

NINTH EDITION

# DESIGN BASICS

STEPHEN PENTAK ■ DAVID A. LAUER

NINTH EDITION

# DESIGN BASICS

STEPHEN PENTAK ■ DAVID A. LAUER

Professor Emeritus,  
The Ohio State University



Australia • Brazil • Mexico • Singapore • United Kingdom • United States

This is an electronic version of the print textbook. Due to electronic rights restrictions, some third party content may be suppressed. Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. The publisher reserves the right to remove content from this title at any time if subsequent rights restrictions require it. For valuable information on pricing, previous editions, changes to current editions, and alternate formats, please visit [www.cengage.com/highered](http://www.cengage.com/highered) to search by ISBN#, author, title, or keyword for materials in your areas of interest.

**Design Basics, Ninth Edition**  
Stephen Pentak, David A. Lauer

Product Director: Monica Eckman  
Product Manager: Sharon Poore  
Associate Content Developer: Erika Hayden  
Product Assistant: Rachael Bailey  
Media Developer: Chad Kirchner, Liz Newell  
Marketing Manager: Jillian Borden  
Senior Content Project Manager: Lianne Ames  
Senior Art Director: Cate Rickard Barr  
Manufacturing Planner: Sandee Milewski  
IP Analyst: Jessica Elias  
IP Project Manager: Farah Fard  
Production Service: Thistle Hill Publishing  
Services  
Compositor: Cenveo® Publisher Services  
Text and Cover Designer: tani hasegawa  
Cover Image: © Odili Donald Odita. Courtesy  
Jack Shainman Gallery.

© 2016, 2012, 2008 Cengage Learning

WCN: 02-200-203

ALL RIGHTS RESERVED. No part of this work covered by the copyright herein may be reproduced, transmitted, stored, or used in any form or by any means graphic, electronic, or mechanical, including but not limited to photocopying, recording, scanning, digitizing, taping, web distribution, information networks, or information storage and retrieval systems, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without the prior written permission of the publisher.

For product information and technology assistance, contact us at  
**Cengage Learning Customer & Sales Support, 1-800-354-9706**

For permission to use material from this text or product,  
submit all requests online at **www.cengage.com/permissions**.

Further permissions questions can be emailed to  
**permissionrequest@cengage.com**.

Library of Congress Control Number: 2014943687

ISBN: 978-1-285-85822-7

**Cengage Learning**

20 Channel Center Street  
Boston, MA 02210  
USA

Cengage Learning is a leading provider of customized learning solutions with office locations around the globe, including Singapore, the United Kingdom, Australia, Mexico, Brazil, and Japan. Locate your local office at **www.cengage.com/global**.

Cengage Learning products are represented in Canada by Nelson Education, Ltd.

To learn more about Cengage Learning Solutions, visit **www.cengage.com**.

Purchase any of our products at your local college store or at our preferred online store **www.cengagebrain.com**.

## ABOUT THE COVER ART



ODILI DONALD ODITA.

**Installation view of “Time and Time.” 2012.**

**Permanent installation at the New York Presbyterian Hospital,  
New York.**

Odili Donald Odita’s mural enlivens the patients’ view at the Presbyterian Hospital in New York. This cover photo offers a look at a challenging and complex design problem and solution. We may think of a painting as an experience viewed frontally, but this painting is either seen in glimpses or from various angled points of view. Here is a solution to a formal problem, but also an emotional problem. Prior to the mural, the view from the hospital windows was a blank wall.

Odita has exhibited extensively internationally, and was included in the American Pavilion at the 2007 Venice Biennale. His work is informed by international currents including his own origin in Nigeria and current life in the United States. Odita says of his work:

What is most interesting to me is a fusion of cultures where things that seem faraway and disparate have the ability to function within an almost seamless flow. The fusion I seek is one that can represent a type of living within a world of difference. No matter the discord, I believe through art there is a way to weave the different parts into an existent whole, where metaphorically, the notion of a common humanity can be understood as real.

To Debbie

# CONTENTS

*PREFACE* xi



## DESIGN PRINCIPLES

CHAPTER

1



### DESIGN PROCESS 2

#### *INTRODUCTION*

Design Defined 4

#### *PROCEDURES*

Steps in the Process 6

#### *THINKING*

Getting Started 8  
Form and Content 10  
Form and Function 12

#### *LOOKING*

Sources: Nature 14  
Sources: Artifacts and Objects 16  
Sources: History and Culture 18

#### *DOING*

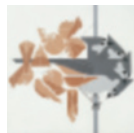
Thinking with Materials 20  
Doing and Redoing 22

#### *CRITIQUE*

Constructive Criticism 24

CHAPTER

2



### UNITY 26

#### *INTRODUCTION*

Harmony 28  
Visual Unity 30

#### *GESTALT*

Visual Perception 32

#### *WAYS TO ACHIEVE UNITY*

Proximity 34  
Repetition 36  
Continuation 38  
Continuity and the Grid 40

#### *UNITY WITH VARIETY*

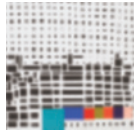
The Grid 42  
Varied Repetition 44  
Emphasis on Unity 46  
Emphasis on Variety 48  
Chaos and Control 50

#### *UNITY AT WORK*

Film and Painting 52

CHAPTER

## 3



## EMPHASIS AND FOCAL POINT 54

*INTRODUCTION*

Attracting Attention 56

*WAYS TO ACHIEVE EMPHASIS*

Emphasis by Contrast 58  
 Emphasis by Isolation 60  
 Emphasis by Placement 62

*DEGREE OF EMPHASIS*

One Element 64

*ABSENCE OF FOCAL POINT*

Emphasizing the Whole over the Parts 66

CHAPTER

## 4



## SCALE AND PROPORTION 68

*INTRODUCTION*

Scale and Proportion 70

*SCALE OF ART*

Human Scale Reference 72

*SCALE WITHIN ART*

Internal Proportions  
 and References 74  
 Contrast of Scale 76

*MANIPULATING SCALE*

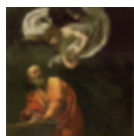
Hieratic Scale and Fantasy 78

*PROPORTION*

The Human Standard 80  
 Geometry and Notions  
 of the Ideal 82  
 Root Rectangles 84

CHAPTER

## 5



## BALANCE 86

*INTRODUCTION* 88*IMBALANCE*

Horizontal and Vertical  
 Placement 90

*SYMMETRICAL BALANCE*

Bilateral Symmetry 92  
 Examples from Various  
 Art Forms 94

*ASYMMETRICAL BALANCE*

Introduction 96  
 Balance by Value and Color 98

Balance by Texture and  
 Pattern 100

Balance by Position and  
 Eye Direction 102  
 Analysis Summary 104

*RADIAL BALANCE*

Examples in Nature and Art 106

*CRYSTALLOGRAPHIC BALANCE*

All-over Pattern 108



CHAPTER

## 6



## RHYTHM 110

*INTRODUCTION*

Engaging the Senses 112  
 Visual Rhythm 114

*RHYTHM AND MOTION*

Shapes and Repetition 116

*ALTERNATING RHYTHM*

Patterns and Sequence 118

*PROGRESSIVE RHYTHM*

Converging Patterns 120

*POLYRHYTHMIC STRUCTURES*

A Study in Contrast 122

PART

## 2

## DESIGN ELEMENTS

CHAPTER

## 7



## LINE 126

*INTRODUCTION*

A Point Set in Motion 128

*LINE AND SHAPE*

Defining Shape and Form 130

*TYPES OF LINE*

Contour and Gesture 132

*INHERENT LINE*

Structure of the Rectangle 134

*CONNECTING POINTS OF EMPHASIS*

Implied and Psychic Lines 136

*LINE DIRECTION*

Horizontal, Vertical,  
 and Diagonal Lines 138

*LINE QUALITY*

Creating Variety and Emphasis 140

*LINE AS VALUE*

Using Lines to Create  
 Dark and Light 142

*LINE IN PAINTING*

Outline of Forms 144  
 Explicit Gestural Line 146

*LOST-AND-FOUND CONTOUR*

Suggestions of Form 148

CHAPTER

## 8



## SHAPE 150

*INTRODUCTION*

Shaping Perception 152

*PREDOMINANCE OF SHAPE* 154*VOLUME/MASS*Working in Two and Three  
Dimensions 156*NATURALISM AND IDEALISM*Nature and Aspiring  
to Perfection 158*NATURALISM AND DISTORTION*

Exaggerated Shapes 160

*ABSTRACTION*

Essential Shapes 162

*NONOBJECTIVE SHAPES*

Pure Forms 164

*CURVILINEAR SHAPES* 166*RECTILINEAR SHAPES AND  
COMBINATIONS* 168*POSITIVE/NEGATIVE SHAPES*Introduction 170  
Isolation or Integration 172  
Emphasis on Integration 174  
Ambiguity 176

CHAPTER

## 9



## PATTERN AND TEXTURE 178

*PATTERN*Creating Visual Interest 180  
Tessellation and Geometric Patterns 182*TEXTURE AND PATTERN*

Similarities and Differences 184

*TEXTURE*

Creating Visual Interest 186

*TACTILE TEXTURE*Actual and Implied 188  
Collage 190*VISUAL TEXTURE*

Verisimilitude and Trompe L'oeil 192

CHAPTER

## 10



## ILLUSION OF SPACE 194

*INTRODUCTION*Translating Space  
to Two Dimensions 196*DEVICES TO SHOW DEPTH*Size 198  
Overlapping 200  
Vertical Location 202  
Aerial Perspective 204  
Plan, Elevation, Perspective 206Linear Perspective 208  
One-Point Perspective 210  
Two-Point Perspective 212  
Multipoint Perspective 214*AMPLIFIED PERSPECTIVE*

A Different Point of View 216

*MULTIPLE PERSPECTIVE*

A Pictorial Device 218

*AXONOMETRIC PROJECTION*

Casting Lines on an Angle 220

*OPEN FORM/CLOSED FORM*

The Concept of Enclosure 222

*TRANSPARENCY*

Equivocal Space 224

*CONCLUSION*

Complexity and Subtlety 226

## CHAPTER 11



## ILLUSION OF MOTION 228

*INTRODUCTION*

Stillness and Arrested Action 230

*ANTICIPATED MOTION*Seeing and Feeling  
Impending Action 232*WAYS TO SUGGEST MOTION*Figure Repeated, Figure Cropped 234  
Blurred Outlines and Fast Shapes 236  
Multiple Image 238*OPTICAL MOVEMENT*

Afterimage and Eye Movement 240

## CHAPTER 12



## VALUE 242

*INTRODUCTION*

Light and Dark 244

*VALUE PATTERN*

Variations in Light and Dark 246

*VALUE AS EMPHASIS*

Creating a Focal Point 248

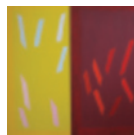
*VALUE AND SPACE*

Using Value to Suggest Space 250

*TECHNIQUES*

An Overview 252

## CHAPTER 13



## COLOR 254

*INTRODUCTION*

Color Theory 256

*COLOR CHARACTERISTICS*

Color Perception 258

*PROPERTIES OF COLOR*Hue and the Three Dimensions  
of Color Perception 260  
Value 262  
Intensity/Complementary Colors 264*PALETTES*

Mixing Light and Mixing Pigments 266

*VISUAL COLOR MIXING*

Techniques that Suggest Light 268

*COOL/WARM COLORS*Identifying Color  
with the Senses 270*COLOR AS EMPHASIS*

Color Dominance 272

*COLOR AND BALANCE*

Achieving Balance within  
Asymmetrical Composition 274

*COLOR AND SPACE*

Color's Spatial Properties 276

*COLOR SCHEMES*

Monochromatic/Analogous 278  
Triadic/Complementary 280

*COLOR DISCORD AND  
VIBRATING COLORS*

Unexpected Combinations 282

*COLOR USES*

Local, Optical, Arbitrary 284

*EMOTIONAL COLOR*

Color Evokes a Response 286

*COLOR SYMBOLISM*

Conceptual Qualities of Color 288

*GLOSSARY* 290

*BIBLIOGRAPHY* 294

*PHOTOGRAPHIC SOURCES* 296

*INDEX* 298

# PREFACE

This ninth edition of *Design Basics* continues to offer a breadth of sources to illuminate the language of design. A new edition offers the opportunity to bring in recent additions from visual culture and the larger world of ideas. While the elements and principles remain consistent and enduring, new media and new applications to the traditional media offer exciting examples for us to view and consider.

In Chapter 1 there are new examples of design forms that learn from nature. Artists and designers have been learning from nature throughout recorded history, and we have only to look at Leonardo's sketchbook to find ideas in this vein. A difference we can see in new approaches is an almost direct connection to mirroring organic growth structures in creating visual form, and actually working with living biodegradable materials in the production of packaging.

In almost every chapter you will find reference to the work of two artists who were interviewed in preparation for this new edition. Painter Sydney Licht and architect Jonathan Poore offered insights into the workings of design principles and elements in their work, and you will see the results throughout the text.

Another recurring feature of this edition are the paintings of John Moore and Louise Fishman, which appear in every chapter. These two paintings of similar size and proportion are contrasting in their styles. They show different thinking and execution that is obvious at a glance, but also some surprising kinships for such startlingly different characters.

One other area of expanded coverage can be found in Chapter 9. Contemporary interest in complex patterns can be found in both science and art. We will see that structure like this has been of interest to pattern designers since the fourteenth century.

Please be sure to explore the list of resources for the many new links to interesting features that allow this text to open a world of greater knowledge.

## RESOURCES

Many new resources are available for instructors and students with this ninth edition.

### For Students

Cengage Learning's CourseMate with eBook brings the text to life with study tools that enhance the understanding of design concepts presented in the book, including chapter concept videos narrated by the author, quizzes, image flashcards, and interactive foundation modules. The CourseMate site also offers in-depth video interviews with painter Sydney Licht and architect Jonathan Poore, video demonstrations of studio art techniques, links to explore related art and design websites, and dozens of design projects and research assignments.

The eBook allows students to take notes, highlight, and search, and it provides an integrated, one-stop approach to accessing this edition's robust digital content. Icons appear throughout the text, with active links in the eBook, making it easier for students to know when to refer to specific resources.

### For Instructors

Instructor resources are available on the Instructor's Companion Website and include easy access to the Digital Image Library with high-resolution images (including diagrams and fine art images from the text) as well as PowerPoint slides, Learning Objectives, and Critique Activities for each chapter.



PART

# 1

# DESIGN PRINCIPLES



CHAPTER

## 1

DESIGN PROCESS 2



CHAPTER

## 2

UNITY 26



CHAPTER

## 3

EMPHASIS AND FOCAL POINT 54



CHAPTER

## 4

SCALE AND PROPORTION 68



CHAPTER

## 5

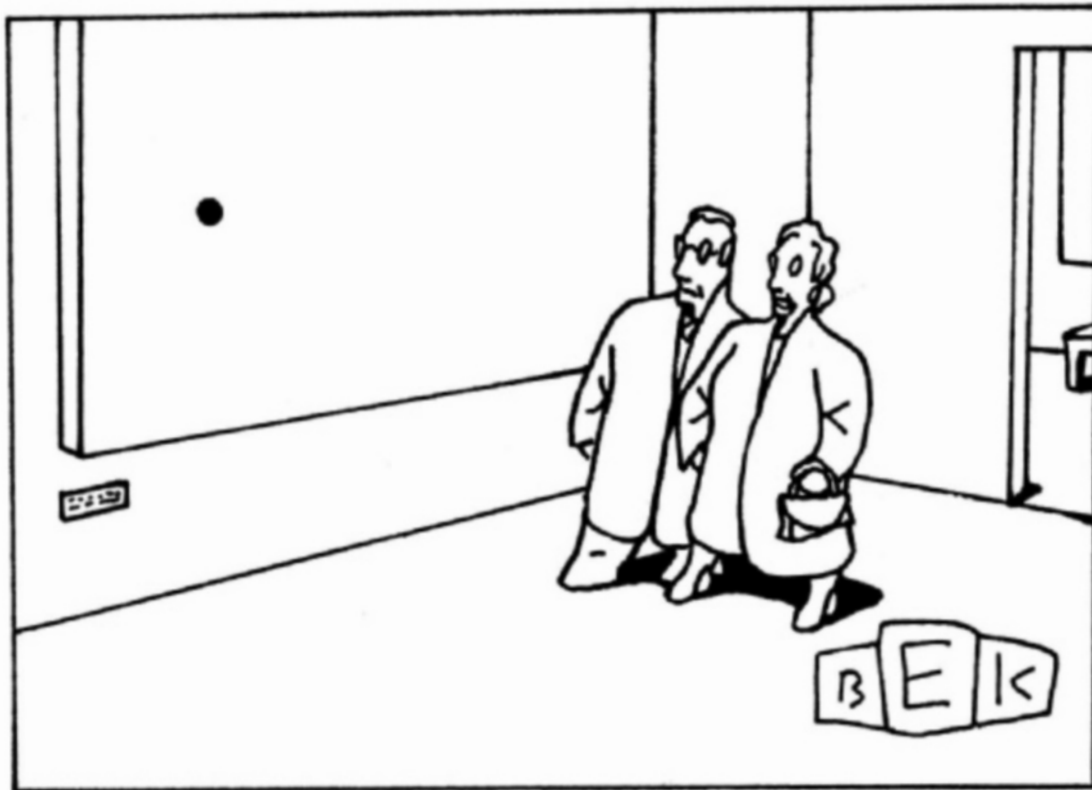
BALANCE 86



CHAPTER

## 6

RHYTHM 110



*"Where does he get all his ideas?"*

Bruce Eric Kaplan

The Cartoon Bank: A New Yorker Magazine Company.



## *INTRODUCTION*

Design Defined 4

 DESIGN PROCESS INTRODUCTORY VIDEO

 STUDIO PROJECT

## *PROCEDURES*

Steps in the Process 6

## *THINKING*

Getting Started 8

## *THINKING*

Form and Content 10

## *THINKING*

Form and Function 12

## *LOOKING*

Sources: Nature 14

## *LOOKING*

Sources: Artifacts and Objects 16

## *LOOKING*

Sources: History and Culture 18

## *DOING*

Thinking with Materials 20

## *DOING*

Doing and Redoing 22

## *CRITIQUE*

Constructive Criticism 24

## DESIGN DEFINED

What do you think of when you hear the word *design*? Do you associate design with fashion, graphics, furniture, or automotive style? Design has a more universal meaning than the commercial applications that might first come to mind. A dictionary definition uses the synonym *plan*: To **design** indeed means to plan, to organize. Design is inherent in the full range of art disciplines from painting and drawing to sculpture, photography, and time-based media such as film, video, computer graphics, and animation. It is integral to crafts such as ceramics, textiles, and glass. Architecture, landscape architecture, and urban planning all apply visual design principles. The list could go on. Virtually the entire realm of human production involves design, whether consciously applied, well executed, or ill considered.

▶ Watch a video about the design process.

▶ Go online to CengageBrain to access this chapter's Studio Project.

### ↓ A

John Kuchera. *It's Time to Get Organized*. 1986. Poster. Art Director and Designer, Hutchins/Y&R.



© 1983 JOHN KUCHERA

## Visual Organization

Design is essentially the opposite of chance. In ordinary conversation, when we say “it happened by design,” we mean something was planned—it did not occur just by accident. People in all occupations plan, but the artist or designer plans the arrangement of elements to form a visual pattern. Depending on the field, these elements will vary—from painted symbols to written words to utilitarian objects to furniture and architectural forms. The result is always a visual organization. Art, like other careers and occupations, is concerned with seeking answers to problems. Art, however, seeks visual solutions achieved through a design process.

The poster shown in **A** is an excellent example of a visual solution. *How* the letters are arranged is an essential part of communicating the idea. The poster in **B** also creates a



PLEASE DOWNLOAD THIS POSTER FREE AT WWW.ANOTHERPOSTERFORFACE.COM

DESIGN: MARTY NEUMEIER

### ↑ B

Marty Neumeier. *War: What Is It Good For?* Poster design. Copyright: free art for public use.

▶ Explore more: an ad agency

visual statement. Red is used for emphasis, bringing forward the word *war* from the text “what is it good for?” This red appears to have been crudely brushed on with drips and rough edges accentuating a violent urgency, and stands in contrast to the graceful formality of the text in black. If we recall the message in **B**, it will be because we will recall how the elements are organized. As we will see in future examples as well, **B** is a successful meeting of form (the visual elements) and content (the message).

### Creative Problem Solving

The arts are called *creative* fields because there are no pre-determined correct answers to the problems. Infinite variations in individual interpretations and applications are possible. Problems in art vary in specifics and complexity. Independent painters or sculptors usually create their own “problems” or avenues they wish to explore. The artist can choose as wide or narrow a scope as he or she wishes. The architect or graphic and industrial designer is usually given a problem, often with very specific options and clearly defined limitations.

The creative aspect of art and design cannot be reduced simply to an idea about making things look better. To keep that in mind, observe the packaging material shown in **C**. A problem was defined by two students: “How can we create a sustainable packing material to replace foam, which is not biodegradable?” The solution, first generated by these students in the Inventor’s Studio class, taught by Burt Swersey at Rensselaer Polytechnic Institute (RPI), reflects his teaching dictum: “I’m not interested in your ideas. Find a problem to solve.” The problem found a potential solution in the form of a strong fungus observed by one of the students on his family farm. The resulting material is grown as a fungus and is biodegradable. This was not a visual problem or solution, but we may find beauty in the right use of materials. While our emphasis will be on visual design, it is worth remembering this lesson in problem solving. This theme will recur in other examples. In later chapters, we will see the work of architect Jonathan Poore who tells his clients, “We lead with the need, not the solution.”



**Evocative Design. Mushroom Packaging.**



**Explore more:** sustainable design

## STEPS IN THE PROCESS

We have all heard the cliché “a picture is worth a thousand words.” This is true. There is no way to calculate how much each of us has learned through pictures. Communication has always been an essential role for art. Indeed, before letters were invented, written communication consisted of simple pictorial symbols. Today, pictures can function as a sort of international language. A picture can be understood when written words may be unintelligible to the foreigner or the illiterate. We do not need to understand German to grasp immediately that the message of the poster in **A** is pain, suffering, and torture.

### Art as Communication

In art, as in communication, the artist or designer is saying something to the viewer. Here the successful solution not only is visually compelling but also communicates an idea. Any of the elements of art can be used in communication. Purely abstract lines, color, and shapes can very effectively express ideas or feelings. Many times communication is achieved through symbols, pictorial images that suggest to the viewer the theme or message. The ingenuity of creative imagination exercised in selecting these images can be important in the finished work’s success.

Countless pictures demonstrate that words are not necessary for communication. We can see that in two examples that suggest the idea of balance. In the photograph *Balanced Rock* (**B**) no words are needed to communicate the idea. In **C** we read the word, but the concept is conveyed visually. The uppercase *E* provides a visual balance to the capital *B*, and the dropped *A* is used as a visual fulcrum. As in **A** the concept comes across independent of language.

So we are led to wonder how these artists arrived at their conclusions. Both **B** and **C** are good ideas, but how were they generated? We can appreciate that the process of trial and error would differ between working with rocks and text! Examples on the coming pages will demystify the work behind the results we admire in accomplished artworks.

### The Creative Process

These successful design solutions are due, of course, to good ideas. Students often wonder, How do I get an idea? Almost everyone shares this dilemma from time to time. Even the professional artist can stare at an empty canvas, the successful writer at a blank page. An idea in art can take many forms, varying from a specific visual effect to an intellectual communication of a definite message. Ideas encompass both content and form.



← **A**

**Stop Torture.** 1985. Poster for Amnesty International. Stephan Bundi, Art Director and Designer; Atelier Bundi, Bern, Switzerland.

It is doubtful that anyone can truly explain why or how an answer to something we've been puzzling over appears out of the blue. Our ideas can occur when we are showering or mowing the lawn, or in countless other seemingly unlikely situations. We can say it is unlikely that such a moment of insight will occur unless we define the problem, as Swersey suggests, and listen attentively to "our characters," as the writer Vladimir Nabokov suggests. Since we are not counting on a bolt from the blue to inspire us, what sort of activities can promote the likelihood that a solution to a problem will present itself?



The media and the message can vary dramatically, but a process of development can transcend the differences. We suggest three very simple activities with very simple names:

Thinking  
Looking  
Doing

These activities are not sequential steps and certainly are not independent procedures. They overlap and may be performed almost simultaneously or by jumping back and forth from one to another. One thing is certain, however: A moment of sudden insight (like getting an idea while showering) rarely occurs without an investment of energy into the problem. Louis Pasteur said that "chance favors the prepared mind," and the painter Chuck Close tells it like it is: "Inspiration is for amateurs. The rest of us get to work."

## ← B

Andy Goldsworthy. *Balanced Rock* (Misty, Langdale, Cumbria, May 1977). *Andy Goldsworthy: A Collaboration with Nature* (New York: Harry N. Abrams, Inc., Publishers, 1990).

[Explore more](#) from Andy Goldsworthy.

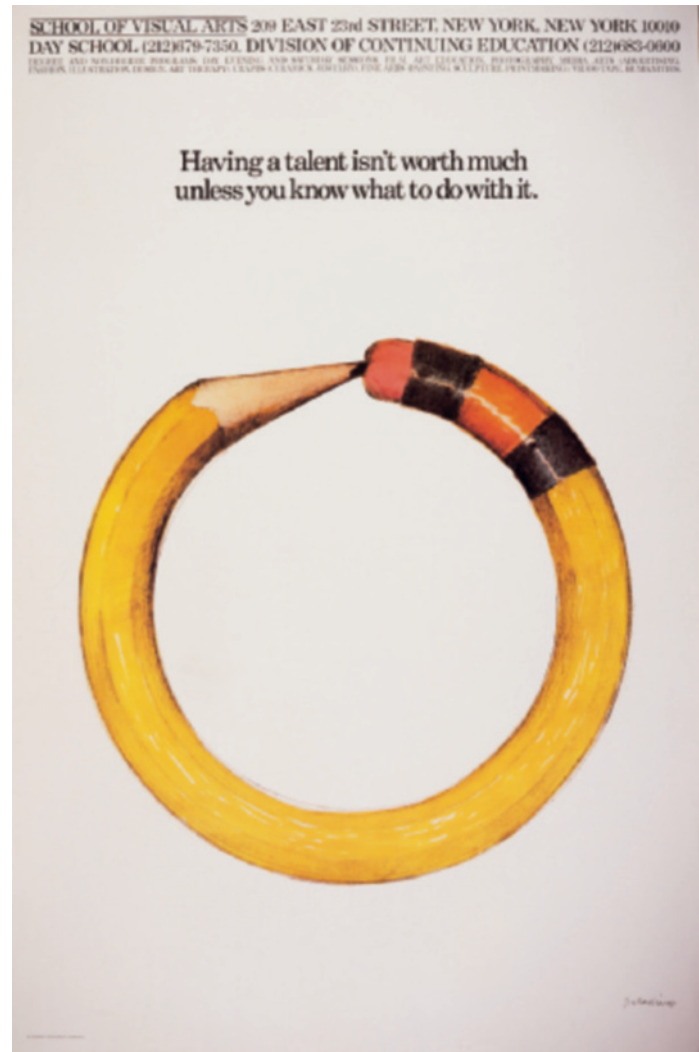
## → C

The layout of the letters matches the word's meaning to convey the idea.

# BALANCE

## GETTING STARTED

The well-known French artist Georges Braque wrote in his *Cahiers* (notebooks) that “one must not think up a picture.” This is a compelling argument for the intuition and innovation we expect from art and design. Nevertheless, this idea can be overly romanticized to suggest that “thinking” hinders the creative impulse, perpetuating a cliché of the artist as an inarticulate bohemian. In fact, art and design are intellectual activities and are thoughtful by nature. This we will see in the work and reflections of practitioners as diverse as painter Sydney Licht and cinematographer Stephen Goldblatt.



“Having a talent isn’t worth much unless you know what to do with it.” Poster for the School of Visual Arts. 1978.



Claes Oldenburg. *Proposal for a Colossal Monument in Downtown New York City: Sharpened Pencil Stub with Broken-off Tip of the Woolworth Building*. 1993. Etching with aquatint, 2' 8½" × 1' 10". Collection of Claes Oldenburg and Coosje van Bruggen.

 [Explore more](#) of the artist's work.

## Thinking about the Problem

Knowing what you are doing must precede your doing it. So thinking starts with understanding the problem at hand:

Precisely what is to be achieved? (What specific visual, intellectual, or emotional effect is desired? What problem is being solved?)

What media are to be employed? Does the desired result dictate the media, or does the problem get solved through the attributes and limitations of a predetermined medium?

Is this a project for you as an individual, or is collaboration involved?

These questions may all seem self-evident, but effort invested without full awareness will likely be nonproductive.



**C**

**Tom Friedman. *Untitled*. 1992. Pencil shaving, 22" × 1½" × 1½".**  
from an edition of two.

Explore more: a gallery



## Thinking about the Solution

Thinking can be especially important in art that has a specific theme or message. How can the concept be communicated in visual terms? A first step is to think logically of which images or pictures could represent this theme and to list them or, better yet, sketch them quickly, because a visual answer is what you're seeking. Let's take a specific example: What could visually represent the idea of art or design? Some obvious **symbols** appear in the designs on these pages, and you will easily think of more. You might expand the idea by discussing it with others. They may offer suggestions you have not considered. In many cases such as large architectural projects, art installations, and films, collaboration is a requirement.

Sketch your ideas to see immediately the visual potential. Sketches may take the form of drawings, but can just as easily be a number of photographs, or collected material relevant to the project. At this point you do not necessarily decide on one idea, but it's better to narrow a broad list to a few ideas worthy of development. Choosing a visual image is only the first step. How will you use your choice? Three examples shown here all start with a pencil, but take that to unique and memorable conclusions:

A fragment of a pencil becomes the subject of a monumental sculpture. **(A)**

Wasted talent is symbolized by a distorted and useless pencil. **(B)**

A carefully sharpened pencil becomes a spiraling ribbon demonstrating art's ability to transform our understanding of form. **(C)**

These examples are imaginative and eye-catching. The image was just the first step. How that image or form was used provided the unique and successful solution.

Watch a video of architect Jonathan Poore discussing thinking.