

Table of Contents

Chapter 1 ■ Getting Started with 3ds Max 2012		1
Exploring the Features of 3ds Max 2012		2
Exploring System Requirements for Installing 3ds Max 2012.....		3
Installing 3ds Max 2012.....		3
Launching 3ds Max 2012.....		9
Exploring the 3ds Max 2012 UI.....		10
The Application Button.....		12
The Quick Access Toolbar		14
The Title Bar		15
The InfoCenter Toolbar.....		15
Window Controls.....		15
The Menu Bar		15
The Main Toolbar.....		26
The Graphite Modeling Tools Ribbon.....		26
The Command Panel.....		27
Rollout.....		31
Viewports.....		31
The Time Slider		32
The Track Bar		32
Prompt Line and Status Bar Controls.....		32
The Coordinate Display Area.....		33
Animation Keying Controls		33
Viewport Navigation Controls.....		34
The ViewCube Tool.....		35
The Steering Wheel Tool.....		35
The Quad Menu		36
Setting Preferences.....		36
Using the Help Feature		38
Quitting the 3ds Max 2012 Application		39
Summary.....		40
Chapter 2 ■ Exploring Primitives, Objects, Modifiers, and MassFX		41
Getting Familiar with the Project Workflow		42
Exploring Geometry Primitives		43
Standard Primitives.....		43



Extended Primitives	44
Architectural Objects	45
Compound Objects	48
Dynamics Objects.....	49
Working with Objects.....	50
Creating and Saving an Object.....	50
Selecting an Object.....	53
Moving an Object.....	54
Rotating an Object.....	56
Scaling an Object.....	57
Cloning an Object.....	59
Mirroring an Object	61
Grouping and Ungrouping an Object	62
Linking and Unlinking an Object	64
Hiding and Freezing an Object	67
Setting Properties for an Object.....	70
Using Grids.....	72
Working with the Pivot Point.....	74
Exploring Layers.....	75
Working with Splines.....	76
Drawing a Spline.....	76
Editing a Spline	78
Rendering a Spline.....	81
Creating an Object using a Spline.....	83
Working with Modifiers	85
Exploring Modifier Types.....	85
Understanding the Modifier Stack	85
Applying Modifier.....	86
Using Hair and Fur (WSM) Modifier	87
Exploring MassFX.....	90
Summary.....	96

Chapter 3 ■ Modeling in 3ds Max 2012 97

Exploring Modeling Concepts.....	98
Polygons.....	98
Primitives.....	98
Mesh Objects and Sub-Objects	98
Working with Editable Poly Objects	99

Converting Primitives into an Editable Poly Object.....	99
Applying the Edit Poly Modifier	100
Modifying Editable Poly Object.....	102
Selecting the Sub-Objects of an Editable Poly Object.....	103
Using the Soft Selection Feature.....	104
Extruding a Polygon.....	105
Beveling a Polygon	107
Exploring the Graphite Modeling Tools Tab.....	109
Exploring the Freeform Tab.....	110
Exploring the Selection Tab.....	111
Exploring the Object Paint Tab	111
Exploring NURBS Modeling	112
Exploring NURBS Objects and Sub-Objects.....	112
Creating a Sub-Object of NURBS Curve	112
Creating a Sub-Object of a NURBS Surface.....	114
Converting an Object to a NURBS Object.....	116
Editing a NURBS Object.....	117
Exploring the Subdivision Modeling	119
Applying the MeshSmooth Modifier	119
Applying the TurboSmooth Modifier	122
Summary.....	124

Chapter 4 ■ Working with Materials and Maps 125

Introducing Material Properties.....	126
Using the Slate Material Editor	127
Using Standard Materials	128
Defining Shader Types.....	130
Exploring Compact Material Editor	131
Exploring Types of Maps.....	132
2D Maps	132
3D Maps	133
Compositor Maps	134
Color Modifier Maps	134
Miscellaneous Maps	134
Understanding the Maps Rollout	135
Applying a Map to a Material	135
Summary.....	142

Chapter 5 ■ Working with Animation, Inverse Kinematics, and Character Studio **143**

Understanding Animation Concepts	144
Using the Time Configuration Dialog Box	145
Using the Auto Key Mode	147
Using the Set Key Mode.....	149
Creating and Viewing Previews	152
Exploring Kinematics	154
Using the IK Methods.....	154
Understanding Character Studio	157
Working with Biped	158
Creating a Biped.....	158
Manipulating a Biped.....	159
Animating a Biped	161
Understanding Physique	167
Exploring Crowd Systems	168
Summary	174

Chapter 6 ■ Working with Lights and Cameras **175**

Exploring Lights.....	176
Categories of Lights.....	176
Properties of Light	177
Working with Lights	179
Creating Standard Lights.....	179
Creating Photometric Lights	181
Creating Sunlight and Daylight Systems.....	183
Introducing Shadows	187
Working with Cameras	187
Creating a Camera	188
Creating Cameras from a Specific View.....	189
Exploring Camera Attributes	190
Animating a Camera	190
Summary	192

Chapter 7 ■ Working with Particle Systems and Space Warps **193**

Working with Particle Systems	194
Understanding the Types of Particle Systems.....	194
Creating a Particle System for Rainfall Effect.....	201

Working with Space Warps.....	204
Creating an Animation Using a Space Warp.....	205
Exploring the Space Warp Categories.....	210
Summary.....	222
Chapter 8 ■ Rendering in 3ds Max 2012	223
Introducing the Scanline Renderer.....	224
Exploring the Options Group.....	225
Exploring the Antialiasing Group.....	226
Exploring the Global SuperSampling Group.....	227
Exploring the Motion Blur Group.....	227
Exploring the Auto Reflect/Refract Maps Group.....	228
Exploring the Color Range Limiting Group.....	228
Exploring the Memory Management Group.....	229
Introducing Ray Tracing.....	229
Introducing Advanced Lighting.....	230
Introducing the mental ray Renderer.....	231
Defining Global Illumination.....	235
Defining Caustics.....	235
Introducing the VUE File Renderer.....	235
Using Texture Baking.....	236
Introducing the Quicksilver Hardware Renderer.....	240
Introducing the iray Renderer.....	240
Exploring the Rendered Frame Window.....	241
Summary.....	242