

**LEONARDO PROJECT**  
**of the**  
**Utah Science/Arts Center\***

**SUMMARY**

Utah's Science/Arts Center (US/AC) will provide environments and opportunities for visitors to explore, discover, experience and understand science, art, and technology. Building on the cohesive theme of *Origins*, US/AC will show how subjects and fields of thought are integrated and interdependent.

The Utah science/arts center will be unique. It is not a copy, a duplicate or a clone of anything that exists anywhere in the world today. It just cannot be treated as a typical building design or architectural plan. It is a *living, evolving, interactive structure* and instituteionw hich will grow with this community well into the 21st century.

The first of the 21st century science centers will celebrate, encourage, and expect *creativity from every visitor*. The objective is nothing more than a transformation of the visitor. We expect them to leave the facility a very different individual from when they entered.

US/AC is a major project which will take many years to develop and complete. The Leonardo Project is a mini US/AC on wheels -- a preview -- or taste -- for the region's residents and visitors. Leonardo will travel throughout the intermountain west, not only providing educational outreach but generating excitement and interest in the upcoming Gateway Center.

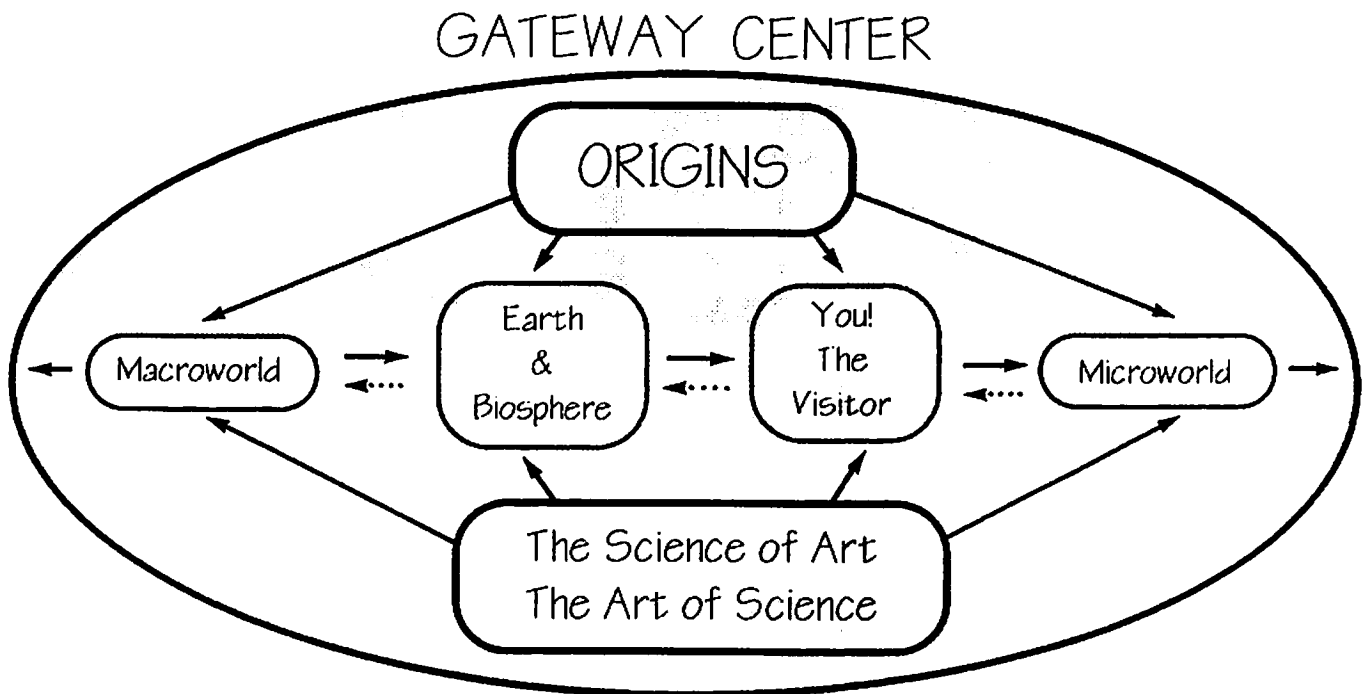


Figure 1. Connections between the theme Origins and the four major fields in the Utah science/arts center.

\* also called Gateway Center: The Learning Depot.

## OVERVIEW

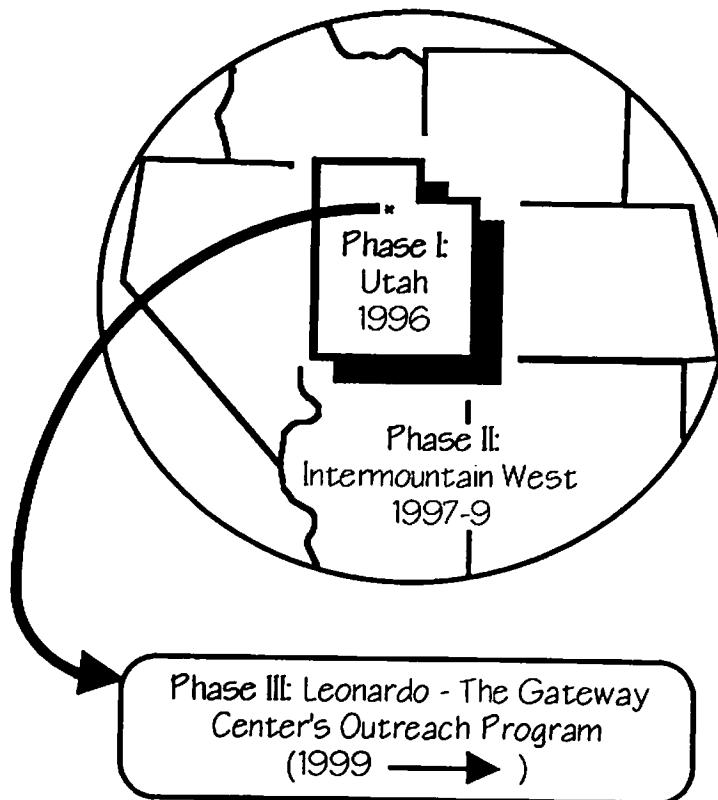
### Phase I (1996, 7,500 ft<sup>2</sup>):

The first phase of the Leonardo Project will focus on Utah and Utah's State Centennial celebration. Phase I costs about \$600,000 plus annual operating costs of approximately \$450,000. First full year operating revenues are estimated at about \$400,000.

### Phase II (1997-1998):

Phase II will expand the Leonardo Project to the Intermountain West states which border Utah, cover a region within a roughly 350 mile radius of Salt Lake City, ranging from Boise and Pocatello in the north to Las Vegas and Durango, Colorado, in the south; as far east as Rock Springs, Wyoming, and Grand Junction, Colorado; and as far west as roughly Winnemucca, Nevada.

The second phase is expected to be financed via major support of the National Science Foundation and several major national and regional foundations. This would involve an expansion of Leonardo from a 7,500 square foot implementation (Phase I) to 10,000 square foot implementation in Phase II. Annual operating costs involving the larger regional area are \$600,000 per year. The implementation cost for the Phase II expansion is estimated at \$400,000.



### **Phase III (1998 and beyond):\***

Phase III is the Bridge to the Utah science arts center. Phase III involves an annual operating budget of \$600,000 per year, which includes \$130,000 per year in exhibit activity, maintenance, and upgrading. The Leonardo Project is a permanent outreach program of the Utah science/arts center. The mother ship will be the Gateway Center.

### **PHASE I DETAILS (7,500 square feet) January, 1996 Implementation**

- *The Leonardo Facility:*

Leonardo is designed to be implemented in a large open structure, such as a typical gymnasium or exhibit hall. It is also flexibly designed so that it can be incorporated in long narrow spaces, such as the major walking area in a shopping mall. It is also designed in an hierarchical, educational bottom line fashion -- a particularly unique theme of the Utah science/arts center.

- *The Leonardo Card -- Leonardo's Tracking System:*

Upon entering the facility, or as a result of promotional and advance efforts before Leonardo comes to town, each visitor will have a card encoded with their personal information, which is updated at various activities in Leonardo. Access to certain exhibits and activities will require completion of a particular set of prerequisites. The visitors' involvement with various exhibits and activities will be automatically recorded on the card. The personal data and experience information on the card will also allow many of the exhibits to be more personalized; the exhibit/activity will "recognize" the visitor. The card system also provides an automatic way of tracking exhibit activity, popularity, and effectiveness, and will provide objective information as to which exhibits need to be enhanced, replaced, or removed. It will also provide information on which concepts need further development or greater emphasis, and which can be de-emphasized or even eliminated. This information will allow Leonardo to tune its exhibits and activities in future years to the particular needs and interests of the local community. The card may also permit visitors to make gift shop orders at particular exhibits.

- *Leonardo's Village: (700-1,000 square feet)*

A city square providing the entrance foyer, information, crowd control, and entrance/admission services. Small group interactions with artists, scientists, storytellers, and art and technology activities will also be here. A model and other exhibits on the full Utah science/arts center will also be available.

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\* Utah Governor, Michael Leavitt: "As we enter a new high tech world, education and training becomes even more important, and we must...take a quantum leap forward." (Inaugural Address, January, 1993.)

- *Macroworld -- The Cosmos & Space (2,000 square feet):*

A star lab mini-planetarium, telescope facility, and a variety of activities dealing with the Cosmos and Space, including a You, the Astronaut! section.

- *Earth & Biosphere (1,000 square feet):*

Activities relating to the environment, water, weather, the ecosystem, earthquakes, and planet Earth.

- *You! The Visitor (2,000 square feet):*

An array of activities related to the visitor based on anatomy, physiology, health, medicine, sports and physical performance, and the senses.

- *Microworld(500 square feet):*

What Leonardo could not see -- an introduction to the Microworld.

- *The Truck Itself (700 square feet):*

The truck may contain special, highly sensitive exhibits, accessed only by those visitors who have earned the right of access by completion and experience of other components of Leonardo. The truck will also include activities related to energy and transportation.

- *Little Leonardo's -- a Magic School Bus (The Children's Museum of Utah):*

Exhibits and activities for preschool and elementary students.

- *Leonardo's Shop (700 square feet):*

An extensive shop with a wide range of educational products and kits related to Leonardo's exhibits and activities.

- *Leonardo's Library (700 square feet):*

A major resource center and library in collaboration with the local library system, including Leonardo's direct INTERNET connection, teacher and docent training facilities, office, and general command center.

- *The INTERNET Connection:*

Leonardo will have two means of connection to the INTERNET and the Information Highway:

- a conventional modem telephone line means, and;
- a direct satellite downlink and fiber optic link for high speed, nearly instantaneous communication.

The satellite dish and related equipment will be mounted directly on the truck and will be connected to a number of the exhibits and activities in Leonardo, as well as to the resource center.

- *Volunteers/Docents:*

Most of the development, construction, and implementation of Leonardo on Wheels will utilize volunteers, donations, and gifts from the community. By mobilizing the state's students, teachers, and other members of the community to work on interactive, hands-on projects, we are confident of obtaining a range of absolutely outstanding activities for Leonardo at minimum cost. The development of such activities is in itself a major science, art, and technology learning and creative experience.

The outreach program of the Leonardo Project includes an emphasis on having the local communities involved in the educational and operational aspects of Leonardo on Wheels. An extensive docent training and utilization program will involve local talent and expertise in the planning, scheduling and staffing of the project and in the implementation of its educational goals. Docents will be recruited from local communities. Students who serve as docents may be eligible to receive academic credit for their experience and efforts.

- *Leonardo's Theatre:*

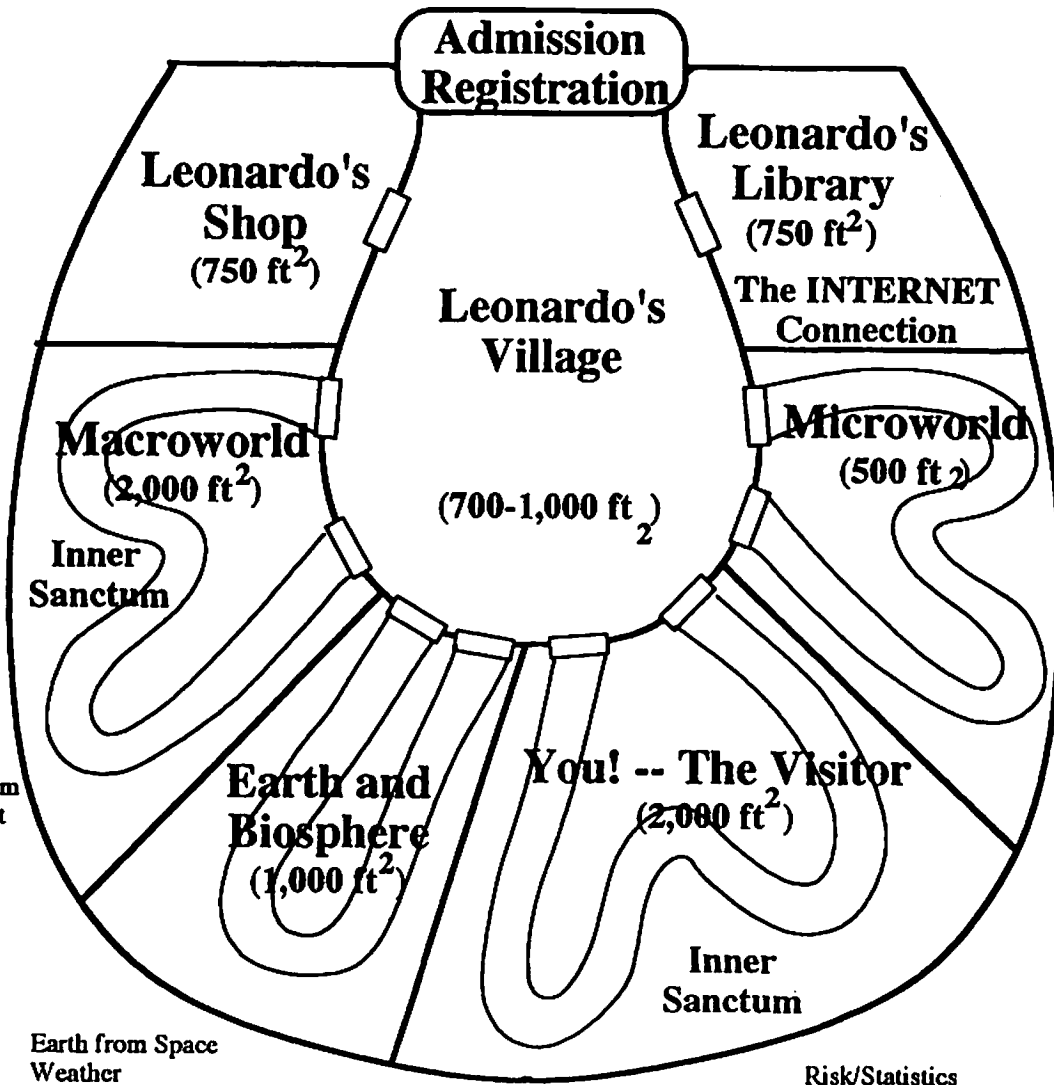
Leonardo's Theater includes a theatrical production called Meeting of Minds. Based on the award winning PBS series of the same name it will showcase the appearance of Leonardo da Vinci himself, along with other historical characters, including a special "Utah Leonardo." Steve Allen, the creator and host of the PBS series, will guest host the first production. Premiering at Abravanel Hall in Salt Lake City, the production will feature a lively discussion of Art and Science as seen by and experienced by our distinguished guests. This program will become an annual event of the Gateway Center. Educators can produce their own Meeting of Minds programs at their local schools and communities. A variety of other dramatic and theatrical activities will also be available, some of which may involve professional actors, but the majority will involve the local community.

- *Utah's "Leonardos:"*

To help celebrate Utah's centennial year, 1996, there will be special exhibits and activities around Utah's Leonardos, Utah's contributions in Science, Art, and Technology. Rather than didactic displays commemorating the Utah accomplishments, a select number of Utahns will be commemorated by having their discoveries and activities experienced in a hands-on, interactive mode, characteristic of the entire Leonardo Project.

# THE LEONARDO PROJECT

(~7,500 ft<sup>2</sup>)



Hawking  
Starlab  
Telescope  
Space Simulator?  
Patterns in Space/  
Powers of 10

Lunar Leaper  
Forces & Momentum  
You! The Astronaut

Earth from Space  
Weather  
— Utah the Movie  
Energy  
— Earthquakes  
Minerals & Atoms  
Water  
Recycling  
Math/Exponents/Patterns

Cloud Chamber  
Atoms & Molecules  
Scanning Probe  
Microscopy  
SEM Microscopy  
Optical Microscopy  
Micro-Cosmos

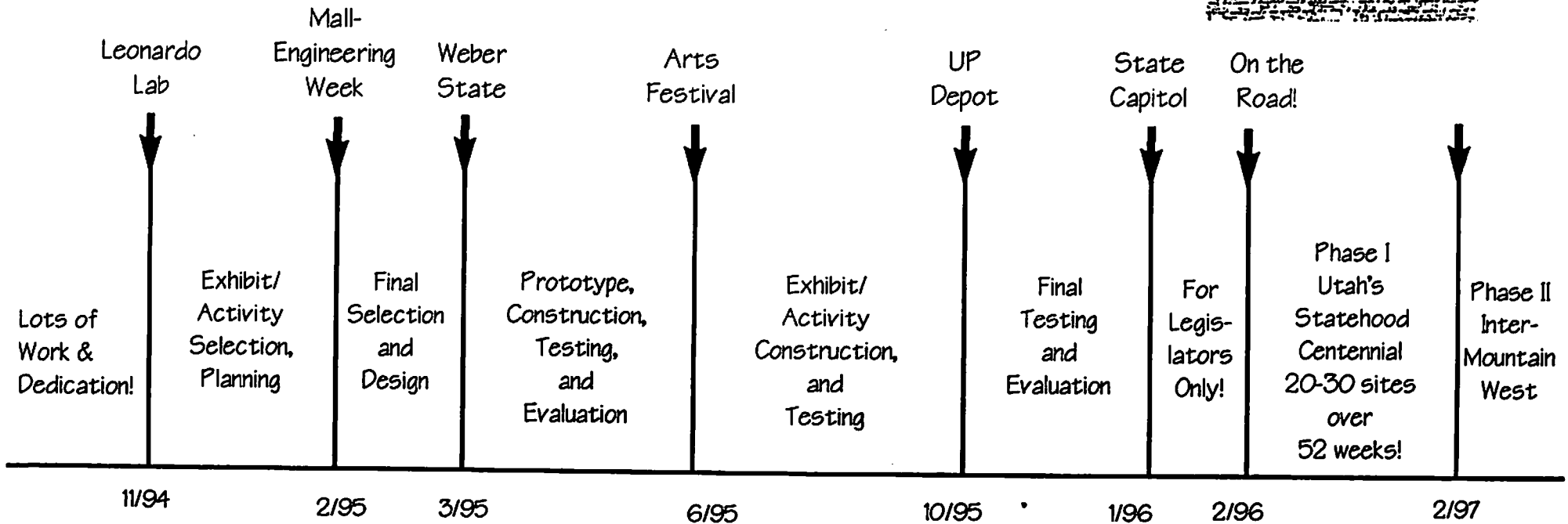
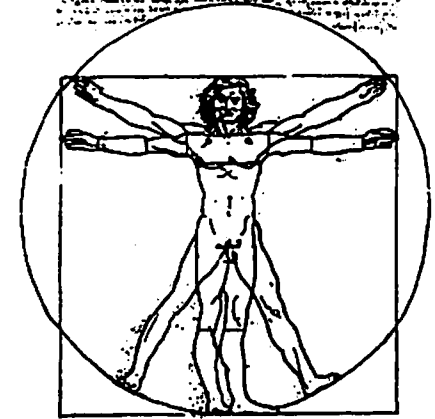
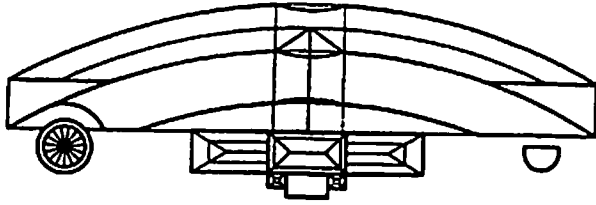
Risk/Statistics  
Chaos and Your Heart  
Imaging and Anatomy  
Sound and Music  
Vision, Light, & Art  
Personal Morphing  
Health & Performance  
Dance & Mechanics

**Little Leonardos --  
Magic School Bus**

**Truck  
(alternative energies)**

# The Leonardo Project

## The Gateway Center's Traveling Science/Arts Experience!



Time (not to scale)