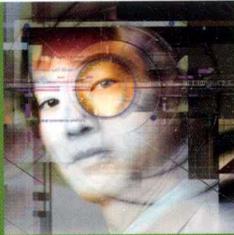
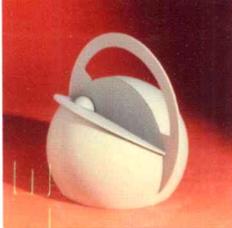


Mary Stewart



S E C O N D E D I T I O N

# Launching the imagination

A Comprehensive Guide to Basic Design

# Launching the Imagination

A Comprehensive Guide to Basic Design

---

second edition

Mary Stewart



Boston Burr Ridge, IL Dubuque, IA Madison, WI New York San Francisco St. Louis  
Bangkok Bogotá Caracas Kuala Lumpur Lisbon London Madrid Mexico City  
Milan Montreal New Delhi Santiago Seoul Singapore Sydney Taipei Toronto

LAUNCHING THE IMAGINATION: A COMPREHENSIVE GUIDE TO BASIC DESIGN

Published by McGraw-Hill, a business unit of The McGraw-Hill Companies, Inc., 1221 Avenue of the Americas, New York, NY, 10020. Copyright © 2006, 2002 by The McGraw-Hill Companies, Inc. All rights reserved. No part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written consent of The McGraw-Hill Companies, Inc., including, but not limited to, in any network or other electronic storage or transmission, or broadcast for distance learning. Some ancillaries, including electronic and print components, may not be available to customers outside the United States.

This book is printed on acid-free paper.  
Printed in China

5 6 7 8 9 0 CTP/CTP 0 9 8 7

ISBN-13: 978-0-07-287061-9  
ISBN-10: 0-07-287061-3

Editor in Chief: *Emily Barrosse*  
Publisher: *Lyn Uhl*  
Sponsoring Editor: *Joe Hanson*  
Developmental Editor: *Cynthia Ward*  
Editorial Assistant: *Elizabeth Sigal*  
Executive Marketing Manager: *Suzanna Ellison*  
Managing Editor: *Jean Dal Porto*  
Project Manager: *Catherine R. Iammartino*  
Art Director: *Jeanne Schreiber*  
Senior Designer and Interior Designer: *Kim Menning*  
Cover Designer: *Bill Stanton*  
Senior Photo Research Coordinator: *Alexandra Ambrose*  
Photo Research: *Photo Search, Inc., New York*  
Art Editor: *Emma C. Ghiselli*

Cover Credits:

- [1] Stan Rickel, *Teapot Sketches*, 1991. Courtesy of the artist.
- [2] Detail, Jacey, *Untitled*. © Jacey, Shannon Associates.
- [3] Tanija & Graham Carr, *Untitled*, 2001. Courtesy of the artists. Photo: Victor France.
- [4] Detail, Michael James, *Rhythm/Color: Improvisation*, 1985. Photo: David Caras.
- [5] Donna Dennis, *Subway with Silver Girders*, 1981-82. The Margulies Collection at the Warehouse. Photo: Peter Aaron.

Lead Media Producer: *Shannon Gattens*  
Media Project Manager: *Michele Borrelli*  
Production Supervisor: *Janean A. Utley*  
CD-ROM Development and Design: *Creative Myndz*  
Composition: *10.5/14 Palatino by Prographics*  
Printer: *CTPS*

Credits: The credits section for this book begins on page 387 and is considered an extension of the copyright page.

**Library of Congress Cataloging-in-Publication Data**

Stewart, Mary, 1952-

Launching the imagination : a comprehensive guide to basic design / Mary Stewart.-- 2nd ed.

p. cm.

Also issued in parts titled: Launching the imagination : A comprehensive guide to two-dimensional design, and Launching the imagination : A comprehensive guide to three-dimensional design.

Includes bibliographical references and index.

ISBN 0-07-287061-3 (softcover : alk. paper)

1. Design. I. Title.

NK1510.S74 2006

745.4--dc22

2005041666

The Internet addresses listed in the text were accurate at the time of publication. The inclusion of a website does not indicate an endorsement by the authors of McGraw-Hill, and McGraw-Hill does not guarantee the accuracy of the information presented at these sites.

*Launching the Imagination:*  
*A Comprehensive Guide to Basic Design*  
is dedicated to my teachers. Especially Garo Antreasian,  
Rudy Pozzatti, Marvin Lowe, and Adrian Tió.

— dedication —

In the beginning of my teaching career, I had the good fortune to audit the courses of two master teachers of design, William Itter and David Hornung. Itter's fundamentals course, derived from Joseph Albers' approach, featured assignments that were methodical, systematic, and highly analytical. Hornung's course, which focused on conceptual and visual patterns, was exuberant, synthetic, and often irreverent. Despite significant differences in their assignments, both teachers brilliantly presented substantial design information.

Based on these experiences and my own teaching, I concluded that a comprehensive approach to design requires experimentation as well as analysis, and that rambunctiousness is the natural partner to rigor. Thus, when McGraw-Hill invited me to write a design textbook, I was determined to present substantial information in the liveliest possible way.

## A Comprehensive Approach for 21st Century Students

*Launching the Imagination* treats design as both a verb and a noun—as a problem-solving process as well as a well-crafted product. It challenges students to use design to explore their own ideas while encouraging them to look closely and learn from the work of other artists. My aim was to write a book that would help students create designs that are both conceptually inventive and visually compelling. I hope that students will be inspired to see the foundations course as a launching pad for their future work, for their entry into the community of artists.

**Thorough coverage of 2D and 3D design.** This book covers all of the topics common to foundations courses, recognizing that artists and designers benefit from a strong shared vocabulary. By combining these topics in one volume, we are able to provide students with a coherent approach to the full-year course that also offers a savings over the cost of multiple volumes. (For instructors who only want a 2D or 3D volume, however, split volumes are available.) This sec-

ond edition has benefitted from the feedback of many foundations teachers, whose suggestions are reflected in the expanded and refined discussions of 2D and 3D elements and principles.

**Unique coverage of time design.** *Launching the Imagination* recognizes that students in today's foundations courses have the opportunity to work in a wider range of media than ever before. I have tried to present a teachable unit on time design or "4D" (Part Four) by exploring the elements and principles at the core of such new and old forms as film, websites, graphic novels, and visual books. Time design is of great interest to our students, and this section is comparable to the 2D and 3D design sections in length and significance.

**Unique coverage of creativity and concept development.** Because foundations courses are as much about process as product, *Launching the Imagination* covers such topics as generating and developing ideas, managing time, and making the most of critiques. This material, found in Part Two, can be assigned any time in the course. Some instructors find it valuable to discuss the material during class time, while others prefer it as supplemental reading.

**Hundreds of full-color images.** An art textbook is only as good as the images it offers—and I've sought images that are diverse and compelling. The stylistic range represents both time-honored masterworks (such as Caravaggio's *Descent from the Cross*) and works by contemporary artists (such as Alfred Leslie's *The Killing Cycle*, which was inspired by Caravaggio's painting). There are examples from many different cultures, representing a wide range of two-, three-, and four-dimensional media. A Maori meeting house is included in a discussion on cultural meaning, a kinetic Japanese tower is presented in a discussion of time, and contemporary and historic masks have been analyzed throughout. Many forms of visual culture are represented, from comic books and product design to video, painting, sculpture, and more.

**Conversations with practicing artists.** Guest speakers have enhanced my own courses, and I tried to recreate that experience in book form through the “Profiles” at the end of each chapter. In these interviews, students learn about working processes and career choices from a remarkable group of masters. The “Profiles” help students see connections between basic design and professional practice. Interviews with sculptor Todd Slaughter and photographer Abelardo Morrell have been added to the second edition.

## New to the Second Edition

Working with invaluable feedback from adopters of the first edition, I have expanded, reorganized, refined, and updated the presentation—all with an eye to creating a better learning experience. The following summarizes the key changes in this edition:

- **Expanded and improved coverage of 2D design.** All three chapters of Part One have been thoroughly revised, with clearer writing, improved image choices, and larger image sizes. Chapter 1 goes into greater detail on the elements of line, shape, texture, and value. Chapter 2 offers a more precise introduction to color theory and a more thorough introduction to color schemes and composing in color. Chapter 3 has been significantly reorganized, and greater attention has been given to gestalt theory, the illusion of space, and the illusion of movement.
- **Expanded and improved coverage of 3D design.** Part Three has been expanded to four chapters, making for a more coherent and manageable presentation of 3D elements, principles, materials, and concepts. Because an understanding of the practical and expressive qualities of materials is essential to work in 3D, I have created a separate chapter (10) on construction methods and materials. Throughout Part Three, illustrations have been added and concepts have been explained in greater detail.

- **New coverage of visual communication.** The unit on Concepts and Critical Thinking (Part Two) has been strengthened by the addition of a new Chapter 7, entitled “Constructing Meaning.” This new chapter provides a lively and concise introduction to the theory and practice of visual communication. In it, students will explore the role of audience in communication and consider the importance of intent, context, visual drama, and metaphor.
- **Better placement of “Key Questions.”** To help students immediately see the relevance of a topic to their own studio work, the “Key Questions” now appear at the end of sections within the chapter rather than at the end of the chapter.
- **New media resource guides.** This book is supported by a website and CD-ROMs that adds another dimension to the learning environment. A page at the end of Parts One, Two, Three, and Four shows you what types of media resources are keyed to each of those parts. These guides also include lists of studio projects that are available in the Instructor’s Manual.

## Multimedia Resources for Students and Instructors

*Please contact your local McGraw-Hill representative for details on the following supplements, including policies, prices, and availability, as some restrictions may apply. If you are not sure who your representative is, you can find him or her by using the rep locator at [www.mhhe.com](http://www.mhhe.com).*

### For Students:

- **The Core Concepts CD-ROM** is made up of five components to offer students essential study material in conjunction with this text. *Elements and principles of art* are illustrated with interactive exercises and animations. *Art techniques* are demonstrated and explained with brief video segments. *Chapter*

*Resources* include study guides and quizzes. *Internet Resources* provides a guide to using the Internet for research. *Study Skills Primer* provides students with essential advice on how to be successful when studying during college.

- **The Online Learning Center**, located at [www.mhhe.com/launching2](http://www.mhhe.com/launching2), offers resources for each chapter of the text, including chapter objectives, discussion questions, online testing, and links to websites for additional research of the topics covered. In addition, the site hosts links to promote getting involved in art and in conducting research on the Web.

## For Instructors:

- **The Instructor's Manual** includes more than 50 studio assignments, with examples, in a consistent format that makes them easy for instructors to use as is or adapt to their own purposes. For new foundations teachers, the IM offers suggestions for constructing a syllabus. The Instructor's Manual is available on the instructor's section of the Online Learning Center, located at [www.mhhe.com/launching2](http://www.mhhe.com/launching2), and on the **Instructor's Resource CD-ROM**. Adopters may obtain a password and/or CD-ROM from their local McGraw-Hill representative.

## Acknowledgments

Writing this book has been an enormous undertaking and I've received a lot of help from my colleagues. At Northern Illinois University, I am especially indebted to Dr. Harold Kafer, who has been encouraging and supportive throughout this process, to Professor Leif Allmendinger, who reviewed Chapter Seven and suggested improvements, and to Foundations Program secretary Florence Butler, whose reserves of energy and wit seem bottomless.

I would like to thank the following artists and designers who contributed so generously to the Profiles, which accompany each chapter:

Nancy Callahan, Professor of Art, *The State University of New York at Oneonta*

Bob Dacey, Associate Professor of Art, *Syracuse University*

Diane Gallo, Independent Writer

Sharon Greytak, Independent Filmmaker

Ann Baddeley Keister, Associate Professor of Art, *Grand Valley State University*

Heidi Lasher-Oakes, Independent Sculptor

David MacDonald, Professor of Art, *Syracuse University*

Rodger Mack, Professor of Art, *Syracuse University*

Abelardo Morell, Professor of Art, *Massachusetts College of Art*

Rick Paul, Professor of Art, *Purdue University*

Todd Slaughter, Professor of Art, *The Ohio State University*

Ken Stout, Professor of Art, *University of Arkansas*

Jerome Witkin, Professor of Art, *Syracuse University*

Phillia Yi, Professor of Art, *Hobart and William Smith Colleges*

I am also grateful for the advice of the following reviewers, who responded so thoughtfully to the project in various stages of development. Their opinions, suggestions, criticisms, and encouragement helped shape *Launching*:

## For the Second Edition:

Kathleen A. Arkles, *College for Creative Studies*

Donald Barrie, *Seattle Central Community College*

Julie Baugnet, *St. Cloud State University*

Donna Bechis, *Fitchburg State College*

Nancy Blum-Cumming, *University of Wisconsin-Stout*

Debra K.D. Bonello, *Lansing Community College*  
 Jeff Boshart, *Eastern Illinois University*  
 Jacquelin Boulanger, *New College of Florida*  
 Stephanie Bowman, *Pittsburg State University*  
 Peter Brown, *Ringling School of Art*  
 John Carlander, *Westmont College*  
 Steven Cost, *Amarillo College*  
 Michael Croft, *University of Arizona*  
 Cat Crotchett, *Western Michigan University*  
 Claire Darley, *Art Academy of Cincinnati*  
 Anita M. DeAngelis, *East Tennessee State University*  
 Beverly Dennis, *Jowes County Junior College*  
 Tracy Doreen Dietzel, *Edgewood College*  
 Tim Doud, *American University*  
 James Elniski, *School of The Art Institute of Chicago*  
 John Ford, *Labette Community College*  
 Corky Gross, *Cazenovia College*  
 Arlene Grossman, *Art Institute of Boston at Lesley University*  
 Danielle Harmon, *West Texas A & M University*  
 Christopher Hocking, *University of Georgia*  
 Carol Hodson, *Webster University*  
 Sara M. Hong, *University of Arizona*  
 Lorie Jespersen, *Lake Michigan College*  
 Cheryl Ann Kittredge, *University of Maine, Presque Isle*  
 Michelle LaPerriere, *Maryland Institute College of Art*  
 In Shik Lee, *Tompkins Cortland Community College*  
 Richard F. Martin, *New York Institute of Technology*  
 Christine McCullough, *Youngstown State University*  
 Julie McWilliams, *Sussex County College*  
 Nancy Morrow, *Kansas State University*  
 Byron Myrich, *Jones Junior College*  
 Kelly Nelson, *Longwood University*  
 Lara Nguyen, *California State University, Long Beach*  
 Grace O'Brien, *Purdue University*  
 Mark O'Grady, *Pratt Institute*  
 William Potter, *Herron School of Art-IUPUI*  
 Patsy C. Rainey, *University of Mississippi*  
 Cherri Rittenhouse, *Rock Valley College*  
 Gil Rocha, *Richland Community College*  
 William B. Rowe, *Ohio Northern University*  
 Kim Schrag, *Tompkins Cortland Community College*  
 Jean Sharer, *Front Range Community College*  
 Gail Simpson, *University of Wisconsin-Madison*  
 Todd Slaughter, *Ohio State University*  
 Robert Smart, *Lawrence University*  
 Karen Spears, *Eastern Kentucky University*  
 Mindy Spritz, *The Art Institute of Atlanta*  
 Teresa Stoll, *Lake City Community College*  
 Katherine Strause, *University of Arkansas at Little Rock*  
 Rob Tarbell, *Limestone College*  
 William Travis, *Rowan University*  
 Gerson M. Rapaport, *New York Institute of Technology*  
 Linda Vanderkolk, *Purdue University*  
 Carolynne Whitefeather, *Utica College*  
 Reid Wood, *Lorain County Community College*  
 Marilyn H. Wounded Head, *Mesa State College*  
 Alice Zinnes, *New York City College of Technology, City University of New York*

## For the First Edition:

Scott Betz, *Winston-Salem State University*

Jeff Boshart, *Eastern Illinois University*

Peter Brown, *Ringling School of Art and Design*

Brian Cantley, *California State University,  
Fullerton*

Laurie Beth Clark, *University of Wisconsin,  
Madison*

Michael Croft, *The University of Arizona*

John Fillwalk, *Ball State University*

David Fobes, *San Diego State University*

Albert Grivetti, *Clarke College*

Ken Horii, *Rhode Island School of Design*

Imi Hwangbo, *University of Louisville*

Michelle Illuminato, *Bowling Green State  
University*

Ann Baddeley Keister, *Grand Valley State  
University*

Margaret Keller, *St. Louis Community College*

Dan Lowery, *Southwestern Illinois College*

Karen Mahaffy, *University of Texas at San Antonio*

Richard Moses, *University of Illinois*

Gary Nemcosky, *Appalachian State University*

Helen Maria Nugent, *Art Institute of Chicago*

Rick Paul, *Purdue University*

Ron Saito, *California State University, Northridge*

Karen Schory, *Johnson County Community College*

Susan Slavick, *Carnegie Mellon University*

Paul Wittenbraker, *Grand Valley State University*

William Zack, *Ball State University*

Finally, the McGraw-Hill team has been knowledgeable, supportive, and enthusiastic. Senior Editor Joe Hanson has contributed a great deal to the book design, continually expanded the use of new technologies, and enthusiastically promoted the book at every opportunity. Developmental Editor Cynthia Ward encouraged me to pursue a wide range of revisions, and the book is greatly improved as a result. Editorial assistants Torii Yamada and Elizabeth Sigal have been prompt and helpful throughout the process. Designer Kim Menning and layout genius Glenda King greatly increased the visual impact of the book. As head of the photo research team, Alexandra Ambrose was prompt, inventive, and helpful. Project Manager Cathy Iammartino and Executive Marketing Manager Suzanna Ellison were highly accessible, enthusiastic, and consistently supportive. Bonnie Mitchell and her Creative-Myndz team have been resilient, dedicated, and endlessly inventive in their approach to the CD-ROM.

*Mary Stewart*

part one

---

## **Two-Dimensional Design**

chapter one

**Basic Elements 18**

chapter two

**The Element of Color 52**

chapter three

**Principles of Two-Dimensional Design 78**

---

part two

## **Concepts and Critical Thinking**

chapter four

**Cultivating Creativity 116**

chapter five

**Problem Seeking and Problem Solving 128**

chapter six

**Developing Critical Thinking 146**

chapter seven

**Constructing Meaning 164**

---

part three

## **Three-Dimensional Design**

chapter eight

**Elements of Three-Dimensional Design 180**

chapter nine

**Principles of Three-Dimensional Design 220**

chapter ten

**Materials and Methods 242**

chapter eleven

**Physical and Cerebral 260**

---

part four

## **Time Design**

chapter twelve

**Aspects of Elements of Time 292**

chapter thirteen

**Narrative and Non-Narrative 322**

chapter fourteen

**Interdisciplinary Arts 345**

Key Readings 371

Notes 375

Glossary 377

Photo Credits 387

Index 397

Preface vii  
 A Guide to the *Core Concepts in Art* CD-ROM xviii  
 Introduction: Beginner's Mind, Open Mind 6  
   Defining *Design* 9

## Two-Dimensional Design

### chapter one Basic Elements 18

LINE 18  
   Defining Line 18  
   Line Quality 18  
   Actual Lines 20  
   Implied Lines 22  
   Line Networks 23  
   Using Line 25  
   Key Questions 26

SHAPE 26  
   Defining Shape 26  
   Types of Shape 28  
   Degrees of Representation 32  
   Degrees of Definition 34  
   Using Shape 35  
   Key Questions 37

TEXTURE 37  
   Types of Texture 37  
   Creating Texture 38  
   Texture and Space 38  
   Trompe L'Oeil 40  
   Combining Physical and Visual Texture 40  
   Marks and Meanings 42  
   Key Questions 42

VALUE 43  
   Contrast 43  
   Value Distribution 44  
   Value and Volume 46  
   Value and Space 46  
   Value and Lighting 47  
   Key Questions 48

*Summary, Keywords* 49

**Profile: Phylla Yi, Printmaker** 50

chapter two  
**The Element of Color** 52

COLOR THEORY 52

COLOR PHYSICS 53  
   Color and Light 54  
   Using Additive Color 54  
   Using Subtractive Color 55

COLOR INTERACTION 55

DEFINING COLOR 57  
   Hue 57  
   Value 58  
   Intensity 60  
   Key Questions 63

COLOR SCHEMES 62  
   Monochromatic 62  
   Analogous 62  
   Complementary 63  
   Split Complementary 63  
   Triadic 64  
   Chromatic Grays and Earth Colors 64  
   Using Disharmony 65  
   Key Questions 66

COMPOSING WITH COLOR 67  
   Creating the Illusion of Space 67  
   Weight and Balance 68  
   Distribution and Proportion 68  
   Color as Emphasis 69

COLOR, EMOTION, AND EXPRESSION 70  
   Color Keys 72  
   Symbolic Color 72  
   Expressive Color 74

*Summary, Keywords* 75

**Profile: Ann Baddeley Keister, Fiber Artist** 76

chapter three  
**Principles of Two-Dimensional Design** 78

UNITY AND VARIETY 78  
   Gestalt: Theory and Application 80  
   Patterns and Grids 85  
   Key Questions 87

BALANCE 87  
   Weight and Gravity 87  
   Symmetrical Balance 89  
   Radial Symmetry 90  
   Asymmetrical Balance 90  
   Expressive Uses of Balance 93  
   Key Questions 94

SCALE AND PROPORTION 94

RHYTHM 95

EMPHASIS 96  
   Emphasis by Isolation 96  
   Emphasis by Placement 97  
   Emphasis Through Contrast 97  
   Key Questions 99

CREATING THE ILLUSION OF SPACE 99  
   Linear Perspective 100  
   Other Ways to Create the Illusion of Space 103  
   Using of Illusion of Space 103  
   Key Questions 105

DYNAMIC SPACE: CONSTRUCTING *MULAN* 105

THE ILLUSION OF MOVEMENT 107  
   The Kinesthetic Response 107  
   The Decisive Moment 107  
   Before and After 108  
   Multiplication 108  
   Key Questions 110

DETERMINING PRIORITIES 109

*Summary, Keywords* 110

**Profile: Ken Stout, Painter** 111

PART ONE MULTIMEDIA RESOURCES 113

# Concepts and Critical Thinking

## chapter four

### Cultivating Creativity 116

DESIGN AND CREATIVITY 116

SEVEN CHARACTERISTICS OF CREATIVE THINKING 116

- Receptivity 117
- Curiosity 117
- Wide Range of Interests 117
- Attentiveness 117
- Connection Seeking 117
- Conviction 117
- Complexity 117

GOAL-SETTING 118

- A Goal-Setting Strategy 119
- Characteristics of Good Goals 120

TIME MANAGEMENT 120

- Set the Stage 121
- Prioritize 121
- See the Big Picture 121
- Work Sequentially 121
- Use Parts to Create the Whole 121
- Make the Most of Class Time 121
- Start Early 122
- When in Doubt, Crank It Out 122
- Work Together 122
- Reduce Stress 123

*Summary* 124

**Profile: Nancy Callahan, Artist, and Diane Gallo, Writer** 126

## chapter five

### Problem Seeking and Problem Solving 128

PROBLEM SEEKING 128

- The Design Process 128
- The Fine Art Process 130
- Sources of Ideas 130
- Characteristics of a Good Problem 132

CONVERGENT AND DIVERGENT THINKING 133

- Using Convergent Thinking 133
- Using Divergent Thinking 135

BRAINSTORMING 136

- Make a List 136
- Use a Thesaurus 137
- Explore Connections 137
- Keep a Journal 138

VISUAL RESEARCH 139

- Thumbnail Sketches 139
- Model Making 139

VARIATIONS ON A THEME 141

AN OPEN MIND 143

*Summary, Keywords* 143

**Profile: Heidi Lasher-Oakes, Sculptor** 144

## chapter six

### Developing Critical Thinking 146

ESTABLISHING CRITERIA 146

FORM, SUBJECT, AND CONTENT 147

STOP, LOOK, LISTEN, LEARN 147

TYPES OF CRITIQUES 148

- Description 148
- Cause and Effect 149
- Compare and Contrast 149
- Greatest Strength/Unrealized Potential 151

DEVELOPING A LONG-TERM PROJECT 152

- Week One Assessment 152
- Week Two Assessment 153
- Developing A Self-Assignment 153
- Self-Assignment: Jason Chin The Mythological Alphabet* 154

TURN UP THE HEAT: PUSHING YOUR PROJECT'S POTENTIAL 156

- Basic Arithmetic 156
- Transformation 157
- Reorganization 159

CONCEPT AND COMPOSITION 159

ACCEPTING RESPONSIBILITY 160

*Summary, Keywords* 161

**Profile: Bob Dacey, Illustrator** 162

## chapter seven

### Constructing Meaning 164

BUILDING BRIDGES 164

- Shared Language 164
- Iconography 165
- Audience 166
- Immediacy 166
- Stereotypes 168
- Clichés 168
- Surprise 168
- Key Questions 169

PURPOSE AND INTENT 169

CONTEXT 170

CONNECTIONS 171

DRAMA 173

AESTHETICS AND ANESTHETICS 173

*Summary, Keywords* 174

**Profile: Ken Botnick, Graphic Designer** 175

PART TWO  
MULTIMEDIA  
RESOURCES 177

# Three-Dimensional Design

## chapter eight

### Elements of Three-Dimensional Design 180

DEFINING FORM 180

FORM AND FUNCTION 181

ORTHOGRAPHIC PROJECTION 182

DEGREES OF DIMENSIONALITY 184

Relief 184

Three-Quarter Works 184

Freestanding Works 184

Environmental Works 184

LINE 187

Line Quality 188

Actual Lines 191

Implied Lines 192

Line Networks 192

Key Questions 193

PLANE 194

Key Questions 195

VOLUME 195

MASS 197

Key Questions 197

SPACE 198

Positive and Negative 198

Compression and

Expansion 201

Activated Space 201

Entering Space 203

Key Questions 203

TEXTURE 204

Degrees of Texture 204

Characteristic and Contradictory

Textures 204

The Implications of Texture 205

Key Questions 206

LIGHT 206

Value and Volume 206

Striking a Surface 206

Ambient and Directed

Light 208

Light as Sculpture 208

Key Questions 210

COLOR 211

Degrees of Harmony 211

Contrast 212

Color and Emotion 212

Symbolic Color 213

Key Questions 214

TIME 214

THE COMPLEXITY OF THREE-DIMENSIONAL DESIGN 215

*Summary, Keywords 215, 216*

**Profile: Rodger Mack, Sculptor 217**

## chapter nine

Principles of Three-Dimensional Design 220

UNITY AND VARIETY 221

Increasing Unity 221

Combining Unifying Forces 224

Increasing Variety 224

Degrees of Unity 224

Grid and Matrix 226

Key Questions 226

BALANCE 227

Key Questions 230

SCALE 231

PROPORTION 231

Key Questions 232

EMPHASIS 233

Emphasis by Isolation 233

Emphasis through

Contrast 234

Key Questions 235

REPETITION AND

RHYTHM 235

Key Questions 238

*Summary, Keywords 239*

**Profile: David MacDonald, Ceramicist 240**

## chapter ten

Materials and Methods 242

CHOICE OF MATERIALS 242

Increasing Material Strength 243

Methods of Construction 246

CONNECTIONS 248

TRANSITIONS 250

TRADITIONAL MATERIALS, CONTEMPORARY USES 250

Stone 250

Wood 251

Metals 252

Clay 252

Glass 252

Fibers 253

Plastics 254

STUDENT MATERIALS 255

Boards 255

Glues 255

Tapes 255

MATERIALS AND MEANINGS 255

Key Questions 256

*Summary, Keywords 257*

**Profile: Todd Slaughter, Sculptor 258**

## chapter eleven

Physical and Cerebral 260

CONSTRUCTED THOUGHT 261

From Life to Art 261

Degrees of Representation 261

Boundaries 264

Bases and Places 266

Key Questions 268

PHYSICAL FORCES 269

Weight and Gravity 269

Compression and

Expansion 270

Tension and Torsion 271

Presence and Absence 272

Process and Product 273

CEREBRAL QUALITIES OF SCULPTURAL OBJECTS 275

Building on a Tradition 275

Reinventing Sculpture 275

CONTEMPORARY QUESTIONS, CONTEMPORARY

ANSWERS 276

Sculpture as Place 276

Sculpture as Journey 278

Sculpture as Time 280

Sculpture as Self 282

EXPRESSING IDEAS IN PHYSICAL FORM 284

Key Questions 284

*Summary, Keywords 284*

**Profile: Rick Paul, Sculptor 285**

PART THREE MULTIMEDIA RESOURCES 289

# Time Design

## chapter twelve

### Aspects and Elements of Time 292

#### BUILDING BLOCKS 294

- Relationships 295
- Transitions 296
- Key Questions 298

#### DURATION 298

- Key Questions 299

#### TEMPO 299

- Key Questions 301

#### INTENSITY 301

- Key Questions 302

#### SCOPE 302

- Key Questions 304

#### SETTING 305

- Objects and Implications 305
- Setting and Actor 307
- Sound: The Hidden Dimension 308
- Key Questions 310

#### CHRONOLOGY 310

- Key Questions 312

#### SCHINDLER'S LIST: CONTENT AND COMPOSITION 313

*Summary, Keywords 318*

**Profile: Sharon Greytak, Filmmaker 319**

## chapter thirteen

### Narrative and Non-Narrative 322

#### TELL ME A STORY 322

#### WORKING WITH MULTIPLE IMAGES 323

- Multiple Image Structures 324
- From Scene to Screenplay 326

#### ESTABLISHING BOUNDARIES 327

- Conceptual Boundaries 327
- Developing a Story 328
- Emotional Boundaries 328
- Style 330

#### CAUSALITY 331

#### STORY AND STYLE IN *CITIZEN KANE* 333

- The Opening Sequence 333
- Conflict 334
- The Closing Sequence 335

#### THE 15-SECOND NARRATIVE 337

#### NON-NARRATIVE 341

- Key Questions 344

*Summary, Keywords 344*

**Profile: Jerome Witkin, Painter 346**

## chapter fourteen

### Interdisciplinary Arts 348

#### EXPLORING THE VISUAL BOOK 348

- Selecting a Text 352
- Writing a Text 355
- Text and Type Style 356
- Word and Image Relationships 358
- Advantages of Visual Books 358
- Key Questions 358

#### INSTALLATION ART 359

- Uses of Space and Time 359
- The Importance of Context 360
- Advantages of Installation Art 362
- Key Questions 362

#### PERFORMANCE ART 362

- Historical Background 363
- Characteristics of Performance Art 363
- Key Questions 365

#### ADVANTAGES OF INTERDISCIPLINARY ART 366

*Summary, Keywords 366*

**Profile: Abelardo Morell, Photographer 367**

#### PART FOUR MULTIMEDIA RESOURCES 369



## CD-ROM CONTENTS

The five icons on the main menu correspond to the five components of the *Core Concepts in Art* CD-ROM.

**Launching the Imagination:  
A Comprehensive Guide To Basic Design  
2nd Edition**

home  
help  
credits  
exit

To explore this CD-ROM please choose from the five circles below.

**Elements and Principles of Art**  
Exercises to enhance understanding  
of art and design concepts

**Core Concepts in Art v.3.0**

Textbook Author:  
Mary Stewart  
CD-ROM by:  
Creative Myndz

Copyright 2006 The McGraw-Hill Companies, Inc. All rights reserved.

Main menu of *Core Concepts in Art*



### Elements and Principles of Art

Explore the elements of 2D, 3D, and time design through interactive exercises and animated demonstrations. Experiment with the principles of unity and variety, pattern and rhythm, balance, scale and proportion, emphasis and focal point, and illusion of space.



### Art Techniques

Observe techniques for painting, sculpture, printmaking, glass, jewelry, photography, and new media in a series of video demonstrations.



### Chapter Resources

Review the content of each chapter in *Launching the Imagination*, Second Edition, in this section of the CD-ROM.



More extensive chapter review materials are also available at the McGraw-Hill **Online Learning Center** ([www.mhhe.com/launching2](http://www.mhhe.com/launching2)), which can be launched from the Internet Resources section.



## Internet Resources

This section is helpful if you are new to using the Internet for research. It offers basic “how-to’s” on using the Web, along with an introduction to computer terminology and netiquette.



You can also access the McGraw-Hill **Online Learning Center** through a link in this section.



## Study Skills Primer

Applicable to all your courses, this primer offers tips on study and organizational skills. It also includes advice on documenting sources.



## EXPLORING ELEMENTS, PRINCIPLES, AND TECHNIQUES

The following screen shots are examples of the types of demonstrations and interactive exercises found in the CD-ROM. For a guide to correlating the CD-ROM with this text, see the “Multimedia Resources” pages at the end of every part.

The screenshot shows an interactive interface with a dark background. At the top right, there are navigation links: "home", "help", "credits", and "exit". On the left, there is a logo and a text box titled "Function of Light - Additive" which explains the additive color system (RGB) and how mixing red, green, and blue light creates other colors. Below this is a "2D Elements - Color" menu with options: "Function of Light", "Properties of Color", "Expressive Qualities", and "Optical Effects". The "Function of Light" option is selected. In the center, there is a diagram of three overlapping circles: red, green, and blue. The overlapping areas create yellow (red and green), cyan (green and blue), and magenta (red and blue), while the center where all three overlap is white. Below the diagram, there are three flashlight icons (red, green, blue) and a "Instructions" box that says: "Click on any combination of the flashlights to turn them on and off. Notice how light combines to form colors in the additive system." At the bottom, there is a "Function of Light" section with a radio button labeled "Additive" and a row of five circular buttons, with the fourth one selected. In the bottom left corner, there is a back arrow and the text "Elements and Principles". On the right side, there are icons for information (i), FYI, and copyright (©).

An interactive activity that allows you to experiment with additive color, found in “Elements and Principles of Art”

home help credits exit



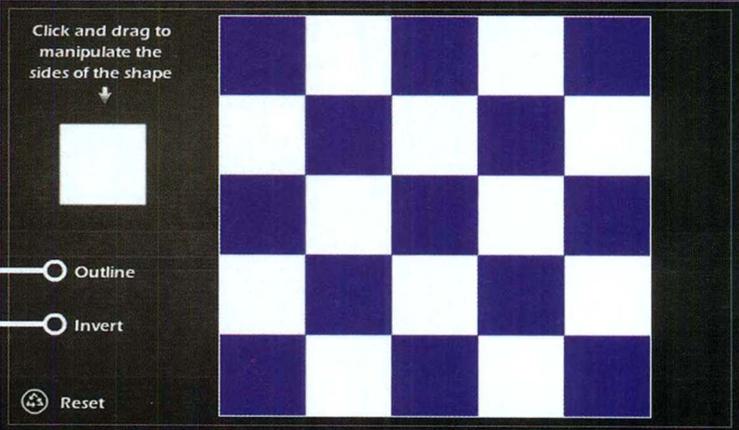
**Principles - Module**  
Tessellation is a special case of the face/vase illusion. It involves dividing a module into shapes that begin to have an ambiguous figure/ground relationship. These modules are then assembled into a grid structure so that when the portions of the module that were originally perceived as negative space are arranged side by side, they complete a shape that can now be perceived as a positive shape. The artist M. C. Escher used tessellation to create illusions that reveal the contradictions between what makes visual sense and what makes logical sense.

**Principles**

- Unity & Variety
- Pattern & Rhythm
- Balance
- Scale & Proportion
- Emphasis & Focal Point
- Illusion of Space

← Elements and Principles

Click and drag to manipulate the sides of the shape



**Instructions**  
Click and drag the edges of the unit square to create a shape that tessellates (fills the space without leaving gaps). The Outline button shows you the contour of the shape. The Invert button allows you to experiment with the perception of positive and negative space. The Reset button returns the unit square to its original shape.

**Pattern & Rhythm**

- Module

FYI ©

An interactive activity that allows you to experiment with positive and negative space, found in “Elements and Principles of Art”

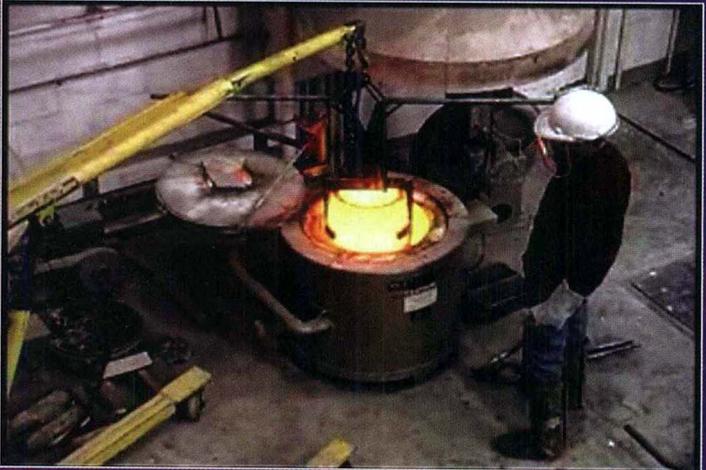
home help credits exit



**Sculpture**  
Sculptors reshape raw materials into new forms that will share the same three-dimensional space as the artist. These forms must struggle, like their creators, to overcome and exploit the natural forces of gravity, heat, light, wind, weather and time. Modern sculpture often uses nontraditional materials to comment on contemporary culture or to investigate formal issues of space. However, durable materials such as stone, bronze and ceramic continue to be forged into concrete expressions of the artist's dreams and ideas.

- Bronze Casting
- Stone Carving
- Ceramic Sculpture

← Art Techniques



**Bronze Casting**  
The lost-wax method of bronze casting is an indirect process that allows the artist to work freely in a soft material like clay or wax, and then translate that free expression into a more durable material such as metal. There are many variations of the lost-wax method. This is just one example. First the artist creates an original sculpture. The wax layer is the exact shape and thickness that is wanted for the final metal sculpture.

A video demonstration of the lost-wax method of bronze casting, found in “Techniques”