

SVE

Society For Visual Education, Inc.
A Business Corporation
1345 Diversey Parkway
Chicago, Illinois 60614-1299

SVE Basic Skill Boosters

Teacher's Manual

**Science Corner:
Space Probe**

20608-DSI
Dewey Decimal Number 523.2

20608-ASBTG



SVE

Society For Visual Education, Inc.
A Business Corporation
1345 Diversey Parkway
Chicago, Illinois 60614-1299

SVE Basic Skill Boosters

Teacher's Manual

**Science Corner:
Space Probe**

20608-DSI
Dewey Decimal Number 523.2

20608-ASBTG

Credits and Copyright

Consultants:

Marianne Dunne
Boston Museum of Science, Boston MA

Ann Koufman
Computer Specialist, Driscoll School, Brookline, MA

Curriculum Designer:

Henry F. Olds, Jr.

Managing Editor:

Clare Siska

SVE Producer:

Nancy L. Davis

Manual and Skill Booster Writers:

Nancy L. Davis
Ellen Kisslinger

Production Assistant:

Christine Smith

Software Programming:

Peter Andrews
Rob Shaver

Software Art/Design and Animation:

Angela Faeth

Software Art Direction:

Laura Koller

Software developed by Learningways, Inc.,
Cambridge, MA.

Graphic representations of software icons are used with
permission by Learningways, Inc.

Copyright © MCMLXXXIX
Society For Visual Education, Inc. All Rights Reserved.
Printed in the United States of America.

Reproduction of this manual, in whole or in part,
is forbidden without prior written permission from
Society For Visual Education, Inc.

Contents

Introduction

- Learning Objectives
- Program Description
- Grade Level

Flowchart

Getting Started

- Equipment Needed
- Cautions
- Loading the Program
- Turning Off the System

Disk Program Instructions

- How to Select
- How to Explore
- Dropping
- Waving
- Writing

Suggested Steps for Using the Program

- Research
- Writing
- Illustrating Reports

The Units: Organization and Description

- Solar System
- Day and Night
- The Seasons
- The Moon
- The Sun

How to Use the Menu Bar

- Visible Disk Options (OPEN, SAVE)
- Invisible Disk Options (SETUP, DISK UTILITIES)
- PRINT Options

Trouble-Shooting Guide

Skill Boosters



Introduction

Science Corner: Space Probe is intended to enhance students' basic understanding of our solar system. After first investigating our solar system on the computer screen, students explore a variety of concepts: how day and night occur; why we have seasons; some characteristics of our sun and moon. Students are provided with opportunities to explore and interact with the material in several ways. To take full advantage of the program, students need to read and follow directions carefully, take measurements, read illustrations, record data, hypothesize causes and effects, make predictions, draw conclusions, and make generalizations. A Notebook in the program enables students to record some of their work while at the computer. They are thus provided numerous opportunities to develop study skills and the "tools" of scientific inquiry as they expand their knowledge of the world in which they live.

Learning Objectives

Science Corner: Space Probe is designed with the following learning objectives in mind:

- to introduce students to the concept of a solar system
- to make students aware of some of the planets' characteristics
- to help students understand the phases of the moon
- to explain how day and night occur
- to illustrate how and why the seasons occur

Program Description

On the Program Disk, the user has the option of receiving instruction in using the program or immediately loading the Student Disk. At this point, the user goes to the *Selection Screen*, from which five units can be explored. The units are: Solar System, Day and Night, The Seasons, The Moon, and The Sun. Each unit has two types of scenes: a main scene that provides an interactive simulation, and one or more supporting scenes. When a unit is selected, it opens to either an introductory supporting scene or to the main scene. The user explores and interacts with the main scene by following the on-screen instructions. Other supporting scenes provide additional learning and interactive activities.

Each unit includes a Notebook page on which students may record their observations and ideas. Students should be encouraged to use the Notebook throughout to help them express concepts in their own words. Notebook pages can be printed.

Students can work through the units as they choose. It is often worthwhile to work with the simulation first. Each simulation can be replayed as often as desired. Then

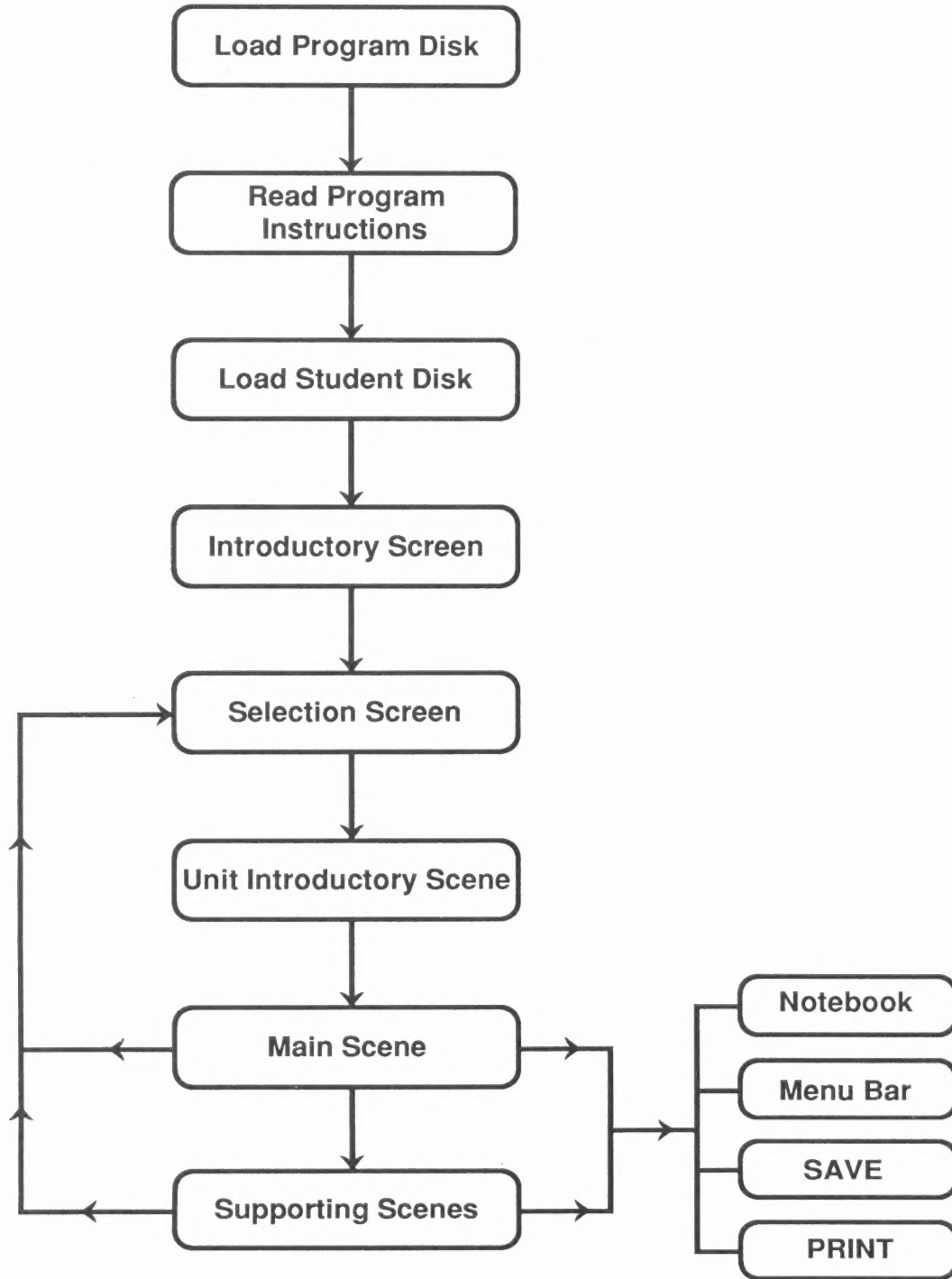
students can use the supporting scenes to help them reflect on what they observed in the simulation. They can return to the simulation with an improved awareness of what is going on. They can also work on the main and supporting scenes concurrently, by "flipping" back and forth, if this helps them to understand the concepts better. Thus, students can vary their approaches to suit individual learning styles.

Grade Level

This program is designed for the upper primary and lower intermediate grades.

The following is a simple flowchart of the program organization.

Flowchart



Getting Started

The *Science Corner: Space Probe* package comes with one copy of each disk. See SVE's "Copy Our Disks" program sheet at the back of this manual for information on how to make five extra copies of the Program Disk. The Student Disk is a data disk and is not copy protected. You may make as many copies of it as you need.

Equipment Needed

This program will operate on an Apple IIc, IIgs, or an Apple IIe with 128K. One disk drive is required. A mouse and color monitor are strongly recommended.

Cautions

Disks should always be handled with extreme care to avoid erasing the information stored on them. The following precautions will minimize problems:

- Never touch the magnetic surface of the disk.
- Do not leave disks where they can collect dust. Always keep disks in disk jackets unless they are being used in disk drives.
- Do not turn the disk system off with a disk in the drive. Magnetic fields generated by the drive's motor may alter the data in the disk.
- Do not press any keys when the red light on the disk drive is on. This means the disk is turning and the computer is searching for information.

Loading the Program


1 Insert the Program Disk into the disk drive.

Note: *Science Corner: Space Probe* works best with a single disk drive. If you wish to use a second drive, change the SETUP only when you are ready to use the Student Disk. (See the **SETUP** section in this guide.)

2 Close the door to the disk drive.

3 Turn on the Apple computer and the monitor. This will load the program.

4 A red light on the disk drive will turn on. If the disk drive light does not turn off in about ten seconds, turn the Apple computer off and make sure your disk is placed correctly in the disk drive.

5 The SVE screen will appear, followed by the title screen of *Science Corner: Space Probe* and an information screen. For program instructions, click on . To continue, follow the instructions as indicated on the instruction screen.


Turning Off the System

1 Remove the disk.

2 Turn off the Apple computer.

3 Turn off the monitor.





Disk Program Instructions

From the instruction screen on the Program Disk, the user can click on  to gain access to the program instructions. The program instructions include information about how to select and explore. It is important to become familiar with the program instructions before continuing.

How to Select

Science Corner: Space Probe functions in a "point and select" fashion. When the program has been loaded, you will notice a small white arrow at the top of your screen. This is called the "pointer." To work with an item on the screen, move the pointer to the item and "click" on the item.









Mouse: If using a mouse, "clicking" means pressing the mouse button. To "drop" something, click again.

Keyboard: If using the keyboard, press the  keys to move the cursor. Hold down the  to move faster. To "click," press the option key (or ). To "drop" something, press the option key (or ) again.

Other Input Devices: With a joystick, a Touch Screen, or a KoalaPad, "clicking" means pressing the control button.

How to Explore

Select one of the five units from the *Selection Screen*. Clicking on these signs takes you to other screens.

-  gives you general instructions or information in a text window. To close the text window, click on it.
-  gives you more specific information or directions in a text window. To close the text window, click on it.
-  gives you questions to think about and possibly answer in your Notebook. To close the text window, click on it.
-  takes you back to the *Selection Screen*. From there you can choose another unit to work on.
-  takes you to the Notebook where you can record your observations and do individualized writing.
-  takes you to the next scene.
-  takes you back to the previous scene. From the Notebook,  takes you back to the scene you were just on.

 reopens a scene you are on.

You are sometimes told to explore by "dropping" or "waving" items in the scene.

Dropping

In this program, to "drop" something means to do the following:

- 1 Click on it to pick it up.
- 2 Move it to the right place.
- 3 Click again to drop it.
- 4 Move the pointer away.

Waving

In this program, to "wave" something means to do the following:

- 1 Click on it to pick it up.
- 2 Move it over a target.
- 3 Move it away.
- 4 Click again to drop it.

Writing

To write in the Notebook or on any scene, place the pointer where you would like your text to begin, and start to type. When you want to go to the next line, press the RETURN key. The computer will "beep" if your typing reaches the end of the screen. If you have begun a word you can't finish on a line, use the DELETE key to erase the last few letters, and start the word over on the next line.

Some of the more important words associated with the scene are available in the menu and can be put into the scene as labels or as part of some writing (see **How to Use the Menu Bar**).

You can reposition any line of text on the screen by clicking on it, moving it, and clicking again to drop it. When you are handling text, you can also use the RETURN Key to drop something.








You can edit a line of text by clicking on it and erasing one letter at a time from the end of the line by pressing the DELETE key (backspace delete). You must then retype any letters you want to replace. If you want to delete something on another line, position the pointer where you want to begin deleting, click on that spot, then press DELETE.

If you wish to save your writing, you must save the scene before going on to another scene (see **SAVE**). Students can also print any Notebook page or any scene (see **PRINT**).

Suggested Steps for Using the Program

This program allows for variation and flexibility as the student explores. However, the following general procedure is a good one to use, especially when becoming familiar with the program.

Encourage students to:

- 1 Form teams of two or three people. Discuss what they discover and what they want to learn. (You may want to answer questions that are asked and ask students questions of your own.)
- 2 Select the topic their team wishes to explore, then review the introductory and/or main scene.
- 3 Select  to read the general directions about what to do in the scene.
- 4 Use the directions as a guide to exploring the scene. (If there are several steps to take, remind students that they can always reopen the directions.)
- 5 Click on  to get more specific information and directions as needed.
- 6 Click on any  they find and read over the questions to think about.
- 7 Click on the  to go to the next scene. Explore and study this scene. There may be another  to go to another supporting scene. If so, follow it and explore and study that scene.
- 8 Use the Notebook option to record observations, discoveries, answers, and questions (using pen and paper is another option). There is at least one Notebook per unit. The Notebook provides an easy way of "thinking on the screen." Write down in their own words what they saw or questions about things they don't understand. (See **Writing**.)
Note: Any writing in the Notebook should be saved before continuing (see **SAVE**). The Notebook page can also be printed (see **PRINT**).
- 9 Use  to review or replay any scene.
- 10 Stop work on a topic at any time and return to the main *Selection Screen* by clicking on .

Research

The five topics in this program initiate a process of inquiry. Students will broaden and deepen their understanding by extending their inquiry with further research. They will find additional information in library books, film or filmstrip collections, magazines, and on TV.

Writing

It is very important that students express in writing what they have learned. While the Notebook is a convenient means for on-screen note-taking, the program does not permit students to do extensive writing. Therefore, students should be encouraged to do further individualized writing about the unit with pencil and paper or, preferably, with a word processor. In many cases, this writing might be based on the notes they have taken in their Notebooks. They can develop their personal reactions to the ideas presented, report on additional research they have done that is related to the unit, or elaborate on answers to questions posed by the program or by them.

Illustrating Reports

Scenes from the program can be printed to illustrate reports that students might create. To some extent, students can rearrange the scene, add characters and objects to it, and write directly on it. These new scenes can be saved and printed in color or black and white. (See **How to Use the Menu Bar, SAVE, and PRINT.**)

The Units: Organization and Description

Introductory Scene : Overview of How Earth Looks from Space

The Solar System: Organization and Description

- **Unit Introductory Scene:** Students focus on the physical characteristics of five planets as seen through a telescope.
- **Main Scene:** Students place six of the planets in their orbits, read their names, and view the sun as the center of our solar system.
- **First Supporting Scene:** Students read information about the six nearest planets.
- **Second Supporting Scene:** Students read information about the three farthest planets.
- **Notebook**

Day and Night: Organization and Description

- **Unit Introductory Scene:** Students read an explanation of why the sun rises and sets.
- **Main Scene:** Students explore the idea that daytime and nighttime are always happening somewhere on the Earth at the same time. They see activities happening simultaneously in different parts of the globe.
- **Notebook**

The Seasons: Organization and Description

- **Unit Introductory Scene:** Students observe the earth orbiting the sun and read an explanation of why there are seasons.
- **Main Scene:** Students position themselves at a point on the Earth where it is spring, then try to determine what season it is in other parts of the world.
- **Notebook**

The Moon: Organization and Description

- **Unit Introductory Scene:** Students observe the moon through a telescope as it goes through one lunar cycle.
- **Main Scene:** Students place the eight phases of the lunar cycle where they think they would be in relationship to the sun and the Earth.
- **Supporting Scene:** Students review lunar phases by playing a matching game using lunar-phase cards.
- **Notebook**

The Sun: Organization and Description

- **Unit Introductory Scene:** Students observe the sun shining on a city and read a description of the relationship between the sun and us.
- **Main Scene:** Students learn about three solar features: solar flares, coronas, and sun spots.
- **Notebook**



How to Use the Menu Bar

The **Menu Bar** is available on the Program Disk instruction screens and all Student Disk screens by pressing ESC. If you have selected an ACTOR, OBJECT, or line of text, you must first drop it before you can select the **Menu Bar**.

The **Menu Bar** contains six options: ACTORS, OBJECTS, BACKGROUNDS, LABELS or WORDS, DISK OPTIONS, and PRINT OPTIONS. To close the **Menu Bar**, click anywhere else on the screen, except on the **Menu Bar**.

ACTORS are animated characters and things that can be added to scenes. Click on ACTORS (the "dancing person" icon) to open it. Then click on either arrow to scroll through the actors. To add an actor to your scene, click on it, put it in your scene, and click again to drop it.

OBJECTS are inanimate things; **BACKGROUNDS** allow you to change scene colors. **LABELS** are words for things such as "moon" or "sun." All of these can be added to the scene in the same way as the **ACTORS**.

DISK gives you disk operating tools. Two options are visible when **DISK** is selected: **OPEN** and **SAVE**. Two other options, **SETUP** and **DISK UTILITIES**, are not visible. They are made available by pressing Control-T (**TEACHER UTILITIES**) after clicking on the **DISK** icon.

Visible Disk Options

OPEN: This option makes it possible to open any of the files on the disk, either those that come with the disk or those saved by users. After clicking on **OPEN**, click on the arrows below the file name to scroll through the names of any other files on the disk until you find the one you want (if no files have been saved, the only name will be **SPACE**). Next, click on the arrow under the scene number to pick the scene you want to open. To open the scene, click anywhere in the long upper box containing the name and number.

Here are some important scene numbers:

The scene number for the Space Probe selection screen is : **SPACE 2**.

The scene numbers for the five main scenes of the program are:

Solar System—**SPACE 1**
Day and Night—**SPACE 14**
The Seasons—**SPACE 17**
The Moon—**SPACE 5**
The Sun—**SPACE 11**.

SAVE: The **SAVE** option is used to save scenes on the Student Disk created or changed by users. To save a new scene, you must give it a new name (it should *not* be named **SPACE**). After clicking on **SAVE**, you will see the name of the scene you were working on. Click on **NEW NAME**, then type in a meaningful file name (you may want to use your own name or the name of your group). Select **NEW NUMBER**, then type a number for your scene. To save your scene, click on the box that has your new name and number in it.

Make sure students understand that any work or writing they have done on a scene will be lost if they move on to another scene without saving.

A red "thermometer" line at the bottom of the **SAVE** box indicates how much space is left on the disk for saving files. If the red line approaches the right, it means the disk is almost full. If the disk is full, delete unwanted scenes, or save on another Student Disk. The original disk scenes are locked to protect them. Students can also save their own files on blank, **PRODOS**-formatted disks, if they choose.

Once you have saved a scene under a new name, you may want to return to it. You can do so at any time the **Menu Bar** is visible (see **OPEN**).

Invisible Disk Options

As noted above to view the teacher utilities, it is necessary to press **CTRL-T** while the *visible* disk options are displayed.

SETUP

Normal Setup:

Print	Current Page
Printer Type	ImageWriter II
Card Type	Serial
Printer Slot	1
Student Disk	Slot 6 Drive 1
Setup and Disk Utilities	Off Menu

Alternative Setups:

Print	Entire Book
Printer Type	Scribe Epson Okidata ImageWriter
Card Type	Parallel Grappler Automatic Ice Digicard Appletalk
Printer Slot	2, 3, 4, 5, 6, 7
Student Disk	Slot 6 Drive 2 Note: Other alternative Student Disk settings will be determined by your particular computer system.
Setup and Disk Utilities	On Menu

You may need or wish to change these settings to use the program on your system.

To change SETUP, click on any one of the right-facing arrows to scroll through the options until you find the one you want. If your printer type does not appear, try several of the options offered and attempt to print. It is likely that one of the options will work with your printer. You can try the same procedure if you have a printer card that is not listed. To save the settings you have changed, put your Program Disk in the disk drive. Move the pointer to SAVE TO DISK and select it. Doing so will make these changes available the next time you use the program. If you do not save the changes, they will not be available and it will be necessary to change the setup again.

Note: Changes to *Slot* and *Drive* for the Student Disk cannot be saved on the Program Disk. If you wish to use a different drive setup, you must change the setting each time. Because the program only uses one disk at a time, it is recommended that the Student Disk be put in your boot drive.

DISK UTILITIES

This allows the teacher to lock, unlock, or delete scenes on a Student Disk. From the expanded CTRL-T Disk menu, click on DISK UTILITIES, then choose the name of the scene you want to work with by clicking on the arrows under the name. Select the number of the scene you want to work with by clicking on the arrow under the scene number.

LOCK: Locking a scene protects it from being deleted or replaced by accident. To lock a scene you have chosen, click on LOCK, then click on the name box. The * which appears to the left of the page number tells you that the scene is locked. A locked scene can always be unlocked to save new changes.

UNLOCK: By unlocking a scene it is possible to delete, replace, or resave it. To unlock a scene you have chosen, click on UNLOCK, then click on the name box.

DELETE: Deleting removes a scene permanently from the disk. Use DELETE to remove scenes you no longer want to keep. To delete a scene you have chosen, click on DELETE, then click on the name box. You are asked to verify if you want to delete that scene. Select YES to delete it.

Note: Always be very careful when you delete a scene. Be sure you are deleting the scene you want to delete. Student files are locked on the disk provided. Unlocking or deleting any SPACE file will seriously damage your disks.

PRINT OPTIONS

This is the last option on the **Menu Bar**. Any scene can be printed. Before printing, check the SETUP to make sure your printer card and printer selections are correct. Also, make sure your printer is connected and turned on. To print a scene, click on PRINT from the **Menu Bar** and follow the directions.

Only if your setup is set to an Apple Imagewriter II printer will you be given the option to select LARGE COLOR, SMALL COLOR, or BLACK and WHITE printing. Of course, you must have a color ribbon installed before you can print in color. A large color image will cover about one half of a page of paper. A small color image will cover about one eighth of your printer paper.

Trouble-Shooting Guide

This section lists problems that sometimes occur, along with likely causes. If these solutions do not help, try running the program on another computer to determine if there is a hardware problem.

If the Program Disk will not load, check the following:

- Do you have the Program Disk in Drive 1?
- Is the disk inserted with the correct side up?
- Is the disk drive door closed?
- Is the disk drive properly connected to the computer?
- Is the computer's memory at least 128K?
- Does the computer have a high-resolution graphics chip?
- Has the high-resolution graphics block been connected to the 128K card?

If the program does not move past the title screen,

- Have you inserted a Student Disk?

If you cannot open another unit or file, check the following:

- Is the Student Disk on the correct side?
- Are all necessary files on the disk?

If the pointer does not move, check the following:

- Was your inputting device plugged in before loading?
- Is it correctly plugged in?
- Is your mouse card connected properly in Slot 4?

If the pointer has disappeared, check the following:

- Has the pointer been completely moved off the screen?
- Is the computer trying to print?
- Have you selected an actor, object, background, or word, and not yet clicked to position it on the scene?

If an actor has disappeared, check the following:

- Has the actor been completely moved off the screen?
- Did you press the DELETE key while the actor was selected?

If ESC will not open the Menu Bar, check the following:

Have you selected an actor, object, background, or word and not yet clicked to position it on the scene?

If an actor's animation has stopped, check the following:

- Has another actor, object, or label been placed on top of it?
- Are there too many actors in the scene?
- Was this character a duplicate created with the SPACE BAR? (Duplicates will not animate.)

If the computer displays an error message, check the following:

- Is the disk drive open?
- Is the correct disk in the drive?
- Are there too many objects, text letters, or actors in your scene?

If you cannot save a scene, check the following:

- Is the scene locked?
- Does a scene with the same name and number already exist?
- Is the Student Disk in the correct drive according to SETUP?
- Is the disk full?
- Is the disk damaged?
- Is the disk drive malfunctioning?

If the actors will not move, check the following:

- Are there too many actors and objects in the scene?
- Is the actor behind another actor, object, or label? (Only the character on the top will move).

If a scene will not print or prints incorrectly, check the following:

- Is the SETUP correct?
 - Is the printer's "select" button on?
 - Is the printer hooked up, turned on, and plugged in properly?
 - Is the paper centered properly?
 - If you were using another program, did you shut off the printer and restart it with your SVE Program Disk?
-

Permission to Reproduce

The purchase of this SVE Basic Skill Booster program carries with it the permission to reproduce the worksheets by the purchasing organization only for the exclusive educational use of that organization. Reproduction must be for noncommercial purposes only.

All material is protected by copyright. Reproduction, in whole or in part, for any other segment of the material, or for any other purposes, is prohibited unless written permission is obtained from the copyright owner.



SVE Basic Skill Boosters 20608-SB



Science Corner: Space Probe

Know These Words!

Getting Ready

Our Solar System

What It Looks Like

Time Zone

What Time Is It?

Changes

Changing Seasons

Moon Phases

Lunar Eclipse



Let the Sun Shine In

TV Special: Solar Report



- to review computer terms
- to decipher a word puzzle

Use with the program: Space Probe

Name _____

Know These Words!

Look at the words in the box at the bottom of the page. Try to find them in the puzzle. Circle them as you find them, then check off each word. The first one has been done for you.

S	O	P	O	I	N	T	E	R	P
T	W	A	S	A	N	M	H	M	R
U	A	T	A	L	O	O	S	E	O
D	V	T	V	I	P	N	S	M	G
E	E	P	E	Y	E	I	S	N	R
N	O	R	B	D	N	T	E	U	A
T	M	I	L	R	S	O	L	O	M
D	O	N	T	I	A	R	E	D	D
I	U	T	H	V	O	R	C	E	I
S	S	T	I	E	B	A	T	L	S
K	E	N	N	E	L	T	R	E	K
E	V	C	L	I	C	K	T	T	M
N	E	L	D	R	O	P	S	E	T

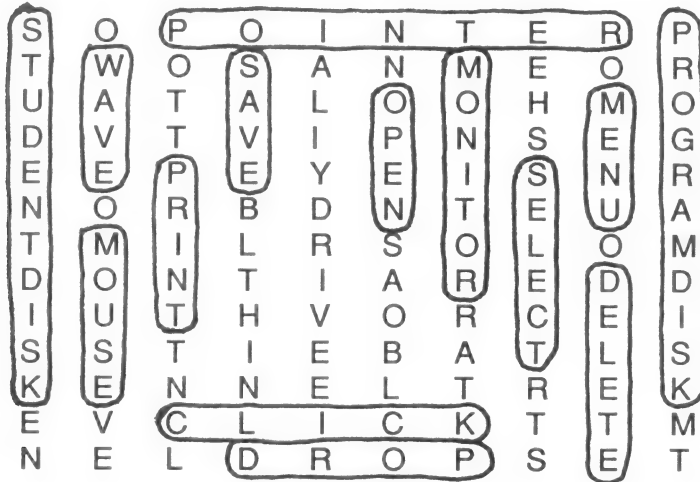
<input checked="" type="checkbox"/> save	<input type="checkbox"/> open	<input type="checkbox"/> program disk
<input type="checkbox"/> pointer	<input type="checkbox"/> menu	<input type="checkbox"/> student disk
<input type="checkbox"/> mouse	<input type="checkbox"/> monitor	<input type="checkbox"/> delete
<input type="checkbox"/> print	<input type="checkbox"/> select	<input type="checkbox"/> click
<input type="checkbox"/> wave	<input type="checkbox"/> drop	

Note: If you don't know these words, check the user's card before exploring *Space Probe*.

- to review computer terms
- to decipher a word puzzle

Use with the program: Space Probe

Answer Key



- to review program-user terms

Use with the program: Space Probe

Name _____

Getting Ready

Fill in the blanks with the following words.

print
scroll
open

drop
save
signs

pointer
replay

click
lose

Clues

- 1 If you move on to another scene without saving, you will _____ your work.
- 2 To keep your work, you must _____ it.
- 3 To _____ means to look for a file by clicking on the arrows.
- 4 We press the mouse button to _____.
- 5 If we want to _____ something, we click on it after it has been selected.
- 6 The small white arrow on the screen is called the _____.
- 7 To make a paper copy of our work, we have to _____ it.
- 8 If we _____, we can see a scene again.
- 9 _____ give us instructions and information.
- 10 We must _____ to go to a new unit.

Note: If you don't know any of these words, check the user's card before you start exploring *Space Probe*.

- to review program-user terms

Use with the program: Space Probe

Answer Key

- 1 lose
- 2 save
- 3 scroll
- 4 click
- 5 drop
- 6 pointer
- 7 print
- 8 replay
- 9 signs
- 10 open

Use with the program: Space Probe

Name _____

Our Solar System

Fill in each blank with the name of one of the planets listed below. Check off each planet as you use it. You may use the planets more than once.

- | | | |
|----------------------------------|----------------------------------|---------------------------------|
| <input type="checkbox"/> Mercury | <input type="checkbox"/> Neptune | <input type="checkbox"/> Venus |
| <input type="checkbox"/> Pluto | <input type="checkbox"/> Mars | <input type="checkbox"/> Earth |
| <input type="checkbox"/> Uranus | <input type="checkbox"/> Jupiter | <input type="checkbox"/> Saturn |

- 1 _____ has many rings around it. The rings are made of ice and rock.
- 2 On _____ we would have plenty of water to drink and air to breath.
- 3 _____ is very hot on one side and very cold on the other.
- 4 The planet closest to the Earth is _____.
- 5 _____ is the largest planet.
- 6 The heat of _____ comes from the inside, not from the Sun.
- 7 _____ is near Earth and is surrounded by a thick layer of clouds.
- 8 The smallest planet in the solar system is _____.
- 9 _____ is extremely cold. It has an icy surface.
- 10 _____ is a large ball of rock, ice, and gas.

- to review planet facts

Use with the program: Space Probe

Answer Key

- 1 Saturn
- 2 Earth
- 3 Mercury
- 4 Mars
- 5 Jupiter
- 6 Jupiter
- 7 Venus
- 8 Pluto
- 9 Neptune
- 10 Uranus

- to learn placement of the planets
- to make a model

Use with the program: Space Probe

Name _____

What It Looks Like

Design a large wall display of our solar system. Follow these steps:

- 1** Draw a large sun. Mount it on the wall.
- 2** Draw pictures of the other planets and put them in their correct position around the sun. Draw in the orbits of the planets.
- 3** Label each planet and its distance from the sun.
- 4** Add some of the other things we have in our solar system, such as stars, meteorites, or spaceships.
- 5** Think about the following: if you could travel to one planet, where would you go? In the space below, describe which planet you would visit and why. Make a list of the things you'd take with you on your trip to another planet. Say why you would need those things for that planet.

- to learn placement of the planets
- to make a model

Use with the program: Space Probe

Answer Key

1-4 Models should vary. Encourage students to produce models that are both scientifically accurate *and* colorful and creative.

5 Answers should vary. Encourage creative thinking.

- to understand time zones

Use with the program: Space Probe

Name _____

Time Zone

The sun rises in the east and sets in the west. Time zones make it easier for people to do things in rhythm with the sun. The United States has four time zones. Whatever time it is in Boston, it is one hour earlier in Chicago, two hours earlier in Denver, and three hours earlier in Seattle.

Below, fill in the times it would be in the other cities based on the times given.

- | | | | |
|-----------------------------|---------------------------|------------------------|---------------|
| 1 San Francisco <u>6 AM</u> | New York _____ | Salt Lake City _____ | Seattle _____ |
| 2 Denver _____ | St. Louis _____ | New York <u>1 AM</u> | Chicago _____ |
| 3 Seattle _____ | Boston _____ | Chicago <u>12 noon</u> | Denver _____ |
| 4 Salt Lake City _____ | St. Louis <u>Midnight</u> | New York _____ | Seattle _____ |

- to understand time zones

Use with the program: Space Probe

Answer Key

- | | | | |
|-------------------------------|---------------------------|---------------------------|-------------------------|
| 1 San Francisco <u>6 AM</u> | New York <u>9 AM</u> | Salt Lake City <u>7AM</u> | Seattle <u>6 AM</u> |
| 2 Denver <u>11 PM</u> | St. Louis <u>Midnight</u> | New York <u>1 AM</u> | Chicago <u>Midnight</u> |
| 3 Seattle <u>10 AM</u> | Boston <u>1 PM</u> | Chicago <u>12 noon</u> | Denver <u>11 AM</u> |
| 4 Salt Lake City <u>11 PM</u> | St. Louis <u>Midnight</u> | New York <u>1 AM</u> | Seattle <u>10 PM</u> |

- to develop an understanding of international time zones
- to produce a simple chart

Use with the program: Space Probe

Name _____

What Time Is It?

1 To explore what time it is in different parts of the world, take a globe and a flashlight. Find where you live on the globe. Mark the spot with a piece of tape. Shine the flashlight there. This is what earth looks like when it is day where you live. Now look at the globe. Where would it be midnight? Where would it be 6 PM (sunset time)? 6 AM (sunrise time)?

2 Now go exploring with a partner. Locate another point on the globe and shine the light there. When it is daytime at this point, figure out where on the globe it is midnight, 6 AM, and 6 PM.

Write the names of the places in this chart.

Starting point	midnight	6 AM	6 PM
1 hometown	_____	_____	_____
2 _____	_____	_____	_____

Science Corner

Skill Objectives:

- to develop an understanding of international time zones
- to produce a simple chart

Use with the program: Space Probe

Answer Key

Answers will vary.

- to develop an awareness of seasonal changes

Use with the program: Space Probe

Name _____

Changes

Choose a place you know well (it can be the place where you live). In the space below, draw how it looks each season. Underneath, write a short description of each.

Spring

Summer

Fall

Winter

Science Corner

Skill Objectives:

- to develop an awareness of seasonal changes

Use with the program: Space Probe

Answer Key

Answers will vary.

- to check understanding of the seasons

Use with the program: Space Probe

Name _____

Changing Seasons

As the earth orbits the sun, the seasons change because the earth is tilted.

- 1 When it is summer in the United States, what season is it in Australia? When it is winter in Australia, what season is it in the United States? Why?
- 2 Why is it always warm near the equator?

Library Work

Choose a country near the equator. Go to the library and find out about the seasons in that country. Take notes on the back to use for a report. What kinds of clothes would you need there? What kinds of food grow best there?

- to check understanding of the seasons

Use with the program: Space Probe

Answer Key

1 When it is summer in the United States, it is winter in Australia. When it is summer in Australia, it is winter in the United States. This is because the axis of the earth is tilted, and the earth revolves around the sun. Different places on Earth get more sun at different times of the year.

2 Countries near the equator are always warm because the amount of sun there is about the same all year long.

Library Work

Answers will vary. Encourage students to think of what the equator is, and how it affects the climate, economy, and culture of the places close to it. Also discuss how countries far from the equator are affected by it.

- to observe the different phases of the moon

Use with the program: Space Probe

Name _____

Moon Phases

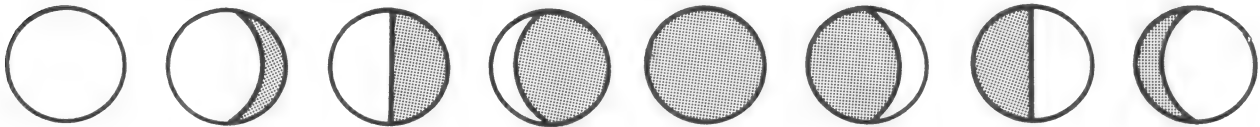
1 Write the correct name under each moon phase.

last quarter
waxing gibbous

waning gibbous
first quarter

full moon
waxing crescent

waning crescent
new moon



2 Keep track of the moon's phases for one month. Use the calendar below. First fill in the dates for this month. Draw in what you see each night. (You can check the newspaper on cloudy nights.)

SUN	MON	TUE	WED	THUR	FRI	SAT

- to observe the different phases of the moon

Use with the program: Space Probe

Answer Key

1



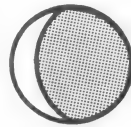
full moon



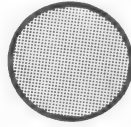
waning gibbous



last quarter



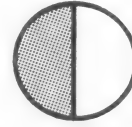
waning crescent



new moon



waxing
crescent



first quarter



waxing gibbous

2 All student calendars should look the same. Students can compare in small groups.

- to learn about how a lunar eclipse occurs

Use with the program: Space Probe

Name _____

Lunar Eclipse

Like the earth, the moon doesn't get its own light. It gets it from the sun. In a lunar eclipse, the earth is between the sun and the moon.

1 In the space below, draw a picture of a lunar eclipse. Then draw dotted lines to show where the moon gets its light.

2 Why can't we see the moon during a lunar eclipse?

- to learn about how a lunar eclipse occurs

Use with the program: Space Probe

Answer Key

1 Drawings should show earth positioned between the sun and the moon. Dotted lines should be from the sun towards earth.

2 We can't see the moon during a lunar eclipse because the earth blocks the light from the sun.

- to review some of the special features of the sun

Use with the program: Space Probe

Name _____

Let the Sun Shine In

Fill in each blank with the feature of the sun being described (you'll use each word more than once):

solar flare

solar corona

sunspots

- | | |
|---|-------|
| 1 explosions of hot gas on the surface of the sun | _____ |
| 2 outer edge of the sun's atmosphere | _____ |
| 3 change size | _____ |
| 4 caused by uneven burning of gases | _____ |
| 5 sometimes slow down spacecraft | _____ |
| 6 looks like a ring around the sun | _____ |
| 7 move around the sun's surface | _____ |
| 8 seen during a solar eclipse | _____ |
| 9 dark spots | _____ |
| 10 can be photographed through a telescope | _____ |

- to review some of the special features of the sun

Use with the program: Space Probe

Answer Key

- 1 solar flare
- 2 solar corona
- 3 sunspots
- 4 sunspots
- 5 solar flare
- 6 solar corona
- 7 sunspots
- 8 solar corona
- 9 sunspots
- 10 sunspots

- to research the sun's features

Use with the program: Space Probe

Name _____

TV Special: Solar Report

Work with two friends. Imagine you are a team of solar experts. You are going to do a TV special about the sun.

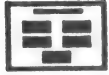
- 1** Go to the library. Research solar flares, solar coronas, and sunspots. Decide beforehand who will research each. Take your notes on the back of this page, and write a brief report about your topic.
- 2** Practice for your show. Prepare any illustrations and props you need.
- 3** Take turns presenting your TV shows. Listen carefully and take notes in the space below. Ask questions of the "experts" if there is something you don't understand!

- to research the sun's features

Use with the program: Space Probe

Answer Key

Answers will vary.



CLICK on this to go to the Selection Screen. From there you can choose another unit to work on.



CLICK on this to go to the Notebook, where you can write down what you have seen, learned, or are thinking about.



CLICK on this to go to the next screen.



CLICK on this to go back a screen.



CLICK on this to clear or reopen a screen.

SVE

Society For Visual Education, Inc. 1345 Diversey Parkway, Chicago, Illinois 60614. A Business Corporation.
Copyright MCMLXXXIX Society For Visual Education, Inc. All Rights Reserved.

Printed in U.S.A.

Science Corner

Program Features

To WAVE something, CLICK on it, MOVE it back and forth over a target, put it back where you want it, CLICK on it again, then MOVE the pointer away.



CLICK on this to see general directions or information.

CLICK on the information to remove it from the screen.



CLICK on this to see more directions or information.

CLICK on the information to remove it from the screen.



CLICK on this to see questions to think about.


CLICK on the questions to remove them from the screen.

COPY

To copy an ACTOR or OBJECT in your scene, CLICK on it, then press the SPACE BAR.

Note: The copy of the actor cannot move.

WRITE

Use the keyboard to write. Put the pointer where you want to begin writing. When you get to the end of a line, press RETURN to go to the next line. CLICK on  in the Menu Bar to find words to label your scenes.





DELETE (to erase)

Press this key to delete a previous letter, number, or character (backspace delete).

Hold down DELETE to erase a line of words.


To delete a line of text other than the one you are on, place the pointer where you want to begin, CLICK on that spot, then press DELETE.

OPEN (to see)

To OPEN a file, CLICK on . Then CLICK on OPEN. CLICK on  or  to see your file names. When you see the file you want, CLICK on  to see the numbers. When you see the number of the file you want, CLICK on OPEN, or anywhere on the bar.

SAVE

TO SAVE a scene, first pick a name and number for your file. **If you change or leave a screen before saving it, your work will be lost.**

CLICK on , then CLICK on SAVE. Move the pointer to NEW NAME and CLICK again. Type your new name. Move the pointer to NEW NUMBER and CLICK. Type your new number.

Note: You can save only one screen at a time. CLICK on the word SAVE or anywhere on the bar to save your file.

PRINT


Turn on the printer. Then CLICK on . CLICK on your print option and follow the instructions.

USER'S CARD

 The pointer is used to **MOVE**, **SELECT**, or **DROP** things on the screen.

To **MOVE**

Mouse—Move the mouse.

Keyboard—Press  keys. Press  key at the same time to move faster.

To **SELECT**, place the pointer on the word or object and **CLICK**, like this:

Mouse—Press the mouse button.

Joystick/KoalaPad/Touch Window—Press the **CONTROL** button.

Keyboard—Press the option key (or  key).

To **DROP** something, **CLICK** or press again.



MENU BAR The Menu Bar has six things you can choose: **ACTORS**, **OBJECTS**, **BACKGROUNDS**, **WORDS**, **DISK**, **PRINT**.

ESC Press this key to open or to go to the Menu Bar. To close or remove the Menu Bar from the screen, press **ESC** again.

Note: When typing in text on the screen, you must press **RETURN** to activate the **ESC** key.



CLICK on this to see the **ACTORS**.

ACTORS are things that move. **CLICK** on  or  to see all the **ACTORS**. To add an **ACTOR** to your screen, point to it, **CLICK**, and move it where you want it. To **DROP** it, **CLICK** again.



CLICK on this to see the **OBJECTS**.

OBJECTS are things that do not move on their own. Follow the same steps as for **ACTORS**.



CLICK on this to see the **BACKGROUNDS**.

BACKGROUNDS can be used to change the background color of a scene. Follow the same steps as for **ACTORS**.



CLICK on this to see the **WORDS**.

WORDS are labels or names that you can add to your scene. Follow the same steps as for **ACTORS**.

LIMITED WARRANTY

Mindscape Educational Software and SVE warrant to the original purchaser of this computer software product that the recording medium on which the software programs are recorded will be free from defects in materials and workmanship for six (6) months from the date of purchase. Defective media returned by the purchaser during the six (6) month period will be replaced without charge, provided that the returned media have not been subjected to misuse, damage, or excessive wear.

Return defective media to point of purchase. You must include a dated proof of purchase, a brief statement describing the defect, and your return address.

Mindscape Educational Software and SVE do not warrant that the programs will meet the purchaser's specific requirements. Any statements made concerning the utility of the programs are not to be construed as express of implied warranties.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED.

IN NO EVENT WILL MINDSCAPE EDUCATIONAL SOFTWARE OR SVE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND IN CONNECTION WITH THE SOFTWARE PRODUCTS.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Address all correspondence to:

Mindscape Educational Software
A Division of SVE
1345 Diversey Parkway, Chicago, Illinois 60614-1299
312/525-1500

SOFTWARE WARRANTY INFORMATION

Name _____ Title _____

School/Organization _____

Address _____

City _____ State _____ ZIP _____

School Phone (____) _____ Fax (____) _____

Name of product purchased: _____

Place of purchase: _____ Date of purchase: _____

Machine type:

() Apple II () Macintosh () IBM
() Tandy () Other _____

Grade level:

() Elementary (K-6) () Jr. High (7-9) () Secondary (10-12)

How did you learn of this program?

() Catalog () Exhibit () Advertising
() Salesperson () Product review () Friend/colleague
() Other _____

PLEASE FILL OUT THIS CARD AND MAIL IT TODAY!

THANK YOU FOR BUYING THIS QUALITY SOFTWARE PRODUCT!

Thank you for purchasing this software product from
Mindscape Educational Software and SVE.
We're dedicated to providing you with high quality software
to meet your educational needs. If you have suggestions or ideas
for products to meet those needs, let us hear from you.
Together, we can make a difference in the education of your students.

WE HOPE YOU ENJOY OUR SOFTWARE!



MINDSCAPE
EDUCATIONAL
SOFTWARE
A Division of SVE



**NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED
STATES**

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 10134 CHICAGO, IL

POSTAGE WILL BE PAID BY ADDRESSEE

MINDSCAPE EDUCATIONAL SOFTWARE

A Division of SVE

1345 Diversey Parkway

Chicago, Illinois 60614-1299

