



# Frame-by-Frame Stop Motion:

The Guide to Non-Traditional Animation Techniques

*PIXILATION - TIME-LAPSE - DOWNSHOOTING*

**TOM GASEK**



# Contents

<b>Dedication and Acknowledgments</b> .....	<b>vii</b>
<b>Introduction</b> .....	<b>xiii</b>
<b>Chapter 1: What Are the Possibilities?</b> .....	<b>1</b>
Creating Magic .....	1
Silent Films and Beyond .....	2
Stop Motion and Its Various Faces .....	6
<b>Chapter 2: Shooting Frame by Frame</b> .....	<b>17</b>
Technique to Serve the Idea .....	17
Preproduction .....	22
Equipment and Setting Up .....	25
<b>Chapter 3: Pixilation</b> .....	<b>31</b>
Take Advantage of the Medium .....	31
Who Is the Director? .....	34
Humor .....	37
Shooting on Twos, Fours, and More .....	38
Variations on Pixilation .....	40
The Moving Camera .....	46
<b>Chapter 4: Time-Lapse Photography</b> .....	<b>51</b>
Expand Your Awareness .....	51
The Intervalometer .....	53
Understand Your Subject .....	55
Contrast .....	56
Shutter Speeds .....	57
Time-Lapse Rates and Formulas .....	59
Time-Lapse Photography and Pixilation .....	60
Motion Control .....	60
<b>Chapter 5: Cinematography, Lighting, and Composition</b> .....	<b>65</b>
Cameras and Lenses .....	65
Camera Controls .....	71
Lighting for Animation .....	75
Compositional Beginnings and Ends .....	78

<b>Chapter 6: Objects, People, and Places</b> .....	<b>81</b>
People, Objects, and Rigging .....	81
Organic and Nonorganic Objects .....	84
Shooting Safe Zones .....	85
<b>Chapter 7: The Multiplane Downshooter</b> .....	<b>91</b>
A Stand of Your Own .....	91
Lighting for the Downshooter .....	93
Clay, Sand, and Three-Dimensional Objects .....	97
Cutouts .....	99
Background .....	104
<b>Chapter 8: A Sense of Drama</b> .....	<b>109</b>
Live Action and Single Framing .....	109
Subtle and Broad Performance .....	112
Reference Film and the Cartoon .....	114
Look in the Eyes .....	115
<b>Chapter 9: Rhythm and Flow</b> .....	<b>119</b>
Let the Music Lead .....	119
Patterns of Movement .....	123
The Beat Goes On .....	126
<b>Chapter 10: Collage (The Digital Advantage)</b> .....	<b>129</b>
Planning a Collage .....	129
Match Lighting and Rotoscoping .....	131
Clean, Clean, Clean .....	133
The Chroma Key .....	135
<b>Chapter 11: Massaging Frames in the Edit</b> .....	<b>139</b>
Working the Frames .....	139
Impossible Perfection .....	143
File Management .....	144
Playback .....	145
<b>Chapter 12: Exposure to the Market</b> .....	<b>149</b>
Now What? .....	150
Record and Archive the Process .....	151
Websites and the Internet .....	152
Film Festivals .....	153
Ownership .....	155
A Few Thoughts .....	156

<b>Exercise 1: The Traveling Head</b> .....	<b>161</b>
<b>Exercise 2 : Rotating Human Subjects</b> .....	<b>165</b>
<b>Exercise 3: 2-D/3-D Handball</b> .....	<b>169</b>
<b>Exercise 4: Animated Light Loop: The Bursting Star</b> .....	<b>175</b>
<b>Exercise 5: The Dropping Heads (Cutout)</b> .....	<b>179</b>
<b>Exercise 6: 3, 2, 1—Countdown</b> .....	<b>185</b>
<b>Exercise 7: Love at First Sight</b> .....	<b>189</b>
<b>Index</b> .....	<b>195</b>