CONTACT NEWSLETTER VOL I Number 2 March 1990



SMITHSONIAN FUNDS "COTI jr" PROJECT

The Office of Interdisciplinary Studies of the Smithsonian Institution has agreed to provide a \$6250 grant to CONTACT in order to fund a pilot educational project to develop the Cultures of the Imagination (COTI) simulation as part of an intermediate school level curriculum. CONTACT would like to acknowledge Wilton Dillon, Neil Kotler and George Robinson of the Smithsonian Institution for their support and interest in this project. CONTACT participants are Darlene Thomas, Consulting Anthropologist, Barbara Sprungman, Science Curriculum Specialist, and Greg Barr, CONTACT CEO. Rely Rodriguez, Science Supervisor for Area Two, as well as Math and Science Department Chairmen, Kim Cox, Louise Morello, James McMillan, and Kitty Lou Smith are making the project a reality for the children of Fairfax County in Northern Virginia.

A MOTIVATIONAL TOOL

Cultures of the Imagination is unique in its ability to stimulate crossdisciplinary research and co-operation in a single exercise. The creation of a futuristic human culture and an alien life-form demands a synergistic effort from both the so-called "soft" and "hard" sciences. In addition, it requires the support of creative individuals from all artistic disciplines to construct the visible image of both the human and alien cultures.

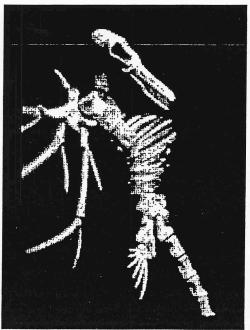
To participate in COTI, students are asked to specialize in a particular discipline while maintaining a high level of awareness of how their discipline interacts with others. They will become more and more involved in preparing for the final role-playing simulation where they will tangibly experience how all the elements they have created come together.

Cultures of the Imagination is a highly exciting learning process which can be used effectively to stimulate latent student interest in many disciplines. In order to devise believable future human and alien civilizations, the students must learn and apply the laws of physics, chemistry and biology. In creating these future human and alien cultures they will acquire a basic understanding of the principles of psychology, anthropology, and sociology. They will need to master the concepts of history and language. They will become familiar with space-age technologies.

Finally, students will be encouraged to develop their creative and artistic abilities to illustrate the beings and cultures they help to design. In the process of making contact between the cultures of their imagining they will be stimulated to learn how to learn and they will learn the values of cultural diversity, positive communication and teamwork.

PROPOSAL

CONTACT is working with the teachers and administration of Fairfax



Artwork by Joel Hagen

County Public Schools to develop a curriculum which could be used to bring the **Cultures of the Imagination** experience to students at the intermediate school educational level.

The purpose of this pilot is to obtain first hand experience with children at that grade level so that we can discover and understand the best mechanisms by which COTI can be integrated into schools across the country.

It is strongly felt that COTI jr can stimulate the maximum involvement from students and teachers in all fields of study. In order to achieve this, a teacher's guide, including objectives, procedures, materials, and an evaluation process, as well as a video based on the COTI simulation and a science fact/science fiction anthology primer will be developed.

The pilot COTI jr program would establish the criteria by which pedagogical values could be evaluated by faculty, administration and parents. In addition, we would be creating the foundation materials for publications and audio-visual aids that could be used to distribute the program nationally.

Under the Smithsonian grant, CONTACT will document the process of creating the COTI jr pilot program including implementation of the program itself in a classroom situation. This would serve to chronicle and evaluate the program, make fundraising presentations, and provide an introduction to the educational possibilities of the curriculum materials.

Teachers from the Area Two Fairfax County Public Schools in Virginia have already begun to introduce COTI jr to a selected group of pupils. Recently, Fairfax County introduced a seventh period hour to their intermediate schools starting in September 1990. Administrators have already indicated that COTI jr may be an appropriate year-long, elective course if our Phase I pilot proves successful. CONTACT NEWSLETTER Vol. I, Number 4, September 1990





COTI jr PILOT A SUCCESS

Greg Barr

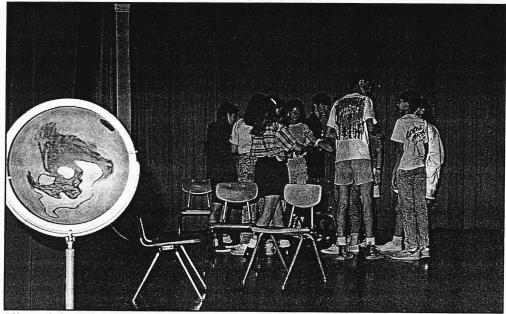
The COTI jr pilot program involved twenty-five eighth grade students and four teachers from both Frost and Poe Intermediate Schools in Fairfax County, Virginia from January to June, 1990. Participation in the program was entirely voluntary and involved extracurricular research and numerous group meetings during which alien planets, extraterrestrial life-forms, multi-generation fusion starships, and even a six-city lunar colony were developed. The children prepared drawings, reports, and science fair quality presentations in preparation for their final face-to-face contact between human cultures of the future and hypothetical alien cultures.

Each meeting reflected the unique blend of personalities and cultural backgrounds of the participating students. The group from Frost were unable to establish conclusive communication within the time allowed for their encounter. On the other hand, the smaller group at Poe, after arousing the curiosity of the alien natives with a series of probes and offerings, succeeded in having their cautious two-man contact team captured by the aborigines as foodproviders.

Throughout the project the students maintained a very high level of interest and enthusiasm which carried through to the final dramatic encounter. Their group meetings were characterized by animated discussion of the issues. At least one student who had exhibited a reluctance to do library research changed his attitude in order to bring new knowledge to his teammates.

Final Presentation

To fulfill our co-sponsorship role with the Smithsonian Institution's Office of Interdisciplinary Studies, CONTACT presented the results of the COTI jr pilot at a day-long



Alien globe stands watch as Frost Intermediate students act out CONTACT.

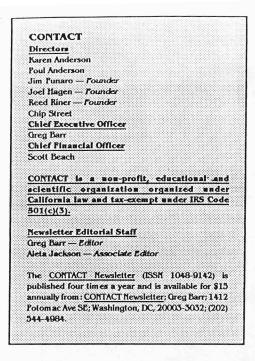
seminar in the teacher briefing room of the National Air and Space Museum. Over forty intermediate school teachers and supervisors from Virginia, Maryland, New Jersey and the District of Columbia, along with representatives from the National Science Foundation and National Science Teachers Association were in attendance.

The program began with an outstanding lecture on astronomy by Jeff Goldstein from the Laboratory for Astrophysics of the museum. His clear and excellent illustrations of the scale of the universe and the types of stars that populate it provided the teachers with the context in which the students must operate in order to satisfy the objectives of COTI jr.

Kim Cox, the teacher who led the COTI jr program at Frost Intermediate School, discussed her experience in the classroom. She fielded questions from her peers and made a strong case for the benefits of creating a formal curriculum from this project. The teachers were then shown a short video presentation of the children in action as well as responding to interview questions about their reaction to COTI jr.

The program concluded with a presentation by COTI jr advisor, Mr. George S. Robinson, Associate Legal Counsel of the Smithsonian Institution. Mr. Robinson is the author of *Envoys of Mankind* in which he discusses the ethical and jurisprudential aspects of humanity's migration into space. Mr. Robinson endorsed the goals and objectives of COTI jr and stressed the program's ability to introduce ethical values into the learning process.

As a result of this final presentation, Dr. Russell Wright, science supervisor for Montgomery



County Schools in Maryland, has encouraged one of the schools in his district to undertake a COTI jr program this year. In addition, CONTACT has been invited to have a COTI jr workshop at the math and science teacher's academy reunion sponsored by the Maryland State Board of Education in October.

COTI jr toolbox

CONTACT is currently seeking funds to prepare instructional tools that can be used as resources for teachers and students who are undertaking the COTI jr curriculum. The centerpiece of this toolbox is a set of looseleaf documents providing guidelines and resources supporting the course objectives. The two main sections are the Teacher's Master Guide and the Student Resource Handouts. Each of these sections is organized into educational units matching the course outline.

The Teacher's Master Guide will contain suggested student activities and a set of questions and answers designed to stimulate discussion. It will also include a suggested bibliography and a guide to available resources on the various topics. The Student Resource Handouts will contain an outline of each area the students are expected to cover before moving on to the next unit. It will also provide a list of materials that the students are expected to produce. This document would be written by experts in all the fields covered, reviewed by an educational psychologist, and edited for publication by at least two educational specialists in the fields of space science and anthropology.

This CONTACT Newsletter publishes columns that are written for teachers and students and treat subjects such as how to build a realistic planetary system or how to create a model globe using easily available resources. As an additional resource, CONTACT is proposing a science fact and science fiction anthology that can serve as a primer. The idea is that a collection of fact articles about world-building and culture creation would be illustrated by related fiction stories that show how altering certain building blocks can affect the overall structure being created. Student readers are given immediate examples of how a single change in the environment can affect a total system.

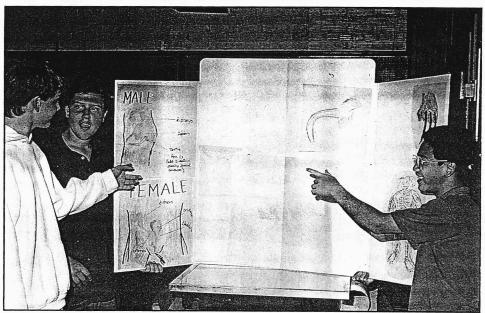
Another element in the toolbox that CONTACT is proposing is a series of video episodes which can be screened prior to moving the students into a new unit or major unit subdivision. This video series would be produced to engage the students enthusiasm for the next phase of the curriculum as well as give them living illustrations of the kinds of creations, both physical and biological, that meet the curriculum criteria of realism and faithfulness to the body of scientific knowledge.

Finally, efforts are underway to produce interactive computer software that would allow students to visualize and create elements of their simulation for their fellow teammates. These programs would present students with the basic knowledge necessary to their worldbuilding and culture-creating exercises, allow them to attempt to integrate the elements they select, and point out problems and errors when they try to integrate disparate elements.

YOUR HELP IS CRUCIAL

Our grant support from the Smithsonian has ended. Funds are desperately needed to continue development of the COTI jr program and to publish the Newsletter. Many of you will have now received four free issues. We cannot continue to provide this service without support. Please consider a generous gift to support our educational and scientific activities. CONTACT is being well received by educators and administrators in the public school system. Our ability to provide these people with resources depends entirely on your support at this time.

Use the convenient coupon on the last page and send your check in today. It really matters!



Poe Intermediate students display alien biology and habitat.

CONTACT NEWSLETTER Vol. II, Number 2, Spring 1991



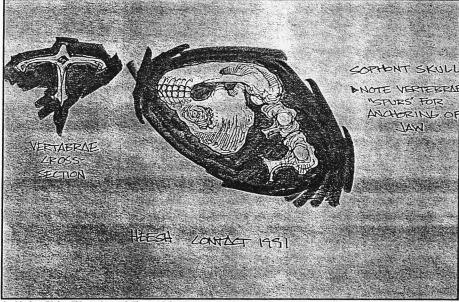


NASA CONTRACTS CONTACT

Dr. Eddie Anderson, Chief of Elementary & Secondary Education Programs at NASA, has provided a small grant to fund our Cultures of the Imagination (COTI) Junior High School project. CONTACT is currently running *COTI jr* at Earle B. Wood Middle School, Rockville, Maryland. Thanks to the enthusiasm and dedication of Mrs. Nell Jeter and Mrs. Sheila Shillinger, both science teachers, nearly 300 eighth grade students are creating human and alien cultures for a June contact.

After an initial presentation by Greg Barr, the students began working on the alien star system and planet. Jeff Goldstein of the National Air & Space Museum made a special presentation on astrophysics and the size of the universe. Leonard David, former staff member of the 1986 National Commission on Space, and Barbara Sprungman, science curriculum developer, briefed the students on current space technology and future space missions. From the National Museum of Natural History, Jake Homiak spoke about his special area of study - Jamaica's Rastafarian culture — to illustrate cultural attributes that the alien design team should take into consideration.

The knowledge acquired during this trial program, coupled with last year's *COTI jr* in Fairfax County, Virginia, will provide the basis for a report on how NASA could incorporate Contact's curriculum into existing NASA educational programs that focus on space science and exploration.



Artists Chip Street and Sean Mechan continued the CONTACT tradition by providing many sketches and renderings of the alien and its culture.

COTI 1991: DIVERGENT TWINS Karen Anderson

Paula Butler, Ctein, Poul Anderson and I supplied a world complete with intelligent sophonts to this year's Cultures of the Imagination (COTI). It was a planet of a red dwarf star, rotating slowly, with one easily visible fellow-planet in the next orbit out and two others, one too dim to see and one just bright enough, further out. There was also a blue giant star, not very far away, brilliant enough to be seen by day. The planet was generally Earthlike, but with somewhat less land. The sophonts were descended from badger-like burrowers, eaters of roots and grubs in the bitterly cold night and fruits, nuts, and small animals in the long hot day.

Barbara Joans was in charge of setting up the teams in Phoenix. Their purpose was to develop parallel-world societies based on the same physical background. Larry Niven assisted her in the capacity of "god," observing what the teams were doing, with two facilitators for each team. Chip Street and Sean Meehan produced artwork to illustrate our cultures. I joined Team Two, and served as part-time "god" when needed — that is, when Barbara and Larry needed information about the world, or to discuss what way would be adopted to get the two teams face-to-face.

As I learned later, Team One decided that they had had a technological society but became dissatisfied with it. They had rejected fire and metal, though they retained tools of bone and plant material, and wove cloth. They returned to their burrows, where they gave up most

0

1