## Photo Credits

$\mathbf{v}$ (bottom), © NASA; vi (bottom), © University of Calgary; vii (top), © CP. PHOTO/Larry Mac Dougal; viii (bottom right), © Tim Tadder/New Sport/Corbis; ix (top right), © Frans Lanting/Corbis; x (bottom), © David P. Hall/Masterfile; xi (top), © John Hawkins; Frank Lane Picture; xii-xiii( spread), © Lynda Richardson/CORBIS; xvi (bottom right), © Royalty-Free/Corbis; 2-3 (top center), © NASA; 4 (top center), © NASA; $\mathbf{5}$ (center), © NASA; 5 (center), © NASA; $\mathbf{5}$ (center left), © Stuart Westmorland/ CORBIS; 5 (center right), © Yann Arthus-Bertrand/CORBIS; 6-7 (spread), © John Foster/Masterfile; 7 (center right), © Stephen Lowe Photography; 7 (bottom left), © David Crane/Aerial Art by Spectral Q; 8 (top center), © Charles Melton/Visuals Unlimited; 9 (bottom left), © Raymond Gehman/CORBIS; 9 (bottom center), © J. Clegg/SPL/PUBLIPHOTO; 9 (top left), © READ, MARIEmaXximages.com; 12 (bottom left), © Photo by Carl Wirsen, Woods Hole Oceanographic Institution; 13 (bottom right), © Ian Crysler; 15 (bottom right), © Barry Runk/Grant Heilman Photography; 25 (center left), © Shane Moore/Animals Animals; 26 (bottom right), © Daryl Benson/Masterfile; 29 (top center), © John Foster/Masterfile; 30 (top center), © John Foster/Masterfile; 32-33 (spread), © Arthur Morris/CORBIS; 33 (bottom left), © Natalie Fobes/Science Faction/Getty Images; 34 (top center), © Digital Vision/Getty Images; 37 (top center), © Doug Allan/naturepl.com; 37 (bottom right), © Dennis Drenner/Visuals Unlimited; 38 (center left), © SuperStock, Inc/Superstock; 39 (bottom right), © Woods Hole Research Center (whrc.org); 40 (bottom right), © Dennis Drenner/ Visuals Unlimited; 42 (top), © Michael Hynes; 42 (bottom right), © Tom Pantages; 46 (bottom right), © Randy Faris/Corbis; 47 (bottom), © James W. Brown; 48 (bottom right), © TH Foto-Werbung/Photo Researchers, Inc; 48 (center left), © Mike Grandmaison; 49 (bottom right), © Hugh Spencer/Photo Researchers, Inc.; 50 (bottom right), © Karen Scott; 55 (bottom left), © Planetary Visions LTD/SPL/PUBLIPHOTO; 56 (top left), © D. Wiersma/SPL/ PUBLIPHOTO; 56 (bottom left), © Roger Ressmeyer/Corbis; 58 (top left), © NOAA/University of Wisconsin-Madison; $\mathbf{5 9}$ (top left), © Darrell Gulin/Corbis; 59 (bottom center), © William Big Bull, Piikuni Utilities Corporation; 62 (bottom right), © Mike Grandmaison; $\mathbf{6 3}$ (top center), © Arthur Morris/CORBIS; $\mathbf{6 4}$ (top center), © Arthur Morris/CORBIS; 66 (top left), © Courtesy of Dr. Tang G Lee; 66-67 (spread), © Courtesy of Dr. Tang G Lee; 68 (top center), © NASA; 72-73 (spread), © University of Calgary; 74 (bottom left), © Science Source/Photo Researchers, Inc.; 74 (bottom right), © Herve Conge/ISM/Phototake; 74 (top center), © University of Calgary; 76-77 (spread), © Reimar Gaertner/Alamy; 77 (bottom left), © John T. Fowler/Alamy; 78 (top), © BRUCE COLEMAN INC./Alamy; 79 (top left), © Peter Essick/Aurora/Getty Images; 79 (bottom center), © Leslie Degner; 80 (top center), © Galen Rowell/CORBIS; 81 (top left), © Hugh Rose/Visuals Unlimited; 82 (top left), © Gerald \& Buff Corsi/Visuals Unlimited; 82 (bottom right), © Darwin Wiggett/Firstlight; 83 (center right), © Wilbur E Garrett/Getty Images; 84 (center), © Gerald \& Buff Corsi /VIsuals Unlimited; 84 (bottom center), © Ron Stroud/Masterfile; 85 (top center), © Walter Hodges/CORBIS; 86 (top left), © Rakosy/Custom medical/PUBLIPHOTO; 89 (top right), © Roger de la Harpe/Animals Animals; 91 (top left), © Gerald and Buff Corsi/Focus on Nature Inc; 91 (top center), © Ed Reschke/Peter Arnold, Inc; 91 (top right), © Fritz Polking/Peter Arnold, Inc; 91 (top left), © Stephen P. Parker/Photo Researchers, Inc; 91 (center), © Bill Beatty/Visuals Unlimited; 91 (center right), © Jack Wilburn/maXximages.com; 91 (bottom center), © Gerald \& Buff Corsi/Visuals Unlimited; 91 (bottom center), © Glenn Oliver/ Visuals Unlimited; 91 (bottom left), © Michael P. Gadomski/Photo Researchers, Inc; 91 (bottom right), © Wally Eberhart/Visuals Unlimited; 91 (bottom left), © Ned Therrien/Visuals Unlimited; 92 (center), © Joe McDonald/CORBIS; 92 (center left), © Norbert Rosing/National Geographic/Getty Images; 92 (center left), © Dorling Kindersley/Getty Images; 92 (center), © James D. Markov/ VALAN PHOTOS; 92 (center right), © Wayne Lynch/IVY IMAGES; 92 (center right), © Tom McHugh/Photo Researchers, Inc.; 92 (center), © Tom \& Pat Leeson/Photo Researchers, Inc.; 92 (center), © Lynn and Donna Rogers/IVY IMAGES; 92 (center right), © Brandon Cole/Visuals Unlimited; 92 (center right), © Bill Ivy/IVY IMAGES; 93 (top), © T. Craddock/SPL/PUBLIPHOTO; 96 (bottom center), © SUMIO HARADA/MINDEN PICTURES; 97 (top right), © B.G. Thomson/Firstlight; 98 (bottom center), © JOHN SHAW/nhpa.co.uk; 98 (bottom right), © Daryl Benson/Masterfile; 99 (top center), © Artbase Inc.; 100 (top center), © Dr. David Phillips/Visuals Unlimited; 101 (top right), © Wally Bauman/Alamy; 102 (top right), © Richard Herrmann/Visuals Unlimited; 102 (bottom right), © Wally Eberhart/Visuals Unlimited; 103 (bottom right), © Joe McDonald/CORBIS; 104 (bottom right), © Jeff Henry/yellowstonephotos.com; 106 (bottom left), From McGraw-Hill Ryerson Biology 12 © 2002, McGraw-Hill Ryerson Limited; 108 (center right), © MINDEN PICTURES/MICHAEL QUINTON; 109 (top center), © Reimar Gaertner/ Alamy; $\mathbf{1 1 0}$ (top center), © Reimar Gaertner/Alamy; 110 (top left), © Wally Bauman/Alamy; 110 (center left), © Carolina Biological Supply Company/Phototake; 110 (center left),@ Artbase Inc.; 112-113 (spread), © Photo by Jo McCulty, courtesy of Ohio State University; 113 (bottom left), © The Field Museum, \#GEO75400; 114 (top center), © Ken M. Johns/Photo Researchers, Inc.; 114 (bottom right), © Joe McDonald/Visuals Unlimited; 115 (top left), © Artbase Inc.; 117 (top left), © Dr. Stanley Flegler/ Visuals Unlimited; 117 (top center), © Dr. Stanley Flegler/Visuals Unlimited; $1 \mathbf{1 8}$ (bottom left), © Science VU/Visuals Unlimited; 118 (top right), © Dr. David M. Phillips/Visuals Unlimited; 119 (top right), © Linda Kershaw; 120 (bottom left), © Gerald \& Buff Corsi/Visuals Unlimited; 125 (center left), © Gaston Design, Inc; 125 (center), © Paul Crum/ Photo Researchers, Inc.; 125 (center left), © NC:NASA/GSFC/Visuals Unlimited; 127 (center left), © Claus Qvist Jessen; 127 (top right), © Ken Lucas/Visuals Unlimited; 129 (bottom right), © Royal Tyrrell Museum; 131 (center), © Royalty-Free/CORBIS; 131 (center left), © GRANT HEILMAN/Heilmanphoto; 131 (center left), © Mark Newman/ SuperStock; 131 (center left), © Kathy Collins/Getty Images;

131 (center), © Jonathan Blair/CORBIS; 131 (center), © Martin Harvey/Peter Arnold Inc.; 131 (center), © Nigel J. Dennis/ Firstlight; 131 (center), © Thomas Kitchin \& Victoria Hurst/Firstlight; 135 (center left), © Tribune Media Services, Inc. All Rights Reserved. Reprinted with Permission; 136 (top center), © Joseph T. \& Suzanne L. Collins/Photo Researchers Inc.; 136 (top right), © Michael Redmer/Visuals Unlimited; 139 (top right), © K. G. Vock/Okapia/Photo Researchers, Inc.; 143 (top center), © Photo by Jo McCulty, courtesy of Ohio State University; 144 (top center), © Photo by Jo McCulty, courtesy of Ohio State University; 144 (center left), © SuperStock. Inc/SuperStock; 145 (top center), © Joseph T. Collins/Photo Researchers, Inc; 145 (top right), © BEATTY, BILL-maXximages.com; 146-147 (spread), © Rob \& Ann Simpson/Visuals Unlimited; 148 (top center), © University of Calgary; 152-153 (spread), © CP PHOTO/Larry Mac Dougal; 154 (top center), © CP PHOTO/Larry Mac Dougal; 157 (top center), © Ian Crysler; 160-161 (spread), © NASA/SPL/PUBLIPHOTO; 161 (bottom left), © Jeremy Woodhouse/Getty Images; 161 (top right), © Dr. David Newman/Visuals Unlimited; 162 (top center), © Bob Gibbons/SPL/PUBLIPHOTO; 162 (top right), © Rob Howard/CORBIS; 163 (top left), © VEER Michael Kevin Daly/Photonica/Getty Images; 163 (top left), © Dr. David M. Phillips/Visuals Unlimited; 163 (top right), © Science Source/Photo Researchers, Inc.; 163 (top right), © EYE OF SCIENCE/SPL/ PUBLIPHOTO; 164 (bottom right), © George Chapman/Visuals Unlimited; 165 (top right), © Dr. Donald Fawcett \& Dr. Porter/ Visuals Unlimited; 165 (bottom right), © Joel Sartore/National Geographic/Getty Images; 171 (center left), © Royalty-Free/ CORBIS; 176 (top left), © f1 online/Alamy; 178 (bottom left), © Pixtal/age fotostock; 178 (bottom center), © H. Wiesenhofer/ PhotoLink/Getty Images; 178 (bottom right), © S. Alden/PhotoLink/Getty Images; 182 (top right), © Blaslus Erlinger/Zafa/ Corbis; 191 (bottom right), © Courtesy Dr. Ken Preston/Bread Wheat Studies and Baking Research/Grain Research Laboratory/ Canadian Grain Commission; 191 (bottom center), © Courtesy Dr. Ken Preston/Bread Wheat Studies and Baking Research/ Grain Research Laboratory/Canadian Grain Commission; 192 (bottom right), © LARRY LEFEVER/Grant Heilman Photography; 193 (bottom right), © John Maier, Jr./The Image Works; 195 (top center), © NASA/SPL/PUBLIPHOTO; 198 (top center), © CP PHOTO/Larry Mac Dougal; 200-201 (spread), © Tim Tadder/New Sport/Corbis; 202 (top center), © Tim Tadder/Corbis; 204-205 (spread), © DR RAY CLACK (FRPS) \& MERVYN DE CALCINA- GOFF (FRPS)/ SPL/PUBLIPHOTO; 205 (bottom left), © Image provided courtesy of Given Imaging; 205 (center right), © DU CANE MEDICAL IMAGING LTD/SPL/PUBLIPHOTO; 210 (bottom right), © Artbase Inc.; 211 (bottom left), © Jean Claude Revy-ISM/PhototakeUSA.com; 223 (top left), © M. Kage/ SPL/PUBLIPHOTO; 223 (top center), ©Ron Boardman/Stone/Getty Images; 232 (bottom right), © Royalty-Free/Corbis; 233 (top right), © Royalty-Free/Corbis; 234 (bottom left), © Artbase Inc.; 235 (top right), © CNRI/SPL/PUBLIPHOTO; 236 (bottom left), © Alison Wright/CORBIS; 239 (top center), © DR RAY CLARK (FRPS) \& MERVYN DE CALCINA-GOFF (FRPS)/SPL/ PUBLIPHOTO; 240 (top center), © DR RAY CLARK (FRPS) \& MERVYN DE CALCINA-GOFF (FRPS)/SPL/PUBLIPHOTO; 242 (bottom left), © Dr. Fred Hossier/Visuals Unlimited; 242-243 (spread), © Jake Norton/MountainWorld Photography; 244 (top center), © Kennan Harvey/Getty Images; 245 (bottom right), From Mader Inquiry Into Life 9th ed. © 2000, 1997 by McGraw-Hill Companies, Inc.; 255 (bottom right), © Barrett \& Mackay Photography Inc.; 259 (bottom right), 2005 D2 Production Inc.; 260 (top center), From Mader Inquiry Into Life 9th ed. © 2000, 1997 by McGraw-Hill Companies, Inc.; 263 (top center), © Jake Norton/MountainWorld Photography; 264 (top center), © Jake Norton/Mountain World Photography; 266-267 (spread), © Vince Michaels/Stone/Getty Images; 267 (bottom left), © Firstlight.ca; 269 (top right), © Klaus Guldbrandsen/ Photo Researchers, Inc; 272 (top center), © Ed Reschke/Peter Arnold, Inc; 277 (bottom center), © Zephyr/SPL/PUBLIPHOTO; 280 (bottom right), © Alix/Photo Researchers, Inc; 281 (top left), © Simon Fraser/SPL/PUBLIPHOTO; 282 (bottom right), © A. Syred/SPL/PUBLIPHOTO; 283 (bottom right), © Dennis Kunkel Microscopy, Inc.; 284 (top left), © Dr. David M. Phillips/Visuals Unlimited; 285 (center), © Dr. R. King/SPL/PUBLIPHOTO; 285 (center right), ©Ed Reschke/ Peter Arnold, Inc; 285 (center), © Dr. Fred Hossler/Visuals Unlimited; 285 (center right), © Ed Reschke/Peter Arnold, Inc; 285 (center), © Ed Reschke/Peter Arnold, Inc; 285 (center right), © Ed Reschke/ Peter Arnold, Inc; 289 (top left), © John Forsythe/Visual Unlimited/ Getty Images; 289 (top center), © John Forsythe/Visual Unlimited; 290 (bottom right), © Mike Powell/Getty Images; 295 (bottom center), From Mader Inquiry Into Life 9th ed. © 2000, 1997 by McGraw-Hill Companies, Inc; 298 (top right), © J. Stevenson/SPL/PUBILIPHOTO; 301 (top center), © Vince Michaels/Stone/Getty Images; 302 (top center), © Vince Michaels/Stone/Getty Images; 304-305 (spread), © Erich Lessing/Art Resource, NY; 305 (center right), © Lawrence E. Armstrong; 305 (bottom left), © Wellcome Library, London; 319 (top right), © Dr. E. Walker/Photo Researchers, Inc; 322 (top right), © PHOTOTAKE Inc./Alamy; 322 (center right), © Dr. P. Marazzi/Photo Researchers, Inc; 323 (top left), © Tom McCarthy/PhotoEdit, Inc.; 324 (bottom right), © Peter Menzel/SPL/ PUBLIPHOTO; 325 (top left), © Ron Chapple/Getty Images; 325 (top center), © Richard Hutchings/PhotoEdit, Inc.; 325 (top right), © Stuart Westmorland/First Light; 327 (top center), © Erich Lessing/Art Resource, NY; 328 (top center), © Erich Lessing/Art Resource, NY; 330-331 (spread), © Tom G. Lynn/Time Life Pictures/Getty Images; 331 (bottom left), © STAR TRIBUNE-MINNEAPOLIS/ST. PAUL 2006; 332 (center left), © Ed Reschke/Peter Arnold, Inc; 332 (bottom left), © Ed Reschke/ Peter Arnold, Inc; 332 (bottom left), © Ed Reschke/Peter Arnold, Inc; 340 (center right), © PROFESSORS P. MOTTA \& T. NAGURO/SPL/PUBLIPHOTO; 341 (bottom center), © SuperStock; 341 (center right), © Ian Crysler; 343 (bottom right), © Ryan McVay/Getty Images; 349 (top left), © Nancy Sheehan/PhotoEdit Inc.; 349 (top center), © Alistair Berg/Getty Images; 349 (top right), © Rayman/Digital Vision/Getty Images; 349 (center right), © Altrendo Images/Getty Images; 349 (center left), © George Shelley/Masterfile; 351 (top center), © Tom G. Lynn/Time Life Pictures/Getty Images; 352 (top center), © Tom G. Lynn/Time Life

Pictures/Getty Images; 352 (top left), © Ed Reschke/Peter Arnold, Inc.; 352 (top left), © Ed Reschke/Peter Arnold, Inc.; 352 (center left), © Ed Reschke/Peter Arnold, Inc.; 355 (bottom), © Royalty Free/Digital Vision/Getty Images; 356 (top center), © Tim Tadder/ New Sport/Corbis; 360 (top right), © Bill Stormont/Corbis; 360-361 (spread), © Frans Lanting/Corbis; 362 (top center), © Frans Lanting/Corbis; 364-365 (spread), © Scott Camazine/Photo Researchers, Inc; 365 (bottom left), © Wolfgang Rattay/Reuters/ Corbis; 366 (top), © Hans Blohm/Masterfile; 366 (bottom right), © Image courtesy of the Still National Osteopathic Museum, Kirksville, MO [AS 49]; 368 (top right), © Dr. Dennis Kunkel/Visuals Unlimited; 368 (bottom center), © SPL/Photo Researchers, Inc; 372 (center left), © Ed Reschke/Peter Arnold, Inc; 372 (center left), © MPI Biochemistry/Vilker Steger/Photo Researchers, Inc; 372 (center), © G. Gschmeissner/SPL/Publiphoto; 373 (center right), © Tom McHugh/Photo Researchers, Inc; 378 (bottom right), © James Stevenson/Photo Researchers, Inc; 379 (center left), © Copyright Dennis Kunkel Microscopy, Inc.; 380 (center left), © Don W. Fawcett/Photo Researchers. Inc; 381 (bottom left), © A, Paseika/SPL/Publiphoto; 381 (bottom center), © Alvin Telser/ Visuals Unlimited; 381 (bottom right), © Robert Calentine/Visuals Unlimited; 381 (bottom left), © Dr. John D. Cunningham/ Visuals Unlimited; $\mathbf{3 8 1}$ (bottom center), © Innerspace Imaging/SPL/Publiphoto; $\mathbf{3 8 1}$ (bottom right), © Dr. Fred Hossler/Visuals Unlimited; $\mathbf{3 8 3}$ (center left), © WireImage Stock/Masterfile; 383 (center left), © Earl Clendennen/Alamy; $\mathbf{3 8 3}$ (bottom left), © Scott Houston/Corbis; 383 (bottom left), © Wesley Bocxe/Photo Researchers, Inc; 383 (bottom left), © C. Molloy/SPL/Publiphoto; 385 (top right), © Kevin P. Casey/CORBIS; 386 (top center), © Anatomical Travelogue/Photo Researchers, Inc; 386 (top right), © Manfred Kage/SPL/Publiphoto; 388 (top right), © Biophoto Associates/Photo Researchers, Inc; 389 (top center), © M. Kulyk/ Photo Researchers, Inc; 393 (bottom left), © J. Timothy Cannon, Ph. D.; 393 (bottom right), © J. Timothy Cannon, Ph. D.; 394 (bottom center), © Courtesy of Washington University in St. Louis Magazine 58(2), Summer, 1988; 395 (top left), © Gca/SPL/ PUBLIPHOTO; 395 (top center), © Simon Fraser/SPL/Puliphoto; 395 (bottom left), © Ralph Hutchings/Visuals Unlimited; 396 (top center), © Peter Griffith/Masterfile; 399 (top left), © Peter Dazeley/Getty Images; 400 (top right), © Garyroberts/ Worldwidefeatures; 401 (center), © Scott Camazine/Photo Researchers, Inc.; 402 (center left), McGraw-Hill Higer Education/ Rebecca Gray, photographer/Don Kincaid, dissections; 402 (center), © Scott Camazine/Photo Researchers, Inc; 403 (bottom left), © Motor Lab- University of Pittsburgh; 404-405 (spread), © PM Images/Getty Images; 405 (bottom left), © Jerry Shuiman/ SuperStock; 406 (top center), © Design Pics Inc./Alamy; 407 (top left), © DR M. PHELPS \& DR J. MAZZIOTTA ET AL/ NEUROLOGY/SPL/PUBLIPHOTO; 407 (bottom left), © Kathleen Finlay/ Masterfile; 407 (bottom center), © Deborah Davis/ Alamy; 407 (bottom right), © Jutta Klee/Getty Images; 408 (top center), © Copyright IllusionWorks, L.L.C.; 408 (top center), © Copyright IllusionWorks, L.L.C.; 408 (top right), © Copyright IllusionWorks, L.L.C.; 408 (bottom right), © Najlah Feanny/Corbis; 410 (top center), © Darwin Wiggett/First Light; 411 (top left), © Bruce Rowell/Masterfile; 411 (bottom left), © Adam Hart-Davis/ Photo Researchers, Inc.; 411 (bottom left), © Adam Hart-Davis/Photo Researchers, Inc.; 413 (bottom left), © Leonard Lessin/Peter Arnold, Inc; 413 (bottom left), © Leonard Lessin/Peter Arnold, Inc; 414 (bottom left), © SPL/Photo Researchers, Inc.; 414 (top right), Ishihara's Test for Colour Blindness, published by KANEHARA \& CO., LTD, Tokyo, Japan. For accurate testing the original plate should be used. From p. 499 Figure 24.11 Inquiry Into Life 9th ed. by Sylvia Mader © 2000, 1997 by the McGraw-Hill Companies, Inc. All rights; 415 (top center), © Lennart Nilsson/Albert Bonniers Förlag AB; 415 (bottom right), © Ralph C. Eagle Jr./Photo Researchers, Inc.; 419 (top right), © Bob Daemmrich/ Photo Edit; 421 (bottom left), © Susumu Nishimaga/SPL/ Publiphoto; 421 (bottom center), © Dr. Goran Bredbory/SPL/Publiphoto; 423 (bottom left), © Photo by Gary Zajic, Auditory Biochemistry Laboratory (director: Dr. Jochen Schacht), Kresge Hearing Research Institute, The University of Michgan; 426 (top left), © Omikron/Photo Researchers, Inc.; 430 (top right), © Dante Fenolio/Photo Researchers, Inc.; 430 (bottom left), © Ken Lucas/Visuals Unlimited; 431 (top center), © PM Images/Getty Images; 432 (top center), © PM Images/Getty Images; 434-435 (spread), © BAUER, ERWIN \& PEGGY/Animals Animals/Earth Scenes; 435 (bottom left), © Royalty-Free/Corbis; 436 (center), © Harley Soltes/Time Life Pictures/Getty Images; 437 (bottom left), © Prof. P. Motta/SPL/Publiphoto; 438 (top center), © Jean-Francois RIVIERE/TOP/Imagestate; 438 (top left), © SALMAIMONE/Grant Heilman Photography; 438 (bottom left), © Dee Breger/Photo Researchers, Inc; 438 (bottom center), © Dr. L. Orci/University of Geneva/SPL/PUBLIPHOTO; 438 (bottom right), © Chris Priest/SPL/PUBLIPHOTO; 439 (bottom center), © CORBIS; 443 (bottom left), © The Litebook Company Ltd. An Alberta Corporation www.litebook.com; 446 (top center), © Bettmann/CORBIS; 446 (top right), © Peter Dench/CORBIS; 448 (top right), © Micheal Ross/Photo Researchers, Inc.; 449 (bottom right), © Richard A. Miller, M.D., Ph.D., University of Michigan Medical School; 451 (top right), Jeremy Maude/Masterfile; 452 (bottom left), © Carlos Davila/Alamy; 453 (top center), © ED RESCHKE/PeterArnold, Inc; 458 (bottom right), © Michael P. Gadomski/Photo Researchers, Inc.; 459 (top right), © Anne Clack/Wellcome Photo Library; 459 (top center), © Kevin Winter/Getty Images; 459 (center right), © SPL/ PUBLIPHOTO; 462 (top left), © Russ Curtis/Photo Researchers, Inc; 463 (top center), © BAUER, ERWIN \& PEGGY/Animals Animals/Earth Scenes; 464 (top center), © BAUER, ERWIN \& PEGGY/Animals Animals/Earth Scenes; 467 (bottom left), © Dr. Ray Rajotte, Scientific Director of the Alberta Diabetes Institute; 468 (top center), © Bill Stormont/Corbis; 472-473 (spread), © David P. Hall/Masterfile; 474 (top center), © David P. Hall/Masterfile; 476-477 (spread), © David M. Phillips/Photo Researchers, Inc.; 477 (bottom left), © 2003 Getty Images; 480 (center right), © A. Syred/SPL/PUBLIPHOTO; 485 (bottom right), © Ed Reschke/Peter Arnold, Inc; 486 (bottom left), © Dr. David M. Phillips/Visuals Unlimited; 486 (bottom right), © A. Pasieka/SPL/ PUBLIPHOTO; 487 (bottom right), © George Musil/Visuals Unlimited; 488 (bottom left), © Dr. Linda Stannard, UCT/Photo

Researchers, Inc; 488 (bottom right), © Dr. Fred Hossler/Visuals Unlimited; 489 (bottom left), © CNRI/Photo Researchers, Inc; 489 (bottom right), © J. Lewin/SPL/PUBLIPHOTO; 492 (top center), © Anatomical Travelogue/Photo Researchers, Inc; 501 (bottom left), © Royalty-Free/Corbis; 503 (top center), © David M. Phillips/Photo Researchers, Inc.; 504 (top center), © David M. Phillips/Photo Researchers, Inc.; 506-507 (spread), © Cameron/CORBIS; 507 (bottom left), © Ruth Jenkinson/SPL/ PUBLIPHOTO; 511 (top left), © Rawlins, PhD/Custom Medical Stock Photo; 511 (top center), © Rawlins, PhD/Custom Medical Stock Photo; 511 (top right), © Rawlins, PhD/Custom Medical Stock Photo; 511 (bottom right), © Andy Walker/SPL/ PUBLIPHOTO; 515 (bottom), © Bradley R. Smith, University of Michigan; 517 (bottom right), © SIU/Visuals Unlimited; 523 (top right), © Photo courtesy of Dr. Sterling Clarren; 530 (bottom left), © CC Studio/SPL/PUBLIPHOTO; 535 (top center), © Cameron/CORBIS; 536 (top center), © Cameron/CORBIS; 539 (bottom left), © Ryan McVay/Getty Images; 540 (top center), © David P. Hall/Masterfile; 544-545 (spread), © John Hawkins; Frank Lane Picture Agency/CORBIS; 546 (top center), © John Hawkins; Frank Lane Picture Agency/CORBIS; 548-549 (spread), © Malcolm Schuyl/Alamy; 549 (bottom left), © Science Source/ Photo Researchers, Inc.; 553 (top right), © Addenbrookes Hospital/SPL/PUBLIPHOTO; 555 (top left), © Science VU/NIH/Visuals Unlimited; 556 (top center), © Andrew J. Martinez/Photo Researcher, Inc.; 557 (top left), © Science Source/Photo Researchers, Inc.; 557 (top right), © Science Source/Photo Researchers, Inc.; 557 (bottom right), © Science Source/Photo Researchers, Inc.; 557 (center), © Science Source/Photo Researchers, Inc.; 557 (bottom left), © Science Source/Photo Researchers, Inc.; 559 (top right), © Robert Calentine/Visuals Unlimited; 562 (bottom right), © S. Nishinaga/SPL/PUBLIPHOTO; 564 (top left), © Dr. John D. Cunningham/Visuals Unlimited; 564 (top center), © Dr. John D. Cunningham/Visuals Unlimited; 564 (top right), © Dr. John D. Cunningham/Visuals Unlimited; 564 (center right), © Dr. John D. Cunningham/Visuals Unlimited; 564 (center right), © Dr. John D. Cunningham/Visuals Unlimited; 564 (bottom right), © Herve Conge/ISM/Phototake; 564 (bottom left), © Herve Conge/ ISM/Phototake; 564 (center left), © Herve Conge/ISM/Phototake; 564 (center left), © Herve Conge/ISM/Phototake; 571 (top left), © G. Parker/SPL/PUBLIPHOTO; 571 (center), © David Schmidt/Masterfile; 571 (bottom right), © David Cavagnaro/Visuals Unlimited; 572 (center left), © ADRIAN T SUMNER/SPL/PUBLIPHOTO; 574 (bottom), © Dennis Kunkel/Phototake; 574 (top right), © Spike Walker/Getty Images; 575 (top left), © Jerome Wexler/Visual Unlimited; 575 (bottom), © Kenneth H. Thomas/ Photo Researchers, Inc.; 580 (top left), © Dr L. Stannard/SPL/PUBLIPHOTO; $\mathbf{5 8 1}$ (top center), © Malcolm Schuyl/Alamy; 582 (top center), © Malcolm Schuyl/Alamy; 584-585 (spread), © Adam Jones/Riser/Getty Images; 585 (bottom left), © Pat La Croix/Getty Images; 586 (top left), © Chris Joint/Alamy; $\mathbf{5 8 6}$ (top center), © Myrleen Ferguson Cate/PhotoEdit; 586 (top center), © Franz Gorski/Peter Arnold; 586 (top right), © Digital Archive Japan/Alamy; 587 (bottom left), © JAMES KING-HOLMES/ SCIENCE PHOTO LIBRARY; 587 (bottom), © Malcolm Gutter/Visuals Unlimited; 587 (bottom right), © Holt Studios International Ltd./Alamy; 595 (top left), © LARRY LEFEVER/Grant Heilman Photography; 599 (top right), © Bettmann/CORBIS; 604 (bottom right), © Jean Pragen/Getty Images; 605 (bottom left), © B. RUNK/S. SCHOENBERGER/Grant Heilman Photography; 605 (bottom left), © John Dominis/Index Stock Imagery; 605 (bottom center), © JAMES STRAWSER/Grant Heilman Photography; 605 (bottom center), © Nigel Cattlin/Photo Researchers Inc.; 609 (top right), © Jane Burton/Photo Researchers, Inc.; 610 (top), © Robert Harding Picture Library Ltd/Alamy; 611 (top right), © Lynn M. Stone/BRUCE COLEMAN INC.; 619 (top center), © Adam Jones/Riser/Getty Images; 620 (top center), © Adam Jones/Riser/Getty Images; 622-623 (spread), © Dr. Don W. Fawcett/Visuals Unlimited; 623 (bottom left), © Dr Elena Kiseleva/SPL/PUBLIPHOTO; 627 (center right), © College Archives, King’s College, London; 628 (bottom right), © M.C. Escher's "Drawing Hands" ©2006 The M.C. Escher Company-Holland. All rights reserved.; 630 (bottom center), © S. Stammers/SPL/PUBLIPHOTO; 634 (center left), © A. Barrington Brown/SPL/PUBLIPHOTO; 650 (center left), © Michael G. Gabridge/Visuals Unlimited, Inc; 652 (top), © A. Pasieka/ SPL/PUBLIPHOTO; 654 (bottom right), © AP Photo/Simon Lin; 658 (bottom right), © Gusto/SPL/PUBLIPHOTO; 663 (top center), © Dr. Don W. Fawcett/Visuals Unlimited; 664 (bottom right), © Science VU/Dr. O.L. Miller, Jr./ Visuals Unlimited; 664 (top center), © Dr. Don W. Fawcett/Visuals Unlimited; 667 (bottom), © Riccardo Cellere /The Terry Fox Foundation; 668 (top center), © John Hawkins; Frank Lane picture Agency/CORBIS; 672-673 (spread), © Lynda Richardson/CORBIS; 674 (top center), © Lynda Richardson/CORBIS; 676-677 (spread), © James Ownby; 677 (bottom left), © Grant Heilman Photography, Inc.; 678 (top), © Kevin Schafer/CORBIS; 679 (bottom left), © David Muench/CORBIS; 683 (center), © Grant Heilman Photography, Inc.; 683 (center right), © Grant Heilman Photography, Inc.; 689 (top right), © Pal Hermansen/Getty Images; 691 (top right), © Kitchin \& Hurst/FirstLight; 692 (center), © Steven J. Kazlowski/Alamy; 693 (top left), © Leigh R. Hilbert 2005; 695 (top right), © David B. Fleetham/Visuals Unlimited; 696 (center left), © Phyllis Greenberg/Animals Animals; 697 (top left), © Dr. C. P. Hickman/Visuals Unlimited; 697 (top right), © Tom Hugh-Jones/naturepl.com; 698 (bottom right), © Courtesy Advanced Cell Technology/Newsmakers/Getty; 699 (top center), © James Ownby; 700 (top center), © James Ownby; 701 (center right), © Bruce \& Jan Lichtenberger; 702-703 (spread), © Byron Jorjorian/Alamy; 703 (bottom left), © Layne Kennedy/CORBIS; 704 (top center), © Daryl Benson/Masterfile; 705 (top right), © Sean O’Neill/Alamy; 705 (center right), © Michio Hoshino/Minden Pictures; 705 (center right), © Grant Heilmain Photography Inc.; 713 (top), © Peter Oxford/naturepl.com; 714 (top left), © Joel W. Rogers/ CORBIS; 715 (center right), © Barb Bertch, Parks Canada; 717 (top), © Superstock; 718 (bottom), © Gilbert S. Grant/Photo Researchers, Inc.; 718 (bottom right), © blickwinkel/Alamy; 718 (top), © Douglas Pulsipher/Alamy; 719 (top), © John T. Fowler/ Alamy; 721 (center right), © Joe McDonald/CORBIS; 723 (top left), © Milton Tierney, Jr./Visuals Unlimited; 723 (top), © C. Allan

Morgan/Peter Arnold, Inc.; 723 (bottom right), © Scott Camazine/Photo Researchers, Inc.; 724 (bottom left), © Mark Moffett/ Minden Pictures; 724 (top right), © Jim Brandenburg/Minden Pictures; 725 (bottom left), © B. RUNK/S.SCHOENBERGER/ Grant Heilman Photography; 725 (bottom), © Science VU/E. White/Visuals Unlimited; 725 (bottom right), © Scott Camazine/ Photo Researchers, Inc.; 738 (top right), © Pat Bennett/Alamy; 739 (top center), © Byron Jorjorian/Alamy; 740 (top center), © Byron Jorjorian/Alamy; 743 (bottom left), © Douglas Faulkner/Photo Researchers, Inc.; 744 (top center), © Lynda Richardson/ CORBIS

## Illustration Credits

132 (bottom left) Victoria Roswell, 156 (bottom center) John Harvey, 159 (top center) John Harvey, 180 (bottom left) John Harvey, 240 (bottom left) John Harvey, 262 (center left) Dave Mazierski, 273 (bottom left) Bart Vallecoccia, 273 (bottom center) Bart Vallecoccia, 273 (bottom right) Bart Vallecoccia, 296 (bottom left) Theresa Sakno, 297 (top center) Bart Vallecoccia, 309 (bottom left) Bart Vallecoccia, 309 (bottom center) Bart Vallecoccia, 309 (bottom right) Bart Vallecoccia, 367 (center right) Victoria Rowsell, 370 (top left) Theresa Sakno, 376 (top center) Theresa Sakno, 376 (bottom center) Theresa Sakno, $\mathbf{3 7 8}$ (top center) Theresa Sakno, 379 (bottom center) Victoria Rowsell, 388 (top left) Victoria Rowsell, 388 (bottom left) Victoria Rowsell, 391 (top center) John Harvey, 397 (top right) John Harvey, 411 (top right) Bart Vallecoccia, 412 (center left) Bart Vallecoccia, 412 (bottom left) Bart Vallecoccia, 417 (bottom left) John Harvey, 417 (bottom center) John Harvey, 417 (bottom center) John Harvey, 417 (bottom right) John Harvey, 436 (bottom right) Bart Vallecoccia, 437 (top center) John Harvey, 437 (bottom right) John Harvey, 444 (bottom right) John Harvey, 446 (bottom left) Bart Vallecoccia, 448 (top center) Victoria Rowsell, 448 (bottom left) Victoria Rowsell, 451 (bottom right) Victoria Rowsell, 452 (bottom right) Bart Vallecoccia, 456 (bottom right) John Harvey, 468 (center left) Dave Mazierski, 497 (center left) Dave Mazierski, 512 (top center) Bart Vallecoccia, 513 (top center) Theresa Sakno, 513 (bottom left) Bart Vallecoccia, 516 (top left) John Harvey, 517 (bottom center) John Harvey, 535 (bottom center) Victoria Rowsell, 537 (top center) Theresa Sakno, 537 (bottom center) Victoria Rowsell, 546 (bottom center) Jane Whitney, 553 (top left) Theresa Sakno, 565 (top center) Theresa Sakno, 569 (bottom center) Theresa Sakno, 576 (top center) Jane Whitney, 579 (top center) Jane Whitney, $\mathbf{6 0 1}$ (top right) Theresa Sakno, $\mathbf{6 0 4}$ (bottom left) Bart Vallecoccia, $\mathbf{6 3 1}$ (bottom center) Victoria Rowsell, 690 (bottom center) John Harvey, 712 (top left) Dave Mazierski

