notes on how your perceptions of your chosen specimens change. Think about whether you are noticing any more about your subject, and whether you are formulating new ways of approaching it. Note down exactly what has changed, why it has changed and how it is different from before.

The value of pencil work

It is worth persevering with your pencil work as it can help with many different aspects of botanical illustration. It will give you ideas about the suitability of different techniques for different specimens. It can also inform your understanding of watercolour practices, as pencil work can be very similar, particularly in relation to light and dark shading.

Pencil can be used to lay out the entire plant, omitting any non-characteristic blemishes that may confuse the work.

Pencil work also gives you the opportunity to explore a technique that is used to perfection by some leading botanical artists, that of ‘watercolour over pencil’, where all the main tonal areas are rendered first in pencil. (See chapter 12.)

The next stage

Ultimately these initial drawings can be refined and shaded to a desired level and then transferred by various means on to the watercolour paper you plan to use; you could trace the image with graphite carbon paper or use a light-box. An easy and cost-free way of tracing is to fix your layout paper to a windowpane with masking tape, stick your watercolour paper over the top and trace through, using a fairly hard pencil (2H) very lightly indeed. The advantage of tracing is that you still have your initial workings to refer to as you proceed with the painting.

You may choose to draw direct on to your chosen paper, but it is important not to use an eraser too much in the process as this breaks down the surface of the paper. If you are hesitant with drawing direct on to the paper, do some preparatory drawings in your layout pad to familiarize yourself with the specimen first.

Don't be tempted to bypass pencil work. Many beginners might be tempted to skip detailed drawing practice in favour of rushing ahead with applying paint. But there are so many skills to master before you get out your paints, and the simplicity of pencil work can teach you so much. You only have to look at the preliminary sketches by masters such as Leonardo to see that time spent exploring and evaluating your subject is never time wasted.