

Welcome to Space Academy GX-1

Space Academy GX-1 is designed to integrate with third- through sixth-grade science curricula and national science standards and to provide dozens of opportunities for inquiry-based learning. Each software activity features Virtual Manipulatives™—realistic models students can manipulate and change to conduct experiments. As they enjoy the engaging science challenges, students make observations, analyze data, form and test hypotheses, and learn to think like scientists. Built-in tracking allows teachers to monitor the number of problems each student has solved and the skill level achieved in each activity.

Visualizing the relative positions of the Sun, Moon, and Earth—and the way they interact to cause day and night, the phases of the Moon, and the seasons—can be difficult and highly abstract. The EarthSunMoon Simulator in *Space Academy GX-1* is both interactive and concrete; students can make a change to the system and then see the effects of that change. For example, students can move the model to simulate the movements of the Earth and Moon around the Sun or to observe a full cycle of seasons on Earth.

In the Planetary Data Center, the station crew members offer different hypotheses about the solar system, and it's up to students to determine which one is correct. Students conduct research or perform simple experiments using colorful, interactive Data Displays—charts, illustrations, and animations—in order to determine which crew member's hypothesis is correct.

With the Gravity Pilot Trainer, students launch rockets to reach targets on and above Earth, in orbit, and on other planets in our solar system. As they experiment with different angles of launch and amounts of thrust, students build a working knowledge of the basic mechanics of gravity and of orbital motion in different regions of the solar system.

The electronic Reference Guide included in the program is a rich multimedia reference tool containing information on all the major science topics students encounter in *Space Academy GX-1*. Many topics appear onscreen automatically as students solve challenges in the program, providing concise “Quick Reference” introductions to new concepts.

Introducing the Program to Your Students

Your introduction to the program can help students make the most of their time using *Space Academy GX-1*.

Before Class...

- Familiarize yourself with the program, using the CD-ROM and pages 2—30 of this guide.
- Install the program on the computer you will use to demonstrate it. If you wish, set the Grow Slides to an appropriate challenge level for your students (see page 4).

Getting Students Started

- In class, turn on the computer and insert the *Space Academy GX-1* CD-ROM. Use a large monitor if available.
- Start the program. Demonstrate how to sign in, and point out the EarthSunMoon Simulator, the Planetary Data Center, the Gravity Pilot Trainer, and the Reference Guide.
- Click a module to start a mission.
- Complete a few challenges to demonstrate the process. Show students how to adjust the Grow Slide (if you want them to) and how to enter the Explore Mode.
- Return to the Main Menu, choose another module, and demonstrate its use. (You may wish to demonstrate all modules in one session, or introduce each module in a separate session.) Repeat until you have shown students all modules, plus the Reference Guide.
- Give students computer time to familiarize themselves with the EarthSunMoon Simulator and the Gravity Pilot Trainer— to visit the Planetary Data Center, and to browse through the Reference Guide.

Extend Students' Learning

Pages 31—71 of this guide are filled with activity ideas and reproducible worksheets to complement the challenges in *Space Academy GX-1*. Two kinds of activities are included:

- At the Computer Activities ~ These activities are designed to be completed at the computer.
- Away from the Computer Activities. These activities are intended for use away from the computer, as an introduction to a science topic or as a follow-up activity. Many activities require students to work in pairs or small groups, encouraging collaborative learning.

Adult Options

From the Main Menu click ~ to access Adult Options

If you do not want students to get into Adult Options, uncheck the “Show Adult Options Button” box (see below). Teachers can still open Adult Options by holding down the **Ctrl** and **Alt** keys while pressing the A key (Windows users), or holding down the **Command** ~€ and **Option** keys while pressing the A key (Macintosh users).

Preferences

Click the Preferences tab to turn program features on or off for your students.



If this box is checked, students can save their work in the EarthSunMoon Simulator and GraviLy Pilot Trainer modules.

If this box is checked, the Adult Options button appears on the Main Menu, allowing students to open this section.

If this box is checked, music plays at the main menu.

Check “Set Volume Manually” to change the program volume using the slider

Allow program to switch to 640 x 480 resolution.

Quit Space Academy GX-1

Click **Play** to return to *Space Academy GX-1*.

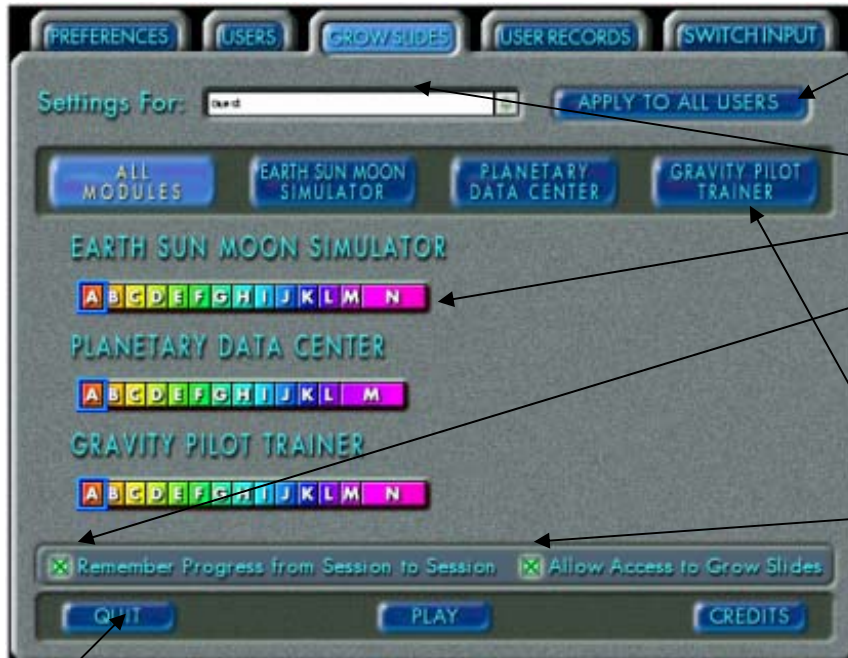
Users

Click the Users tab to view the sign-in list.

- To rename a user, select the name and click the **Rename** button.
- To remove a name from the User List, select the name and click the **Delete** button. (You cannot remove the current user or the Guest user.) To delete all users, sign in as “Guest” and then click the **Delete All** button.
- To add a name to the User List, type a name in the “Add New User” box, then click **Add User**.
- If the **Allow New Users to Add Themselves** box is checked, students can add their names to the User List at the Main Menu. Uncheck this box if you do not want students to add their own names.
- As students solve challenges in *Space Academy GX-1*, they are promoted! (For a complete list of the academy’s rankings, see page 10.) Each student’s rank is displayed next to that student’s name during sign-in and in the User List.

Grow Slides

Click the Grow Slides tab to choose a particular topic or activity for your students. As students solve challenges in a module, the slider automatically advances to more difficult challenges, but you can also set it manually.



Change all users' settings to the currently displayed settings.

Grow Slide settings for this student are shown.

Click a letter to select a new topic or difficulty level.

If this box is checked, play begins at the level achieved at the end of the previous session of play.

Click to display a detailed Grow Slide for this module only

If this box is unchecked, the Grow Slide buttons do not appear within the modules.

Quit Space Academy GX-1.

Click Play to return to *Space Academy GX-1*.

User Records

Click the User Records tab to monitor the activities completed by each student. Each student's overall score is displayed, along with the number of problems solved and the Grow Slide level reached in each module.



Print current record.

To see records for an individual user click the drop-down menu and select the name from the list.

Click arrows to scroll through users' records.

Quit Space Academy GX-1 -

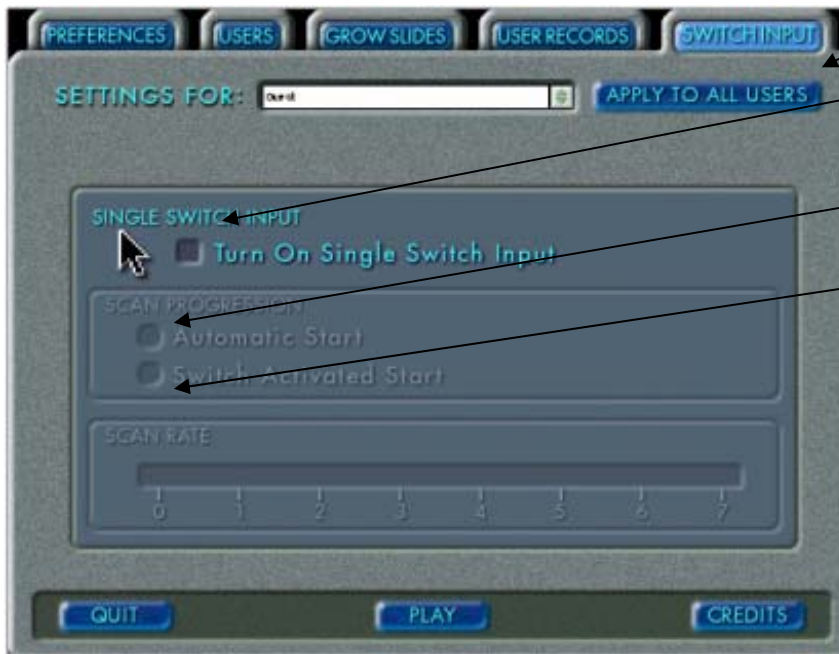
Click **Play** to return to *Space Academy*

Single Switch Input for Students with Special Needs

Built-in single switch scanning is available for single switch users. When scanning is turned on, a selection arrow automatically advances from choice to choice.

To turn on single switch scanning and set scanning options:

1. From the Adult Options screen, click the Switch Input tab.
2. From the Settings **For:** pull-down menu, select the student who will use single-switch scanning.
3. Click "Turn On Single Switch Input."
4. Set single switch options.
5. Select the scanning rate.



Apply currently selected settings to all users.

Scanning starts automatically after each selection.

Student activates switch to restart scanning after each selection.

Select scanning rate (in seconds): 1 (fastest) to 7 (slowest).

When you have selected the settings you want, click **Play** to return to SpaceAcademy GX-1.

You can use any of the following as a single switch device:

- ❑ **A specialized switch.**
- ❑ **The Edmark TouchWindow:** Remove the TouchWindow from the monitor, place it on a desktop or a lap, and touch any part of the screen to make a selection.
- ❑ **The Edmark TouchFree Switch:** For instructions, see “Using TouchFree Switch” (page 6).
- ❑ **A mouse:** Click the mouse button to make a selection.
- ❑ **The keyboard:** Press the space bar to make a selection.

To temporarily suspend or resume scanning while students are using the program, press **Ctrl-Alt-S (Windows)**

Using TouchFree Switch

To use TouchFree Switch with *Space Academy GX-1*, follow these steps:

1. Run *Space Academy GX-1* and open Adult Options (see pages 3—6 for details).
2. Click the Switch Input tab and set the scanning options for the user (as shown on page 5).
3. Click the Preferences tab. In the “Resolution Switching” box, uncheck the box next to “Switch to 640x480 Screen Resolution.”
4. Quit *Space Academy GX-1*. Windows users, please proceed to step 5. Macintosh users, please skip to step 6.
5. Windows users only: Switch your monitor’s resolution to 800x600 (or greater). To switch your monitor’s resolution, follow these steps:
 - a) Click Start | Settings | **Control Panel**.
 - b) Double-click the **Display** icon to adjust the Display Properties.
 - c) Click the Settings tab, then drag the “Desktop area” slider to **800x600**.
 - d) Click **Apply**, then click **OK**.
6. Run TouchFree Switch. Set up the switch for the user and then click **Run** to open the Run Window.
7. Run *Space Academy GX-1*. Use TouchFree Switch to send clicks to the program.

Direct Selection Using the Touch Window

Space Academy GX-1 is fully compatible with the TouchWindow, a portable touch-sensitive screen that attaches to the computer monitor, allowing direct and natural touch input.