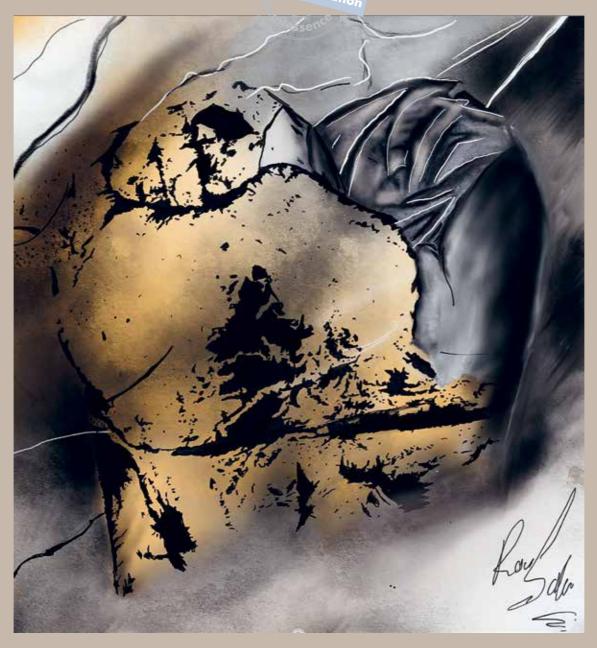


How to Draw Teeth and Why It Matters

Not for Publication





How to Draw Teeth

and why it matters

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Illustrated by dental students like you



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Illustrations

Most of the illustrations in this book were provided by dental students just like you who have taken my course and learned firsthand how to draw teeth.

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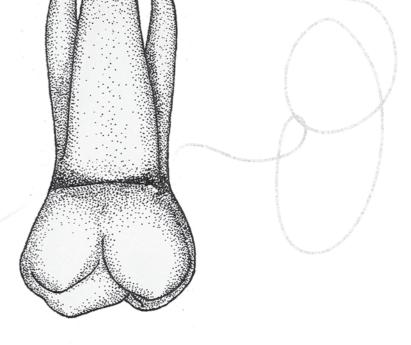
Yifei Wu Free Drawing #2

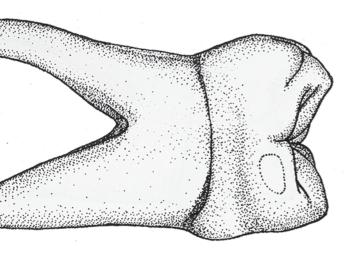
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Last but not the least, thanks be to the one above all of us, God, for answering my prayers for strength and wisdom.

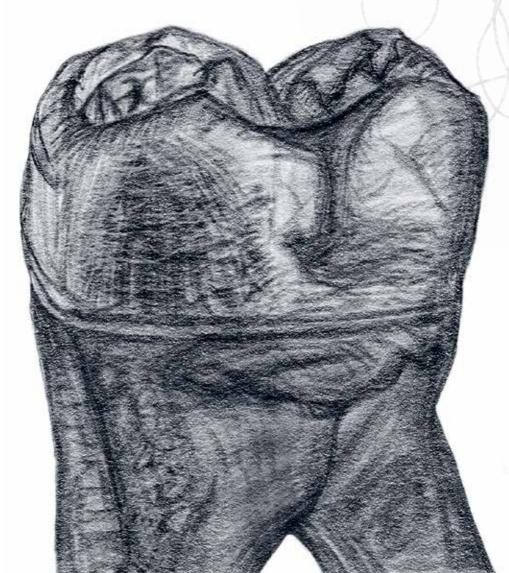




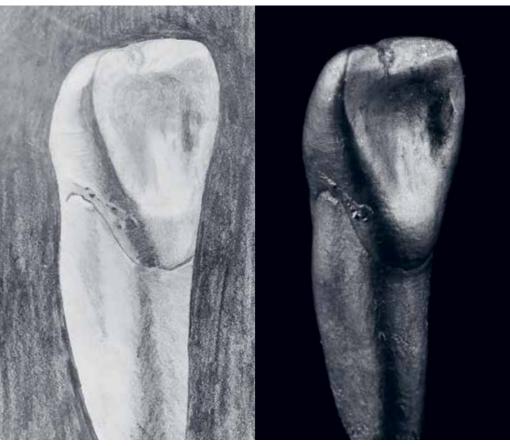
Introduction to Drawing: A Path to Creativity

he exercises and instructions in this book have been designed specifically for people who either cannot draw at all, who feel that they have little to no talent for drawing, or who feel doubtful that they could ever learn to draw—but who still think they might like to learn. The approach of this book is different from other drawing instruction books in that the exercises are aimed at gaining access to skills you already have but that are simply waiting to be released.

Nearly all of my students begin my course with very few drawing skills and with high anxiety about their potential drawing ability. Almost without exception, the students achieve a high level of skill in drawing and gain confidence to go on developing their expressive drawing skills in further art courses or by practice on their own.







Drawing as a Learnable, Teachable Skill

You will soon discover that drawing is a skill that can be learned by nearly every person with normal eyesight and average eye-hand coordination—with sufficient ability, for example, to thread a needle or catch a baseball.

Though little more needs to be said about hands, about eyes we cannot say enough. Learning to draw is more than learning the skill itself; by learning the steps, you will learn how to see. That is, you will learn how to process visual information in the special way used by artists. That way is different from the way you usually process visual information and seems to require that you use your brain in a different way than you ordinarily use it.

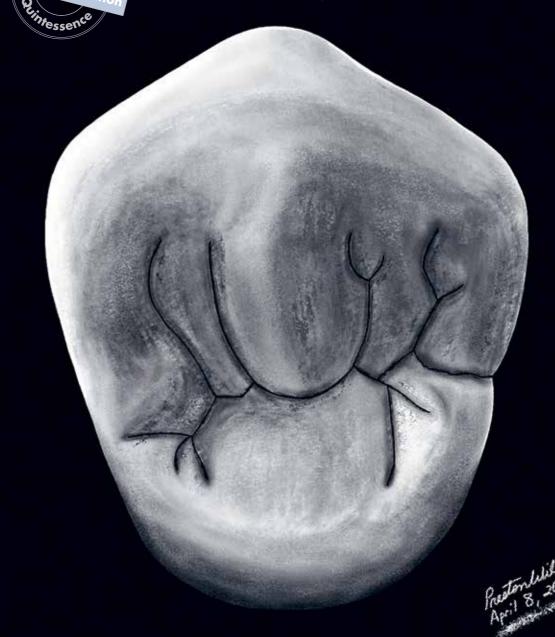
Through the techniques provided in this book, you will therefore be learning something about how your brain handles visual information. Recent research has begun to throw new scientific light on that marvel of capability and complexity, the human brain. And one of the things we are learning is how the special properties of our brains enable us to draw pictures of our perceptions.

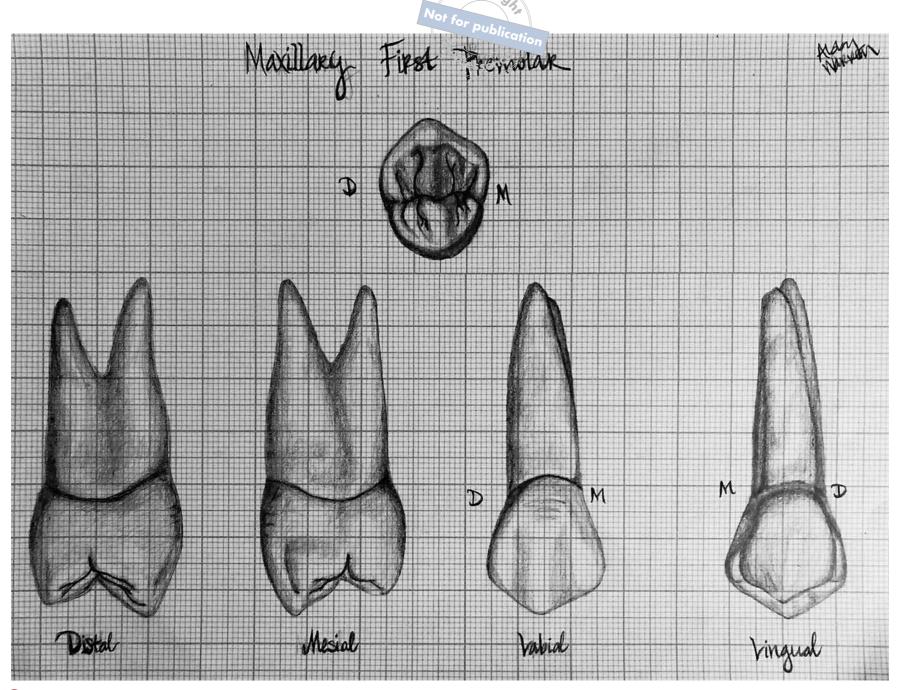
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"Learning to draw is really a matter of learning to see—to see correctly—and that means a good deal more than merely looking with the eye."

—Kimon Nicolaides, The Natural Way to Draw, 1941





Figs 1 to $3\sim$ Student drawings on graph paper where each square represents 1 mm in tooth measurement.

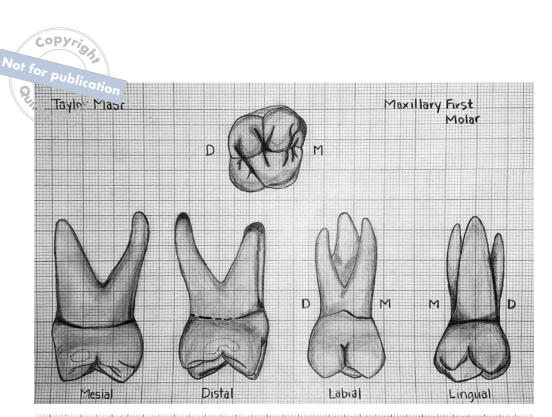
Drawing is a teachable, learnable skill that can provide a twofold advantage (Figs 1 to 3). By gaining access to the part of your mind that works in a style conducive to creative, intuitive thought, you will learn a fundamental skill of the visual arts—how to put down on paper what you see in front of your eyes. Second, through learning to draw by the method presented in this book, you will enhance your ability to see the fine details in your wax-ups of teeth.

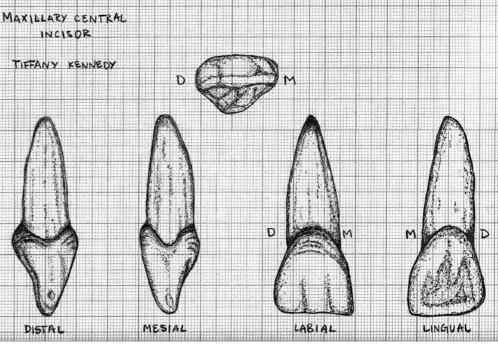
How far you go with these skills after you complete the book and exercises will depend on other traits such as motivation and curiosity.

Why It Matters

This book is primarily intended to guide dental students in the study of tooth morphology—that is, the form of individual teeth. The main objective is to help students study in a way that will make learning a useful, interesting, and memorable experience.

The ability to draw an accurate outline of a tooth is a good indication that a student has clearly seen and understood its external morphology. Along with the visual component, this exercise helps the student develop manual skills needed to correctly reproduce the anatomical form of teeth, which is crucial in almost any phase of dentistry.









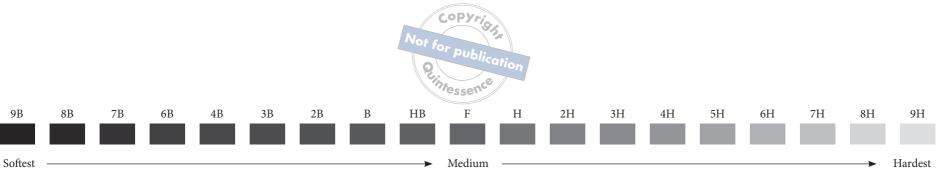
Materials and Equipment Needed

Graphite pencils

These are the most popular pencils for drawing. Graphite pencil cores are a mixed ratio of clay to graphite. The feel of a pencil and the mark it makes on paper is dependent on the blend and ratio of these two products: The more clay there is, the harder and lighter a pencil will be; the more graphite there is, the darker and softer it will be (Fig 4).

Graphite pencils are available in a range of leads, graded from hard (9H) to soft (9B). Hard leads usually make sharp pale marks, whereas soft leads make less precise and darker marks. For example, a (B) grade means the core has more graphite, and it will make a bolder, darker line but will also be a little smudgier than a light pencil. An (H) grade means the core has more clay, and it will make a lighter, finer line but will be less smudgy than a dark pencil.

Graphite pencils are recommended for use on graph paper with the measurement exercise.



 \mathcal{F}_{ig} 4 \sim Graphite scale found in most graphite pencil kits, ranging from 9B to 9H.

Charcoal pencils

These are available in stick and pencil form. Charcoal sticks, which are made in various thicknesses, tend to be softer than the pencils. Pencils have compressed charcoal cores and are available in a range of hardnesses. Both types create more immediate and dramatic results than any of the graphite pencils. Charcoal pencils (sticks) are recommended for use on pastel paper with the free drawing exercise.

Eraser

This is used to remove unwanted marks and to identify highlights. Very soft putty erasers are best as they don't smear the drawing or scuff the surface of the paper.

Drawing paper

The selection of paper for shading techniques is influenced by the type of pencil used, the degree of darkness desired, the shading technique used, and the expression of the shading technique desired. Drawing sheets can differ from each other according to the material, roughness, weight, and acidity treatment.

The key is to select a paper surface (medium or smooth) based on the effects you're looking to achieve. As a general rule, a medium or textured surface will be able to produce a more even, luminescent shade than a smooth surface. The smoother the paper grain, the more difficult it will be to produce an even shade. Smooth paper surfaces cannot produce as great a range of tone (shade) as textured paper surfaces. Textured paper surfaces are usually chosen for shading because the texture of the paper makes shading easier and produces a greater range of tone that can be more evenly applied.

The ideal paper to choose when you are using graphite pencils is one with a soft vellum surface. The random texture is ideal for subtle and even shading. Strathmore 500 Series Plate Drawing or Plate Bristol papers are the recommended medium for graphite pencils.

Graph paper

There are three styles of graph papers: 10 squares per centimeter ("millimeter paper"), 5 squares per inch ("engineering paper"), and 4 squares per inch ("quad paper"). With 10 squares per centimeter, millimeter paper is used for drawings, and this is what we will be referring to when drawing teeth with measurements.