

2011/12

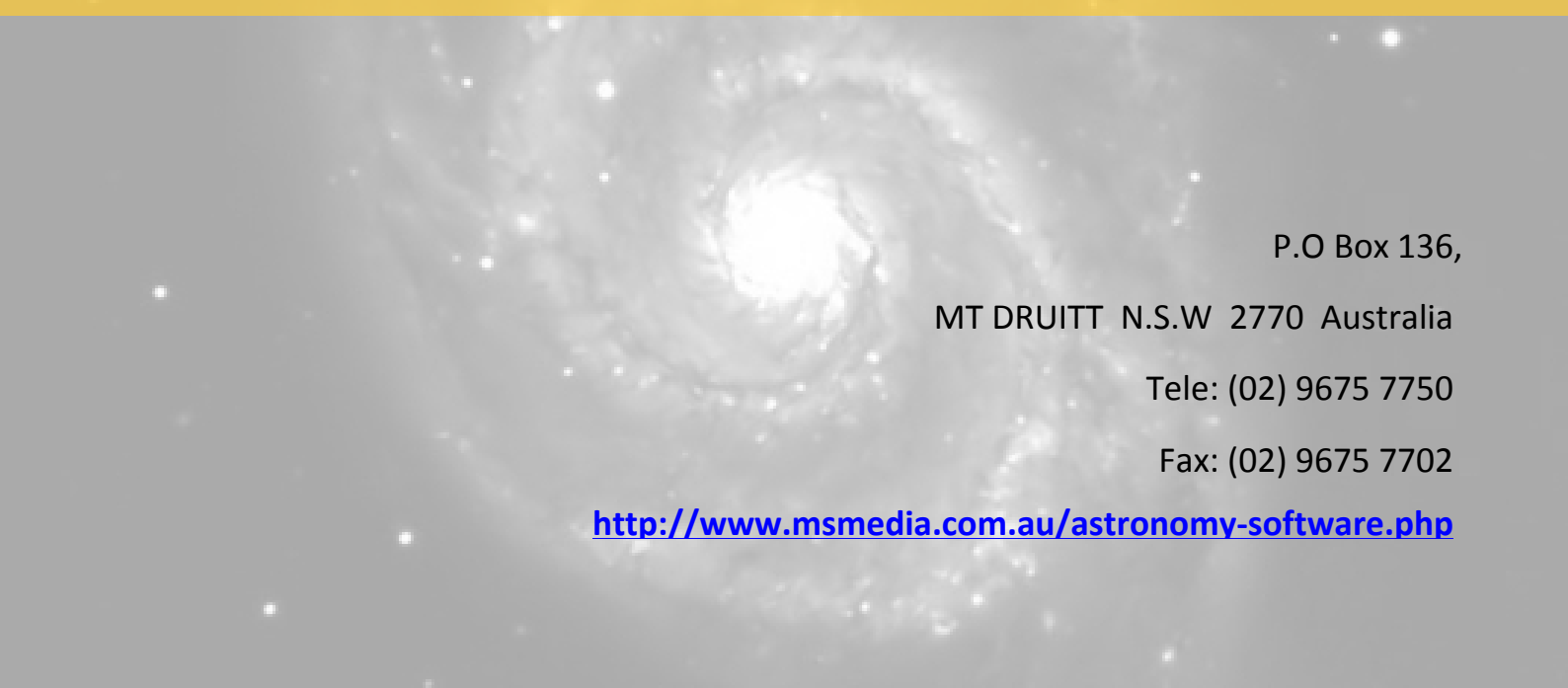


MEDICAL & SCIENCE MEDIA

Astronomy SOFTWARE

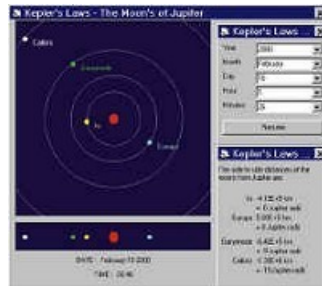
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[Cat #: PCI-1](#)**Virtual Astronomy Laboratory - Wins****Computer Based Labs for Introductory Astronomy**

Many of the astronomical observations and measurements which are of interest in intro astronomy labs are not practical for a variety of reasons, including equipment restrictions, complexity, and night time viewing requirements. The 25 computer-based labs contained in Virtual Astronomy Laboratory are designed to give students a simulated view of the sky, allow them to make measurements on the computer, and analyze the data they have collected. Virtual Astronomy Laboratory brings a hands-on experimental lab component to astronomy courses, and requiring only basic math skills on the student's part, the carefully selected collection of labs are appropriate for introductory astronomy courses at the high school and college level.



Virtual Astronomy Laboratory puts some of astronomy's most useful instruments into the hands of students - precise telescope controls to measure angular size; a photometer to measure light intensity; and a spectrograph to measure Doppler-shifted spectral lines. Time-lapse and time-exposure photographic observing methods are also simulated.

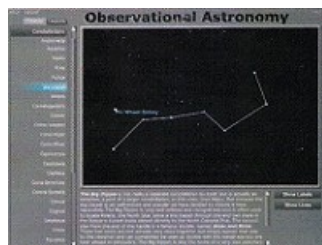
Each lab activity provides everything required to perform a thorough investigation from start to finish - (1) Lab manual which includes background information and step-by-step instructions, (2) interactive simulations for hands-on data collection, and (3) on-screen assistance including input fields allowing students to enter and check their results.

Astronomy Lab Topics: Scientific & Decimal Notation Conversion Scale of the Universe Graphs, Slopes, and Rate of Change Latitude, Axial Tilt, and Length of Day Celestial Coordinates Angular Size Measuring Planet Size Kepler's Laws Lunar Motion Planetary Motion Measurement of Saturn's Rings Stellar Occultation Circumpolar Stars Stellar Parallax Proper Motion of Stars Radial Motion of Stars Visual Binary Stars Eclipsing Binary Stars Cepheid Variable Stars Temperature of Stars Hertzsprung-Russell Diagram Spectroscopic Parallax Galactic Speeds and Hubble's Law Galactic Rotation Distribution of Mass in a Galaxy

System Requirements: Windows 95/98/NT/2000/Me/XP, 486 or Pentium class processor, 16MB RAM.

[Cat #: PCI-36](#)**Observational Astronomy - Wins**

Students may have seen pictures of the famous Horsehead Nebula or Andromeda Galaxy, but where does one look in the sky to find these objects, and what can one expect to see when viewing these objects through the eyepiece of an amateur telescope?



Designed for introductory astronomy courses, Observational Astronomy re-creates a night sky observing session on the computer. Using specialized astrophotography, Observational Astronomy explores the night sky revealing the deep-sky objects hidden within the constellations. Nebulas, galaxies, and star clusters are first located and then observed in a setting similar to that of a night lab.

Students are initially presented with a naked-eye view of the stars with the option to superimpose constellation lines. Students then zero-in on the location of a deep-sky object and progress through various telescope viewing options:

i) View through the eyepiece of an amateur telescope (14" aperture). ii) Time-exposed image with an amateur telescope. iii) Time-exposed image with an observatory telescope or the Hubble Space Telescope.

This progression bridges the gap between what is seen through the eyepiece of an amateur telescope and the time-exposed observatory images seen in textbooks. After students have studied the constellations, Observational Astronomy can be operated in quiz mode where students are tested and scored on their ability to properly identify constellations.

Software Features:

Full coverage of the northern hemisphere sky, including 53 constellations and over 70 deep-sky objects. Based entirely on actual photos of the sky and specialized astrophotography. Includes special sections on the moon and planets. Ideally suited to provide a night lab experience when such sessions are difficult to schedule, or to prepare students for an actual outdoor session. Operates in observing mode or quiz mode. Option to superimpose constellation lines. Choose from more elaborate lines that provide insight as to how the constellation derived its name, or basic lines that include only the brighter stars (often used on star finders). Information provided on each constellation and deep-sky object. Option to access deep-sky objects by Messier number.

System Requirements: Windows 95/98/NT/2000/Me/XP, 486 or Pentium class processor, 16MB RAM.

[Cat #: TG-1](#)

Explore the Planets - Wins & Mac

Explore the Planets 2.0 helps students investigate the planets and their satellites and understand the processes that shape them: volcanism, impact cratering, tectonics, landslides, flowing water, and wind. They will study the planets the way planetary scientists do, by comparing, for example, why some volcanoes on Mars are so much larger than their counterparts on Earth. They'll discover why impact craters are so widespread and much more.

This updated CD-ROM is fully narrated and contains new data and images from recent discoveries and missions into space. The program aids learning with scored review questions, a visual index, an illustrated glossary, colorful animations, video clips, and an updated planet database. Students can even pilot a spaceship through the solar system and test their knowledge of planetary bodies.

New features in Version 2.0:

- Extensive revisions of Mars and the asteroids based on recent missions.
- New images of planets and their moons based on recent missions.
- Interactive panoramas and videos on Mars and asteroids.
- Updated data and images in Planetary Database.
- Fully narrated.
- New visual index.
- Interactive illustrated glossary.
- Easy navigation including page numbers and a jump button on every frame.
- Scored review questions that can be printed and saved to file.

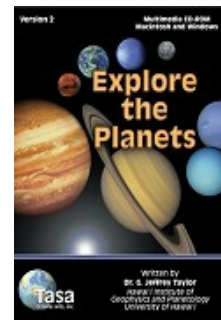
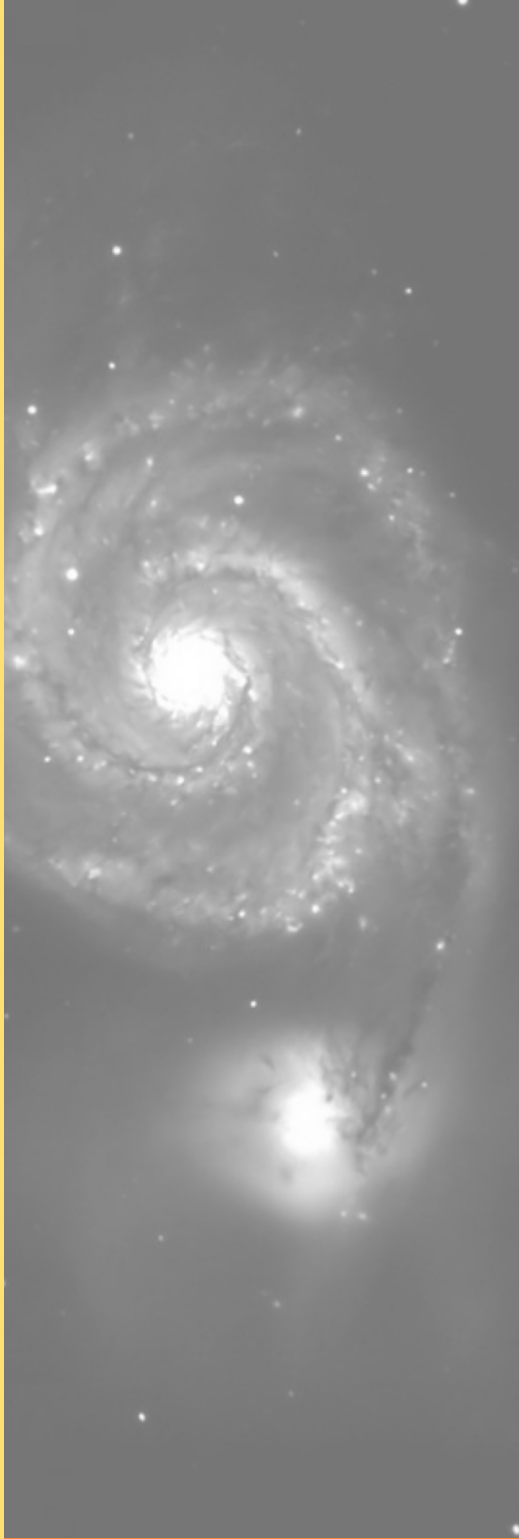


Table of Contents:

- Introduction
- Tour the Planets: Mercury/Venus/Earth/The Moon/Mars/Asteroids & Comets/Jupiter/Saturn/Uranus/Neptune/Pluto
- Planet Processes: Landslides/Volcanism/Flowing water/Wind/Impact cratering/Tectonics/Atmosphere
- Planet Explorer Game
- Planet Database

System Requirements: **Macintosh:** PowerPC™ 180 MHz processor (G3 or higher recommended); Mac OS® 9.2 to Mac OS X, 128 MBytes available RAM; thousands or millions of colors. QuickTime™ required. **Windows:** Windows 98®: Intel® Pentium® II 200MHz, 64 MBytes available RAM; Windows 2000® and Windows XP®: Pentium III 450 MHz, 128 MBytes available RAM; thousands or millions of colors. QuickTime™ required. This program was developed as a 32-bit application and is not supported on 64-bit versions of XP or Vista.



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