A program in open format could be used in teaching music. Five lines might be drawn by the computer on a display screen. The child introduces notes of his choice on the five lines with a pointing device (mouse). The computer interprets the notes as music and plays the music back to the child from the central processor. Then a column of words appears on the right of the screen with choices of the rhythm, "1/4", "3/4", "march time", "6/8", and "8/12", in which the child would like to hear his theme. The child selects one of these with his mouse, and he hears the theme played in the rhythm of his choice. An additional possibility appears - "make your own". If the child selects the "make your own" light button he enters the rhythm of his choice at the keyboard. He may put in 312/698 time or any other arbitrary choice. This is taken by the machine as the desired rhythm and his theme is played thus. Then the column of words on the right vanishes and another column appears designating choices of instrument. The child sees the words "violin", "tuba", "cello", "recorder", "clarinet", and "trumpet". By selecting any of these words with his mouse he hears his theme played in the rhythm of his choice and the instrument of his choice. Again, one of the possibilities offered on the screen is, "make your own". If he selects this, the waveforms of single notes of the instruments appear on the screen. Now he sees the harmonics on the violin, the relative purity of the sign wave of the recorder, and the different overtones that distinguish the other instruments. The child is given a working space at the bottom of the screen to construct his own waveform. He draws the acoustical characteristics of an instrument of his own invention, at random or by careful modification of the frequencies appearing above. He then hears his theme played in the rhythm of his choice by the instrument of his own choosing or invention. Again the column of words on the right vanishes and is replaced by one which asks for his choice of harmony, according to rules of Bach, Hindemith, or Schonberg's twelve-tone scale. The computer then composes counter themes from random notes, rejecting those sequences that violate the selected rules of harmony. The child hears his theme harmonized according to his own rules, played in his rhythm by the instrument of his choosing.

In the linguistic area, second-grade poetry is taught by a program in open format. The program is designed to teach directly at the student's level without going through the verbal or rational forms. The computer, with its display, is capable of teaching directly at these levels without going through the verbal or rational forms. Thus, for example, it was possible to teach small children the concepts of conic sections, polynomials, degeneracy, slope, curvature, inflections, continuity and other abstract mathematical quantities without the children even knowing the words with which to describe them. Later on the teacher might introduce the appropriate terminology in discussing the experience. At that time, she might ask questions such as: "What are the minimum number of real roots of an odd order polynomial?" or "How do you resolve degenerate roots?" or "What relationships do the quadratic forms hold to the sections obtained by cutting a carrot?" Children of all ages were able to answer questions of this type, not by having learned the material verbally, but by consulting the memory of their experiences at the display.

Conventional teaching emphasizes verbal and rational components of the thought process. Still, experience teaches us at much deeper levels, and it is often necessary for the student to translate from the verbal-rational expression of the subject matter into his own experience by a process of synthesis and imagination. The computer, with its display, is capable of teaching directly at these levels without going through the verbal or rational forms. Thus, for example, it was possible to teach small children the concepts of conic sections, polynomials, degeneracy, slope, curvature, inflections, continuity and other abstract mathematical quantities without the children even knowing the words with which to describe them. Later on the teacher might introduce the appropriate terminology in discussing the experience. At that time, she might ask questions such as: "What are the minimum number of real roots of an odd order polynomial?" or "How do you resolve degenerate roots?" or "What relationships do the quadratic forms hold to the sections obtained by cutting a carrot?" Children of all ages were able to answer questions of this type, not by having learned the material verbally, but by consulting the memory of their experiences at the display.

Within the context of the Gestalt Learning Process, attending to reality was central to the experience. Essentially this meant using the SRI facilities as another environment in which the child and the teacher could each experience his own reality. The machine provided an important time-space dimension through which both the child's reality and the teacher's reality could emerge, be explicit, and be attended to.

The machine's reality became a crucial factor in giving both the child and the teacher a setting in which each could begin that which he would have otherwise projected out to other people or things in his world. This particular facet of projection deserves a closer look in regard to the machine's nature which of itself causes the person to view his reality in the dynamic dimension in which it rightfully exists. The machine provides the static backdrop against which a person can experience his dynamics in a way that is otherwise impossible. For the moment, the machine's static nature reduces the three-body problem (I, you, we) to a solvable two-body problem (I, we).

This notion of the machine's static reality is not the same as a static nature is commonly imagined. It must be remembered that each program was designed to operate on student stimuli, within the parameters of the program. In essence, each program carried with it its own process, i.e., the machine configurations and the basic boundaries of the program itself. Yet within this aspect of process, each child brought his content, his style and level of functioning, his individual cognitive and affective processes. He brought his reality, which by the very nature of "what is now," was a dynamic, constantly changing reality of the moment. The programs were designed to allow for open-ended, experimental, experiential learning; it was the child alone who could supply the open-endedness, the experimentation and the experiencing.