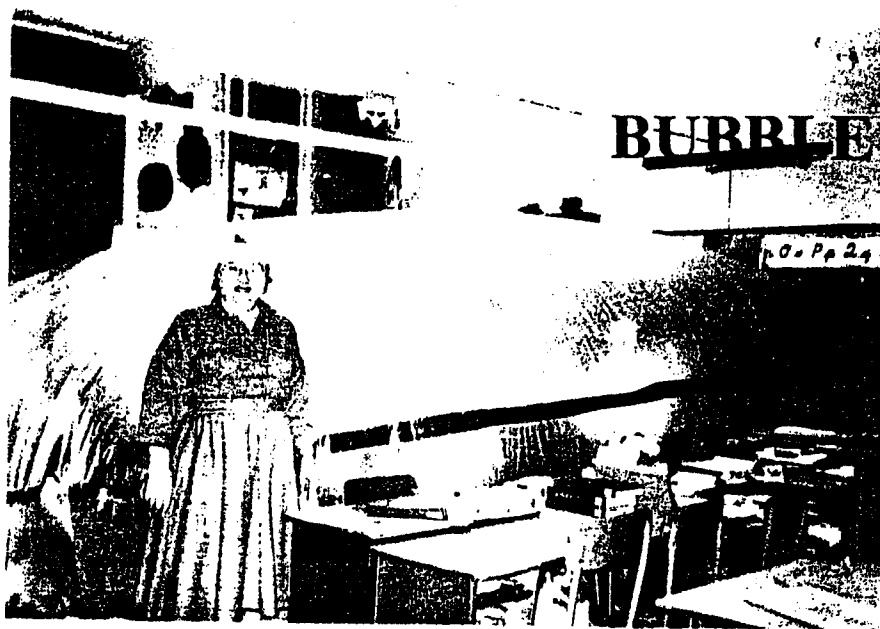


BUBBLE CLASSROOM



Objectives

Students will experience what living in an enclosed environment is like.

Students will learn how to socialize in a close relationship with peers without adult supervision.

Students will learn to plan a mission and carry out that mission within a specified time.

Students will learn the reasons for planning, food selection, keeping supplies in order, and working with others.

Students will learn how to evaluate their own mission and see where improvement can be made.

PLANNING

Planning for the bubble classroom took two weeks of daily planning. The third and fourth graders met together to get acquainted. Then four crews of 15 students were selected. Commanders for the crews were fourth graders. Pilots were third graders. Co-pilots could be third or fourth graders. Teachers guided the selection of the crews.

Each crew then met as a crew and planned its mission into space. The commander of each crew wrote up the mission which its crew selected.

All four crews met together again to go over all the expectations of the mission. Teachers guided the students in determining correct behavior in the bubble classroom.

Each student was allowed two Extra Vehicular Activities (EVAs). This was restroom break. If a third EVA was necessary, the commander had to approve of this request. EVA-Extra Vehicular Activity -- outside the bubble classroom.

Each crew went into the space classroom at 9:00 A.M. and touched down at 2:00 P.M. Each crew was given a send off by both classrooms and welcomed back by all students.

Each student was allowed to take a shoebox of personal items.

A-menu was planned for a well-balanced meal. Water was available for all at any time.

The entire week's curriculum for both classes was centered on aviation and aerospace activities.

CREW MISSIONS

Each crew designed its own patch. The patches were coloured by crew. Patches were laminated and given to each crew member. Each student wore a star with his/her name on it. These stars were laminated and pinned to their suits.

Commanders were given a special cap to wear. Pilots and co-pilots were given special caps to wear.

Commanders and pilots contacted MISSION CONTROL for take-off and touch downs. Only those two could call mission control. Mission control was a row of desks in the classroom outside of the bubble. They had headsets to contact each other. We also used walkie talkies.

FLIGHT SUITS

Each student on the mission had a white flight suit. The suits were paper painters' suits. These were donated by a contractor. Sock paint helmets were also donated by a contractor for the head of each student.

Shoes had to be left off as they entered the classroom.

MENU

Parents were notified of this event and asked to send \$1.00 for their child's lunch for one day.

Food was purchased at Cosco Discount Store. Water was placed in thermos bottles for instant lunch. A large water jug of drinking water was in the bubble classroom.

Students had to prepare lunch. Then they had to clean up and store garbage.

CREW SCHEDULE

Each crew member needs to:

1. Read for $\frac{1}{2}$ hour
2. Do one toy in space experiment
3. View plants through microscope
4. Sleep or rest $\frac{1}{2}$ hour

5. Exercise $\frac{1}{2}$ hour
6. Eat $\frac{1}{2}$ hour - prepare food and clean up
7. Complete mission work - about 2 hours
8. Make new constellations on own telescope.
9. Play bingo (Sit down to hear directions)
10. Play cube probability

ASSIGNMENTS

Each student in and out of the bubble classroom had an orange booklet which had to be completed. Pick any aviation or aerospace assignments relating to your classrooms curriculum.

See crew schedule that was necessary during the time in the bubble classroom.

Students, when not in the classroom space ship, had to finish orange booklets. They also made kites during this time. Each student also drew the earth as it looked from space.

DEBRIEFING AND EVALUATION

After the four days in the classroom, the students met as a group and discussed the good and bad aspects of the missions.

Each student then filled out her/his own evaluation of the time in the bubble classroom.

As a whole, each student was happy to have had the opportunity to participate in the enclosed environment of the bubble. Parents were excited about the project. It was shared with the entire school of Menlo Park, Portland, Ohio, USA.

BUBBLE CLASSROOM ITSELF

The bubble was made by Mrs. Mosen's Young Astronaut Chapter. They allowed the two classrooms to use it.

SCIENCE EXPERIMENTS

Use whatever science experiments you are doing in your classroom. We had pond water and tomato plants to examine under the microscope. We also had a live tarantula in the bubble classroom.

MATERIALS NEEDED

4mm clear polyethylene sheeting-two rolls of 2" duct tape (cloth is best) - about 75' for original taping and extra for repairs if needed.

Window fan (16 or 20 inches square)-two or more speeds is desirable-old blankets or bedspreads to put under the «bubble» unless the floor is carpeted.

Carpet pieces, foam or blankets to put on the floor inside the «bubble».

A large room (gym or multi-purpose room) needed to lay out the «bubble» pieces before taping begins.

SIZE

... about 20' by 15' - or adapt to the size of your classroom space.

... when inflated the «bubble» will be five and a half to six feet high.

... the «bubble» will hold up to 40 persons, depending on the size of the individuals and the activity going on.

ASSEMBLING THE BUBBLE

Cut the plastic as shown on the drawing, cutting the top portion which will be used later for the tube between the «bubble» and the fan.

Tape the plastic together as shown in the drawing and fold.

Make a tube of the remaining plastic. The tube may be any length desired. Tape the plastic to the outside of the fan on all sides.

Cut a slit horizontally in the side of the «bubble» near the bottom. Tape the fan tube to the «bubble». Placement of the fan and tube depends what is convenient for your classroom.

Turn on the fan and inflate the «bubble». To make a slit for the door, use a scissor to cut a horizontal slit large enough for the tallest person to enter. Place tape on the edges of the slit for reinforcement.

