

Acknowledgments

Contributed by Wynne Brown
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Earth and Space Science Activities• Hurricane Central

Lesson developed by Hedley Bond, Wynne Brown, Yuhong Liu, and Steven Moore, Center for Image Processing in Education (CIPE), Tucson, Arizona. Images courtesy of National Oceanic and Atmospheric Administration (NOAA).
• Hole in the Sky

Lesson adapted by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, from "Where Has the Ozone Gone?" by Mary Moore and Steven Moore in Powers of Inquiry, Science Approach, Tucson, Arizona, and "Where Did the Ozone Go?" by Mike Ellison in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and Arizona Board of Regents (ABOR), Tucson, Arizona. Images courtesy of National Aeronautics and Space Administration (NASA).

• Planetary Gallery

Lesson adapted by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, from "Sizing Up the Solar System" by LuAnn Dahlman in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and ABOR. Images courtesy of National Aeronautics and Space Administration (NASA) and University of Arizona Lunar and Planetary Laboratory.• Snow and Ice 1: A Hemispheric View

Lesson developed by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, Tucson, Arizona. Images courtesy of National Snow and Ice Data Center (NSIDC) and NOAA. • Snow and Ice 2: The Sequel

Lesson developed by Hedley Bond, Wynne Brown, Yuhong Liu, and Steven Moore, CIPE, Tucson, Arizona. Images courtesy of NSIDC; photograph on Question 12 by Ben Holt Sr. (South Pasadena, CA), GRACE team, DLR, NASA. Biology Activities• Taking Temperatures

Lesson adapted by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, from "The Snake and the Rat" by Denise Warren in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and ABOR. Images courtesy of Wynne Brown, CIPE; and Denise Warren, using equipment provided by Mike Descour, Department of Optical Sciences, University of Arizona. Animals provided by Ross Munday of Tucson, Arizona; no animals were harmed in the production of this activity.• Bits of Bugs

Lesson adapted by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, from "Don't Bug Me" by LuAnn Dahlman in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and ABOR. Rove beetle image on opening page courtesy of David R. Maddison, Department of Entomology, University of Arizona, Tucson, Arizona. Scanning electron micrographs of rove beetles courtesy of Robert L. Smith, Department of Entomology, University of Arizona. Illustration courtesy of Wynne Brown. Other images courtesy of the National Institutes of Health.
• Animal Locomotion

Lesson adapted by Bill Beaver, Wynne Brown, and Steven Moore, CIPE, from "Animals in Motion" by Denise Warren and Ann Murphey in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and ABOR. Images from Animals in Motion and The Human Figure in Motion (part of the Dover Pictorial Archive), courtesy of Dover Publications, <http://www.doverpublications.com>. • Hand It to the Animals

Lesson adapted by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, from "Animal Hands" by Denise Warren and Kathy Krucker in HIP Biology 1: Discover Biology through Hands-on Image Processing, CIPE and ABOR. Images courtesy of Wynne Brown; Reid Park Zoo, Tucson, Arizona; Arizona-Sonora Desert Museum, Tucson, Arizona; Sea World, San Diego, California; The National Zoological Park, Smithsonian Institute, Washington, D.C.; The Minnesota Zoological Gardens: Zoo-Mobile, Apple Valley, MN; Amy Kublin, Fort Lowell Physical Therapy, Tucson, Arizona; and photo of eastern screech owl wing courtesy of the Slater Museum of Natural History, University of Puget Sound (<http://www.ups.edu/x5662.xml>). Medicine Activities• Breathing Lessons

Lesson adapted by Hedley Bond, Wynne Brown, Yuhong Liu, and Steven Moore, CIPE, from "Out of Breath: Diagnosing Lung Disease" by Deb Nead, Loretta Milligan, and Denise Warren in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and ABOR, and "Out of Breath: Using Ratios to Diagnose Lung Disease" in HIP Mathematics: Discover Mathematics through Hands-on Image Processing, CIPE and ABOR. Images courtesy of American Lung Association (still pending); and Kelly Rehm, Department of Radiology, University of Arizona, Tucson,

Arizona. Illustrations courtesy of Wynne Brown.• Muscle Loss

Lesson developed by Hedley Bond, Wynne Brown, Yuhong Liu, and Steven Moore, CIPE. Images courtesy of NASA and Dr. Harlan Evans and Dr. Jean Sibonga of the NASA Johnson Space Center Bone and Mineral Laboratory, USRA, Division of Space Life Sciences, Houston, Texas. Illustration courtesy of Wynne Brown, CIPE. Digital Literacy Activities• Photo Fixes

Lesson adapted by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, from "Photo Effects" adapted by Larry Kendall in Discovering Image Processing, version 2.0, CIPE, Tucson, Arizona, based on "Old Photo Restorations" by Mark Newhouse in HIP Mathematics: Discover Mathematics through Hands-on Image Processing, CIPE and ABOR. Images courtesy of Wynne Brown; Arizona State Museum; and University of Arizona, Tucson, Arizona. • Cyber Sleuth

Lesson adapted by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, from "Digital Detective" adapted by Larry Kendall in Discovering Image Processing, version 2.0, CIPE, and "Acme Detective Agency" by Carla McAuliffe, LuAnn Dahlman, and Larry Kendall in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and ABOR. Images courtesy of Larry Kendall, Carla McAuliffe, and LuAnn Dahlman. Mathematics Activities• Ramps and Ratios

Lesson adapted by Hedley Bond, Wynne Brown, Yuhong Liu, and Steven Moore, CIPE, from "Public Access: Slopes for the Mathematically Inclined" by Janet Eskins in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and ABOR. Images courtesy of Larry Kendall.• Slice of Pi

Lesson adapted by Wynne Brown, Hedley Bond, Yuhong Liu, and Steven Moore, CIPE, from "Going in Circles" by Janet Eskins in Image Processing for Teaching Sourcebook: Classroom Activities and References, CIPE and ABOR. Images courtesy of NASA, Janet Eskins, and Larry Kendall. Principal investigator

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