A Search for Meaning
In Disaster's Wake

Members of the Maryland State Board of Education were meeting in Baltimore when they heard the news that the space shuttle Challenger had exploded.

"There was a kind of shock that I had never seen before, not in either of the Kennedy assassinations, not in any catastrophe that we have ever experienced," said Gus Crenson, the board's director of communications.

Kathy Rokas, a third-grade teacher in Elyria, Ohio, had taken her class from the East Gate Elementary School to NASA's Lewis Research Center in Cleveland. There the class of 30 watched the launch on a huge screen in a room ringed with six television monitors.

After the explosion and a "dead silence in the room," Ms. Rokas said, she asked the children to "explain what they saw." They calmly asked questions: Was Christa hurt? Did the astronauts die in the ocean? Were the astronauts' children watching television, too?

Kathryn Grossman, a member of the communications staff of the Los Angeles Board of Education was working to drive to the Eggs. She had taken her class from the Eggs Elementary School to the Eggs Research Center in Cleveland. There the class of 30 watched the launch on a huge screen in a room ringed with six television monitors.

"My first thought was that my boss and the board president were sitting in the grandstand" at Cape Canaveral, he said--"in the same grandstand as the family and kids of Christa."

"I got a sickening feeling in my stomach, then got a little fuzzy, thinking, 'Can it be real?'"

Harriet Arvey, director of support services for the Houston Independent School District, was in her office talking with a county mental-health official about establishing a crisis team when a secretary relayed the news.

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National Broadcast
Of Lessons Planned

By J. R. Sirkis

WASHINGTON—The National Aeronautics and Space Administration is preparing a nationwide television broadcast to schools next week as part of an effort to salvage its imperiled teacher-in-space project.

According to an official of the Public Broadcasting Service, the telecast was expected to receive official sanction at NASA headquarters in Washington this week. It will feature Barbara R. Morgan, the runner-up to Sharon Christa McAuliffe in the competition to be the first teacher in space, and perhaps several astronauts, the official said.

Ms. McAuliffe perished along with six others in the fiery explosion of the space shuttle Challenger last week.

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The Joy and Triumph Ended
With One Terrible Moment in the Sky

By Blake Rodman

CAPE CANAVERAL, Fla.—It was bitter cold last Tuesday as the sun rose in the clear, ice-blue sky over Central Florida's swamps and citrus groves. Driving up to the Kennedy Space Center's press and viewing area, I could see the space shuttle Challenger poised for liftoff. It was a day of cruel ironies and sorrow.

Just before the launch, the space shuttle Challenger exploded.

"The wisdom of sending citizens-­astronauts into space was questioned," NASA's Dr. Richard C. Fyfe told American Education Week.

The joy and triumph ended with one terrible moment in the sky. The shuttle had exploded, killing 62 people. It was a day of cruel ironies and sorrow.

President Reagan called the seven astronauts "pioneers." The shuttle's fate was a day of cruel ironies and sorrow.

"The shuttle's fate was a day of cruel ironies and sorrow."

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Sharon Christa McAuliffe

At 11:39 A.M. Eastern Standard Time last Tuesday, in a flash of fire and smoke seen by millions, the nation's teaching corps gained a long-awaited moment in the public spotlight.

But it was a terrible moment, bought at a price that no one had foreseen.

Sharon Christa McAuliffe, who was to be the first teacher and the first "ordinary person" in space, died with six other crew members of the space shuttle Challenger when it exploded 10 miles above the Florida coast and 74 seconds after liftoff.

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Julie Marcia taught school and children had cheered Ms. McAuliffe as she entered the spacecraft. On board, she received a symbol from NASA technicians. Farther away, in classrooms throughout America, children watched the televised start of a space adventure dedicated to them.

Shocked Nation
Mourns Loss of McAuliffe, Astronauts in Explosion

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The stage was set for America's "Teacher in Space" to fulfill a personal dream and complete the project that had stirred the collective imagination of her profession.

But in the briefest of interludes, the script went awry. Joy turned sorrow. Technology's bright promise led to disaster. And what was to be a classroom in space became one awful instant a lesson in mortality.

McAuliffe's role as the first private citizen in space had sharpened the nation's interest in the flight. And her incongruous fate—to be among NASA's first in-flight casualties—left a deep national scar.

In what was believed to be an unprecedented gesture, President Reagan posthumously presented Mrs. McAuliffe's family with a Gold Star of Honor. The American flag was flown at half-mast. The Olympic torch in Los Angeles was relit. On Wall Street, the stock exchange went silent for a solemn minute. An outpouring of respect Washington's Air and Space Museum drew crowds paying tribute to the shuttle crew's black­draped official portrait.

And in cities and towns across the nation, people sought through memorial services and conversation to relieve the sense of loss. They also sought meaning. Why had the impossible happened?

The wisdom of sending citizens-­astronauts into space was questioned. NASA drew heavy criticism for its ambitious schedule of shuttle flights and for what one congressman called its "public-relations hype." Some critics even suggested that manned space flights were unnecessary; robots and satellites would suffice, they said.

But in a brief and eloquent speech to the nation, President Reagan called the seven who died "pioneers" and pledged that the space program would go on. Risk, he told America's children, is the price of achievement. "The future doesn't belong to the faint-hearted," the President said. "It belongs to the brave."

And on an edition of ABC-TV's "Nightline," one child, reading from a class essay she had written on the shuttle accident, expressed in elegant simplicity the central core of a nation's grief: She had been scared, and upset, and sad, she said, because Ms. McAuliffe "was a mother and a teacher."
The Joy and Triumph Ended With One Terrible Moment in the Sky

Continued from Page 1

home. A contingent of six from the National Education Association, including President Mary Hatzenpus Putrell, had left on Monday afternoon, expressing disappointment over having to miss the triumph of one of their own.

To escape the morning’s cold, I sought refuge in the press office, located on a little hill next to the VIP viewing area.

From there, at about 8:30 A.M., I watched as NASA cameras recorded what would be the last images we would see of the New Hampshire teacher who had captured the hearts and imagination of the nation, Christa McAuliffe.

Smiling that now familiar smile, she tucked her curly brown hair into a liner cap, donned a space helmet, and climbed with the other six flight-crew members aboard Challenger, the vehicle that was to carry her—and vicariously the entire teaching profession—to new heights.

Meanwhile, NASA spokesmen were telling reporters that agency officials were optimistic about the day’s launch plans. An electrical problem had been repaired, they said. No other apparent hindrance to liftoff was the round of circles on the fixed launch tower. “We are checking to make sure that we don’t pose any threat to the launch,” a spokesman said.

When I re-emerged from the press office at 9 A.M., the educators had arrived. I walked over to join them.

Of the 112 teachers-in-space finalists, now known as NASA’s “Space Ambassadors,” only about 20 had been able to stick it out through the launch delays. Fewer than 100 of the other 250 teachers and education officials invited to view the launch and attend the NASA conference remained.

But at 5 minutes six, the shuttle engines fired on schedule, shooting out plumes of white exhaust from the launch pad. “Five, four, three, two, one,” the teachers chanted.

Then, with the deafening roar of the booster rockets and a tide of cloudlike exhaust, the shuttle, riding piggyback on its rust-colored fuel tank, shot straight up into the sky, trailed by yellow rocket fire as bright as the sun.

I could barely hear the chanting of the teachers over the roar.

I watched for several seconds, before turning to quickly snap several pictures of upturned faces, looking skyward.

Then I turned back to the shuttle—and one terrible moment in the sky.

At a minute and 16 seconds after takeoff, when Challenger was approximately 10 miles above the earth and traveling at 2,900 feet per second, there was a giant flash and a burst of smoke engulfed the space craft. The violent boom of the explosion followed.

At first, most of us in the viewing stands were not aware that disaster had struck. We simply thought the booster rockets had separated from the larger external tank, and we gaped in awe at the beautiful display of color and light above us. We were too far away to understand what had happened.

But where was the shuttle? It had vanished. There was nothing to be seen beyond the vastness of space.

The atmosphere was infectious. The violent boom of the explosion seemed to re-awaken everyone’s dreams and ambitions. Their Children's Dreams and Ambitions

The students seemed confused and unable to understand what had happened. “Where did all the joy and excitement go?” they seemed to be wondering.

Suddenly, someone yelled, "Parachutes.”
A spectator with binoculars had spotted a parachute drifting through the white clouds and contrails. People gathered around hopefully. Was it possible for anyone to have survived that explosion, I wondered as I spotted the chute.

"Those parachutes are believed to be paramedics going into the area," the public-affairs officer announced over the loudspeakers, dashing hopes that there had been survivors.

In the parking lot behind the bleachers, I met a dazed Gordon Corbett, a teacher finalist from Maine, who was searching for his car. "This is a very hurt group here," he said, pointing toward the educators' buses. "One minute we were participating in the excitement and laughter and then this. Oh God, this. It's awful."

The press room was in a whirl. The horrific events had suddenly turned what was to have been a rather routine space-shot story into the story of a lifetime for most of the journalists here. Trying to reach their editors and news managers, reporters massed around 10 telephones on one side of the room. While radio reporters dramatically described the explosion, writers furiously tapped out their stories on portable computers.

The viewing area empty, the buses loaded, I turned to walk back to the press office. And for the first time, I realized how wrenching the experience had been. My entire body seemed to be shaking, a shivering that would continue on and off uncontrollably for more than an hour. I was nauseated and fatigued.

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"One of the teachers—Mr. Owens, the NASA official who had accompanied the teachers back to their hotel in Orlando," he described how he felt as he watched the explosion. "It was very frightening," he said. "My heart went from my chest down into my legs."

Brian Ballard, editor of the student newspaper at Ms. McAuliffe's Concord (N.H.) High School, attracted a circle of reporters as he described how he felt watching the explosion.

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I left the newsroom to get some fresh air and walked down by the viewing area, now quiet and empty. The American flag, snapping in the wind on a pole down by the lagoon, would soon be lowered to half mast. A few wispy clouds lingering out over the Atlantic were the only trace of the morning's events.

As a former teacher myself, I kept thinking of those I had stood beside on the viewing stands and of all the teachers and students watching the event on television across the nation. This was to have been their day. It all seemed so wrong, so unfair.

Late that night, as I was waiting for my flight home, I called Mr. Owens, the NASA official who had accompanied the teachers back to their hotel in Orlando.

He said there had been only silence and tears on the return trip, but that back at the hotel the teachers had spent "a quiet time together" talking about Ms. McAuliffe, her mission, and what their mission would now be.

All of the teachers, Mr. Owens said, had indicated that, regardless of the day's tragedy, they would apply again for a trip on the shuttle.

He also said the teachers remained committed to carrying on the work Ms. McAuliffe had begun. "They all felt that Christa would have wanted them to continue their work to improve education in this country," Mr. Owens said.

"You know," he added, "a lot of good comes out of adverse and difficult times."

But the energy and enthusiasm of this group of teachers could launch that shuttle.
Aftermath of a Tragedy: Grief for a Hometown Hero

I Was Confused When I Saw Everyone's Head Go Down

By Alisa Tegund

Concord, N.H. — Residents in this snow-covered state were united last week in churches, homes, and bars, trying to understand a public—yet very personal—tragedy.

Within hours of the shuttle explosion, Concord was thrust into the national spotlight, as reporters and photographers from across the country descended on a citizenry jolted from joyful celebration to stunned grief in seconds.

Like most of the city’s 33,000 residents, students at Concord High School, where Sharon Christa McAuliffe had taught religious classes, were made aware of the tragic event on television. Wearing party hats, the students were gathered in the cafeteria watching the HBO, not realizing immediately what had happened.

“I was confused when I saw everyone’s head go down,” said Alex Scott, a sophomore at the school. “Someone called ‘Quiet!’ I was still full of it. I walked back to the class and didn’t believe it. I thought we’d go back to class and she’d be up in space.”

“Shocked,” “stunned,” and “devastated” were the words most often used to describe their feelings. Even those who didn’t know Ms. McAuliffe—or Christa, as she was universally called here—knew a friend or a neighbor who did.

And like a Mandana Marsh, a local photographer and mother of a 4-year-old girl, likened their feelings when she saw the tiny red and white plane thump into Kennedy Space Center.

Studying the clip, I couldn’t help it. I burst into tears.

A Town’s Mourning

Framingham is at least 50 miles in front of the gold-colored statehouse and across the city were the most immediate signs of Concord's mourning. Soon thereafter, the first jolt of the explosion, residents gathered to pray at St. Peter's Church, where Ms. McAuliffe had taught religious classes.

In another sort of establishment—a bar near the downtown area—Judy McGowan, a waitress, said everyone was devastated by the incident.

“I had to send our 16-year-old waitress, Elizabeth Englund. ‘Many of the kids who work in the kitchen had Christa as a teacher or were looking forward to having her.’

A sign in the window of a market read: “Challenger Crew and Christa were brave and I attend a church service of your choice.” In this city where phone calls are still 10 cents and the main street is called Main Street, many residents turned to that traditional source of comfort.

Prayer Service

At a prayer service Wednesday morning at St. John’s Evangelist Church, 300 uniformed students who attended St. John’s Regional Catholic School, ranging from kindergartners to 8th graders, somberly listened to Father Daniel Messier try to explain the incomprehensible events that had unfolded before them.

“We’re fortunate that we can come together and pray,” said Sister Irene Turgeon, principal of the school. “Christa’s hope will move them to courage to move on with life. I’m sure some will say this is God’s fault; we say God’s ways are strange.”

Later that evening, a memorial service was held at the same church for all mourners. Friends, students, and those who had admired Ms. McAuliffe from afar crowded into the church. Many shed quiet tears as one priest told them, “Christa had a special and unique gift. She brought us laughter and life. As she told the students at Concord High, ‘Reach for the stars.’

Second Crisis

The high school where Ms. McAuliffe taught was the focus of much of the attention, as teachers and counselors grappled with their own sorrow and their questions.

It was the second tragic incident in as many months. In December, a recent graduate of Concord High School was fatally wounded by police in a gun battle in a school hallway after he had two students hostage during a gunman.

Many had hoped the space launch would help students overcome that incident. Now, teachers passing around the same memo on dealing with grief and loss that they circulated in December.

“We’re getting experienced at this sort of thing,” said John Heinrichs, director of school psychological services.

The high school was closed Wednesday, but counseling services were made available to the students.

Two signs at the school showed how quickly elation had turned to grief. One, over the front entrance, was an advertisement for a satellite dish. It read: “Helping Bring Christa Down to Earth.”

Another, on a tree on the front lawn, read: “We Love You Christa.” The tree was decorated with black ribbons, Ms. McAuliffe’s picture, and a poem dedicated to her. Students hugged each other and wept in front of the memorial.

Flowers, Telegrams

Hundreds of flowers and telegrams poured into Concord High School, including one from a Maine teacher offering to teach without salary in Ms. McAuliffe’s place.

School personnel also received offers of psychological help from as far away as California. President Reagan sent a condolence letter that was not to be made public until after the private memorial service for students and teachers that was scheduled to be held Friday.

City officials are considering naming a new elementary school after Ms. McAuliffe.

 Said Mark Beausard, superintendent of schools for the district and a personal friend of Ms. McAuliffe, “I’m a superintendent. On the other hand, I’m a human being and have some very strong feelings of sadness and despair.”

Mural and Posters

At the district’s elementary and junior high schools, classes started preparing for Wednesday as faculty members met with counselors and psychologists.

When the children did come to school, many returned to halls and classrooms filled with space murals and Bright posters commemorating their teacher in space.

At Walker Elementary School, an office was set aside for those teachers who felt the need to be alone during the day. Playing in the snow outside were bundled-up children who, had the launch gone according to schedule, were to have attended a Wednesday “ Blastoff Breakfast.”

Moyer James McCray proclaimed Friday “Christa McAuliffe Day.” A citywide memorial service was scheduled to be held Friday night.

Steve McAuliffe, Christa’s husband, traveled with his two children to Framingham, Mass., with Ms. McAuliffe’s parents. He and the children were expected to return to Concord over the weekend.

Until then, Chris’s chocolate-brown house remained empty, with only a police car standing guard in front.

As the media representatives departed and the local papers find other news stories to report, Concord struggles to pick up the threads of normal life. But clearly it will be a long time before last week’s sadness fades. As an Father Messier said: “Christa became Concord through this. When she got on the shuttle, we got on with her. And when that explosion took place, it took place in our hearts.”

Community Leader, Advocate for Teachers, Mother of?

Sharon Christa Corrigan was born in Boston on Sept. 2, 1948, the daughter of Grace and Edward G. Corrigan. She grew up in Framingham, Mass., a Boston suburb.

Although she was christened “Sharon,” she was called Christa from the start, and once told a reporter she had attended her first grade name until she called the certificate for her First Holy Communion.

At Framingham State College, as chief of a slow food-basket program for the needy, she also met her future husband, Steven J. McAuliffe, at Marion High, recalling later that she had noticed him on the first day of her sophomore year. They married in 1970, the same year she graduated from Framingham State College with a degree in history.

After their marriage, the McAullifes lived for eight years in Washington, D.C., where Mr. McAuliffe worked as an aide for the state of the Army.

While in Washington, Christa McAuliffe taught full-time, waited tables, and earned a degree from the Lyndon B. Johnson State Department and worked as a family planning counselor.

She also raised two children, Scott, now 9, and Caroline, 6.

“Christa was unique, but she wasn’t unique,” Mr. Myers said. “In most cases, specialness comes through where you go to school, how much money you make. She had unique qualities, but she didn’t bring with her all those material qualities Americans equate with success. She embraced the qualities of a good teacher.”

Until the tragedy, he said, “we in Concord had no idea of the impact she had on the nation. We were wrapped up in the fact that she was a colleague and friend.”

That national impact was apparent last week in the hundreds of cards, telegrams, and flowers sent to Concord High School, he said. It was also reflected in memorial services held around the country, culminating last Friday with a national service for all of the crew members at the Lyndon B. Johnson Spaceflight Center in Houston.

Mr. McAuliffe was expected to attend the Houston ceremony, as were the President and Mrs. Reagan, members of Congress, and other public officials.

—A.T.
SAD REALITIES: Students at Concord High School had prepared a festive celebration in the school cafeteria for last week’s lift-off moment. Carina Dolcino, president of the senior class, was among the hundreds of Concord students watching the flight of Challenger end in disaster. Below, other Concord High students leave school in what many described as a state of shock. Ms. Dolcino, right, and fellow students later the day attended a memorial service held at St. Peter’s Church in Concord.
TV Brought the Trauma To Classroom Millions

By Lynn Olson

It was the classroom lesson no one had anticipated.

Across the country, students and teachers who were watching the launch broadcast on cable television were still feeling the excitement of the launch instead of experiencing the immediacy of death, brought home with horrifying impact by television.

Some 2.5 million students nationwide were watching Challenger's takeoff via satellite dishes hooked up to their schools. Others were watching the live broadcast on cable.

And by afternoon, countless millions more schoolchildren were sitting in classrooms listening to radio or watching continuous replays of the event on public and commercial stations.

In McCall, Idaho, some 1,000 students in grades K-12 were watching the liftoff and keeping an eye out for their hometown teacher, Barbara R. Morgan, who was scheduled to replace Sharon Christa McAuliffe on the flight should the need arise.

After the explosion, teachers kept the students gathered in a few large viewing rooms for an hour or two to discuss what had happened and to follow the news coverage. Superintendent of Schools Everett D. Howard said staff members were really just trying to get through today before making long-term plans.

At Hall High School in Spring Valley, Ill., 150 students were viewing the NASA broadcast of the launch in the cafeteria. The school is home to "Classroom Earth," the nonprofit group that was coordinating the satellite use of space.

When the disaster occurred, there was just "stunned silence," said a Hall science teacher, Steve Finnin, who had applied for the teacher-in-space program along with 11,000 other candidates. "Initially, we didn't know what to think. But as the moments continued, it was just a shock, utter disbelief."

"Some of us did the count-down," recalled Charlotte A. Gregory, superintendent of the Bath Central School District in Bath, N.Y. "Everybody was happy. I guess we did not believe what we saw. We were still shaking for the shuttle at the time we saw the explosion."

In school after school across the country, teachers, students, and administrators described long minutes of silence followed by crying, despair, anger, and questions for which there were no satisfactory answers.

"What Happened?"

"We've been hearing about kids who want to go over and over "How was the shuttle built? What was the ice doing on it yesterday?" A variety of questions about "How do these things work?" said Sandra S. Fox, director of the Good Grief Program in Boston, which is designed to help teachers support students in schools where a child or colleague has died.

Since the explosion, Ms. Fox said, her staff has been answering calls from schools throughout the New England area. "There are some kids who are angry," said Ms. Fox, "I just talked with a teacher in Maine who told me that the kids in his school were all angry with the space agency, who should have done too much, and they shouldn't have tried yesterday."

Elementary-school children have also expressed a feeling that Ms. Fox said older students probably shared: "This lady was a mother. She had no business going up in this thing."

"The other thing I've been hearing is, "the teachers are having with their own feelings. I have heard probably half a dozen times today about teachers who were watching the launch with kids, saw what had happened, burst into tears, and left the room."

Shared Event

Although technology brought the day's tragedy into the homes of citizens nationwide, it was particularly painful for the education community, which had been preparing for and building up to Ms. McAuliffe's historic flight for more than a year.

"The interest was phenomenal," said John D. Cecil, director of elementary and secondary programming for Public Broadcasting Service. The social-studies teacher's in-flight lessons were scheduled to be aired on P.B.S. on day four of the mission. According to Mr. Cecil, nearly all public-television stations in the country were planning to carry them.

"As a wild guess, I'd say probably in the neighborhood of 20 million kids would have been watching those lessons," he said. "This is really a test for everyone."

The National Science Teachers Association had distributed information to schools along with teaching guides to its 46,000 members, and had helped NASA develop the materials.

Walter J. Westrum, executive director of Classroom Earth, said that some 2,000 elementary schools and high schools across the country had sent in letters confirming that they would be viewing the launch and the lessons by satellite. In the three weeks before the takeoff, he said, student volunteers answered hundreds of phone calls.

Local Efforts

States, districts, and individual schools had tried equally hard to promote the teacher in space and make her "real" for students.

The Learn Alaska Network, an educational satellite system sponsored by the Alaska Department of Education and the University of Alaska, had planned to broadcast the launch and the ensuing lessons to schools and homes in more than 250 communities. In October, Ms. McAuliffe and Mr. Morgan had participated in a live broadcast for the network that enabled students from across the state to ask questions over a special audio system and talk to the teachers.

"We've done all that we can to whip up community interest in science and NASA," said Michael D. Abbett, dean of the Southfield Middle School in Shreveport, La. "We were trying to immerse this area in the space program."

For the last month, the school system had been carrying out "Extra-terrestrial Education," a full-month program involving students and community members that was designed to culminate with the flight.

Pupils and teachers had been following the shuttle's itinerary over computer and via satellite. And last Friday, 60 students were scheduled to take a field trip to the local public-television station for a special program to coincide with the lessons.

"We plan to grieve and we plan to collect all the information we possibly can and then forge ahead," said Mr. Abbett. "People will ask, "What happened? Why?" If people are questioning and they truth that just sunk in. Students at the school observed a minute of silence last week, while two of their classmates played taps over the public-address system.

Quick Response

At schools where students were present and watching the event, teachers and administrators responded quickly to their concerns.

In Alaska, the Learn Alaska Network put together a special program that it broadcast at 12:30 P.M. the day of the explosion. The show included an address by Gov. Bill Shoefield, and a high-school science teacher and a psychologist were available to answer students' questions.

"Some of the students just put their heads down on the desk and watched in disbelief," said Marjorie M. Benning, utilization manager for the network. She added that the network is encouraging teachers to go...
Encourage Students To Express Their Feelings, Experts Suggest

By Lynn Olson

Experts on children's mental health last week urged adults to encourage students to talk about the space-shuttle deaths and to be receptive listeners. And they cautioned that over the next few weeks, children may become fearful, misbehave, or develop such somatic symptoms as headaches and stomachaches. Students may daydream, have problems sleeping, express feelings of futility or show a decline in the quantity and quality of their schoolwork, they said.

Being actual eyewitnesses to the fiery tragedy on television, experts agreed, may be a powerful effect on some children.

"Going With Her"

"Christa humanized it, personalize
ized it, and created an intimate mutual identity," said Dr. Kent Ravenscroft, associate clinical professor of psychiatry at the Georgetown University Medical School, "as if we were their teacher going up into space. And in effect, they were going with her by proxy."

"I had one boy who said that he was riding right up in the rocket with her and then he felt himself explode," he continued. "It was so in­ tolerable that he finally denied it."

Other experts agreed that be­ cause a teacher was aboard the shut­ tle, and because schools had purposefully stirred children's enthusi­asm in the weeks preceding the launch, the disaster could have a great impact on some students.

But they noted that the extent to which children reacted would de­ pend on their age, their intellectual and emotional development, any personal experiences they had had with death or loss, and their personal­ ity.

Valuable Children

Students who had normal con­ tact with the astronauts or their families or who were in schools that had primed them to be deeply in­ volved with the event would be ex­ pected to react more strongly, they said.

Other particularly vulnerable children are those whose mothers have divorced, whose parents are going through a divorce, stu­ dents who are the same age as Ms. McAuliffe's students who are feeling inadequately cared for, and those who are angry with their teachers or classmates.

Although most older children are able to see the difference between a news event and fantasy, and will have some understanding of death, young children will not be reacting to the event itself as much as to the groundswell of feeling among adults and peers, they said.

"Younger kids will almost pick up the vibrations," said Dr. Ravenscroft.

Opportunity for Teachers

More important than the content of lessons will be their willingness "to take leadership," said Dr. Gilbert W. Kliman, co-author of Children and the Death of a President, a book about the effect on children of John F. Kennedy's assassina­ tion.

As part of the study for the book, Dr. Kliman sent a questionnaire to the teachers of 800 youngsters in a small Northern city.

His study found that teachers who took the initiative and immediately organized classroom discussions and activities for their students had a positive effect. Those who refrained from communicating with children or sharing their feelings actually hindered students' ability to cope with traumas.

"While young children frequently wished to be President before this assassination," said Dr. Kliman, "that same generation of children had an immediate child and a long-range freeze on their ambitions po­ litically, and particularly for leader­ ship and for the office of President."

In his current research, he said that the explosion of Challenger will have a similar, negative effect on children's abilities to process and other adventures, scientific activities, particularly among girls.

Teachers should be honest in any dealings with children, said Frank Burtnett, assistant executive direc­ tor of the American Association for Counseling and Development. He cautioned counselors and teachers not to make the event end at 11:39 A.M. Jan. 28.

"This is a time when honesty and facts should really come through," he said. "We need to give answers as best we know them to kids, and not give them more mystery."

Grieving Differently

Experts also cautioned that chil­ dren's reactions to death are differ­ ent from those of adults—and may be what a teacher least expects.

"Grieving children may look bad rather than sad," said Dr. Lillian H. Robinson, professor of psychiatry and pediatrics at the Tulane School of Medicine. "If they raise hell, if they misbehave, or if they do things to keep themselves busy and preoccu­ pied, it's so they don't have time to feel sad or anxious. What we see in a child who is grieving is often the defense against sadness and anger rather than the feelings themselves."

In addition, young children have a tendency to act out their emotions. "I would anticipate children all over the nation to be playing at shuttles blowing up and things like that," she said. "Sometimes they might be making jokes about it. But it's not necessarily disrespectful or bad for them to do that."

Other students may try to distance themselves from the event by han­ dling it intellectually, said Sandra S. Fox, director of the Good Grief Pro­ gram in Boston, which helps children cope with death. Such children may ask endless questions, trying to gather as much information as they can about the event, she said.

For the majority of children, the im­ mediate response should be over in a few days, added Dr. Kliman. But long-term, subtle effects on character and motivation should be of concern to educators, he stated, noting that he is still seeing the effects of the Kenne­ dyl assassination on people.

Dr. Albert Clark, director of stu­ dent-health services for the Los Ange­ les Public Schools said he did not ex­ pect the shuttle explosion to have an "untoward" effect on most students.

Experts agreed that teachers should emphasize the known risks that were involved in the space flight, the bravery of the astronauts, and the importance of such people's risk-taking to society.

They also said that teachers should share their feelings with stu­ dents, in effect giving children "per­ mission to grieve."

But they cautioned adults not to "overwhelm" children. The risk, said Dr. Ravenscroft, is that teach­ ers will project their own feelings onto students rather than listening to what children really think.

A gentle, "backdoor approach" to discussing the disaster, he said, is to get children talking about how oth­ er children reacted, "to come at it through somebody else at some oth­ er place at some other time."

Any immediate, concrete ac­ tions—such as writing letters of con­ dolence, holding a memorial service, or playing the national anthem—would also help, experts said.

Teachers' Gatherings

Equally important, teachers should gather to discuss their own feelings and to overcome their anxi­ ety and fear about saying the wrong thing to students, said Ms. Fox.

Although experts could not give a ready answer about whether schools should proceed with some form of Ms. McAuliffe's in-flight lessons, they cautioned that it may be too soon for the experience to be produc­ tive. The most important factor in the decision, they added, may be how ready teachers feel to cope with it.

The American Association for Counseling and Development has published a special issue of its jour­ nal, School Counselor, on teaching children about death and dying. For a copy of some of the articles, call the a.a.c.d. at 800-545-6555.
Stunned Educators Grieve McAuliffe’s Loss, Search for Meaning

Continued from Page 1

As an education professional, she said, "my first feelings were thoughts of the teacher. I'm a moth­
er, too, so of course I thought of her kids."

"I just sat in my office for a while, listening to the radio, letting it all sink in," said Ms. Arvey.

Across the country, such scenes were repeated last week as educators, students, school administrators, and others tried—in public and private ways—to come to grips with the magnitude of the tragedy, in which the "teachernaut" Sharon Christa McAuliffe, and six astra­
nauts were killed.

Meetings were halted and class routines were disrupted. At many schools, principals relayed the news over the public-address system, and callers and parents,teachers to observe a moment of silence.

Reaction in New Hampshire

In Ms. McAuliffe's home state of New Hampshire, more than a score of educators rushed to the lift-off on television. Like other school officials who had gone to Cape Canaveral expect­
ing to see Mrs. McAuliffe, Robert L. Brunelle, New Hampshire's education commissioner, had to re­
turn to work after the launch was repeatedly delayed.

So Mr. Brunelle and a group of his colleagues at the state education de­
partment had gathered around a televi­sion set.

"Most people and I did think at first that the space shuttle was engaged," said Mr. Brunelle, recounting the scene as department officials watched the shuttle explode. "But then I realized it was too early in the flight for that to happen." Suddenly, "it became very quiet. People were stunned and dis­

mayed." Like many Americans, he said, he could not believe the assassination of President Ken­nedy.

"It's really a personal loss," Mr. Brunelle said. "You felt as though Why did this have to happen to this in­dividual?" Not ignoring the six, but a lot of us identified with Christa.

A Renewed Commitment

After the initial shock, many edu­
cators began searching for some­
thing constructive to salvage amid the disaster.

For some, it meant a renewed com­mitment to strengthening edu­
cation and telecommunications.

Lynn Bonduz of NASA's Lewis Research Center—a former teacher, and a school board chairman who oversees the agency's educa­
tional programs for the Midwest—
said: "We must consider the disas­
ster as a continuing nightmare, as a way of learning from the tragedy."

Noting that the council had been "flooded" with questions from stu­
dents following Tuesday's accident, she said her group found much support for continuing space exploration.

"Although the tragedy is pro­
to the teachers and students be­
lieving that the young astronauts and oth­
er young people should be con­tinued," Ms. Westerman said. "They want Christa McAuliffe's dream to be realized through dedication to the space program and to education."

Similarly, Senator John Glenn,

Democrat of Ohio and the first Ameri­
can to orbit the earth, told re­
porter that the purpose of the shut­tle space program was scienti­
fric and research and not "to put the butcher, the ha­
ker, and the candlestick maker on the air." The House Science and Tech­
ology Committee will hold hearings on last week's accident as it com­
pletes its inquiry, said the panel chairman, Representative Don Fu­qua, Democrat of Florida.

Although no cause has been iden­
tified, some lawmakers suggested that because a review agency's ambitious shuttle plans this year, NASA was under pressure—par­ticularly from commercial customers whose satellites would be launched from the shuttle—to press ahead with this mission.

But Jesse Westmore, director of the Johnson Space Center in Hous­
ton and the man who gave the fi­

nal order to launch last Tuesday morning, said at a press conference that there was absolutely no pres­
sure to get this launch up and em­
phasized that "flight safety is our top priority at NASA."

Mr. Moore mentioned the suspen­sion of all shuttle operations and the appointment of an interim board of inquiry until the investigation is complete.

And late last week, White House of­

ficials said Mr. Reagan was con­sidering having an independent panel to look into the future of NASA's space program.

"We have mounted seven her­
mos who were watching the live­
coverage of the shuttle's takeoff. I know it's hard to understand that some­
times painful things like this happen.

It's all part of the process of inquiry and discovery, that's all part of taking a chance and ex­
ploring man's horizons. The fu­
ture doesn't belong to the fearful. It belongs to the brave. The Challenger crew was pulling us into the future. We can say that our "per­
fection" will continue to follow them.

I've always had great faith in research and science pro­
gram, and what happened today does nothing to diminish it. We don't hide our space program, we

We 'Mourn Seven Heroes'

"Following is the transcript of President Reagan's Jan. 28 state­
mment on the space shuttle disas­
measure, as recorded by The New York Times." Leaders and gentlemen, I planned to speak to you tonight to report on the state of the union, but the events of earlier today have led me to change those plans.

This is a day for mourning and remembering.

Nancy and I are pained to the core by the tragedy of the shuttle Challenger. We know we share this pain with all of the people of our country. This is truly a na­
tional loss.

Nineteen years ago, almost to the day, three astronauts—Cha­

We share the love of our friends and the love of our loved ones, those who are on this earth and those who are in space. We share the love of God.

There's a coincidence today. On this day 390 years ago, the great explorer Sir Francis Drake died aboard ship off the coast of Panama. In his lifetime, the great fron­
tiers were the oceans, and a his­torian later said, "He lived by the sea, for the sea, and was buried in it." Well, today we can say of the Challenger crew, their dedication was to the sea. They were the seamen of space. The crew of the space shuttle Challen­
ger honored us by the manner in which they died. They will never forget them nor the last time we saw them this morning as they traveled to the launch pad and waved goodbye and "slipped the surly bonds of earth to touch the face of God."
Aftermath of a Tragedy: How the Project Evolved

By J.R. Sirkin

Designed as a showcase for the nation's resurgent space program, the teacher into space concept was initially endorsed by educators as a "gimmick" that would do nothing to solve the problems of schools on earth. But long before last week's ill-fated launch, the project had succeeded in capturing the imagination of tens of thousands of teachers and their students, largely due to the participation of Sharon Christa McAuliffe, the high-school teacher from Concord, N.H.

Announced by President Reagan 10 weeks prior to the 1984 Presidential election, NASA's "Teacher in Space Project" was initially condemned by educators as a "gimmick" that would do nothing to solve the problems of schools on earth. But long before last week's ill-fated launch, the project had succeeded in capturing the imagination of tens of thousands of teachers and their students, largely due to the participation of Sharon Christa McAuliffe, the high-school teacher from Concord, N.H.

Teacher in Space: A Strategy to Widen NASA's 'Civilian' Support

By J.R. Sirkin

A task force established by NASA's citizen-advisory council studied the issue of civilian participation for a year and a half before it agreed with Mr. Beggs that the time had come to send civilians into space. In keeping with NASA's charter, it recommended that the civilians chosen should be "professional communicators" who could best disseminate information about the space program.

The council further recommended three categories of communicators from which the space agency should choose: oral communicators, visual communicators, and teachers. Mr. Ladwig agreed.

Teacher Chosen

Based on the council's recommendations, NASA formed in 1984 a space-flight participant program as part of its office of space flight, which manages the shuttle program, Mr. Ladwig said. In April of 1984, a committee composed of seven senior NASA officials recommended that the agency choose a teacher as its first civilian in space, he said.

Mr. Beggs "concurred" with the committee's recommendation, Mr. Ladwig said, and because the decision was "historic," the White House was given the option of announcing it. The President could have vetoed the idea of sending a teacher into space, Mr. Ladwig said, but instead he embraced it.

White House officials stressed last week that the idea of sending a teacher into space was NASA's, not theirs. "The project was organized by NASA and the final selection was made by Jim Beggs," said a spokesman for Richard G. Johnson, assistant director for space science and technology at the White House.

On Aug. 27, 1984, as part of a "management address" in which he called on schools to raise the standards of the nation's students on standardized tests, decrease the dropout rate, and adopt tougher discipline measures, Mr. Reagan announced that the first civilian to fly on the shuttle would be a teacher.

"When the shuttle lifts off, all of America will be reminded of the crucial role teachers and education play in the life of our nation," the President said.

Hostile Reaction

The immediate reaction of teachers' organizations to the President's address was hostile.

"We don't need to send one teacher into outer space," said Mary Hatwood Futtrell, president of the National Education Association, the nation's largest teachers' union. "We need to send all teachers into their classrooms fully equipped and ready to help students learn."

But later, as the symbols of Ms. McAuliffe's role grew, the hope that her flight would somehow increase the prestige of a tarnished profession took hold among many educators.

The spreading national enthusiasm for the project seemed, in fact, to energize the work of states and special commissions around the nation that were exploring ways to upgrade the status of teachers.

And despite their unions' criticism, individual teachers quickly took to the notion of being the first civilian in space.

Within weeks of the President's announcement, NASA reported that

President Announces the Program

President Reagan announced plans for the "Teacher in Space" program during a speech to winners in the Secondary School Recognition Program on Aug. 27, 1984. An excerpt from his remarks follows:

If we apply technology to education with thoughtful skill, good education will be available to all. Education and technology will enable all to participate fully in the wonders and benefits of American life.

One area where those wonders and benefits are most apparent is space. It has long been a goal of our space-shuttle program to some day carry citizen passengers into space. Until now we had not decided who the first citizen passenger would be. But today I am directing NASA to begin a search in all of our elementary and secondary schools—and to choose as the first citizen passenger in the history of our space program one of America's finest: a teacher.

When that shuttle lifts off, all of America will be reminded of the crucial role teachers and education play in the life of our nation. I can't think of a better lesson for our children, and our country.
Teacher in Space: NASA's Bid for Broader Support

Continued from Preceding Page

It was receiving some 400 inquiries a day about the teacher-in-space project.

According to the Council of Chief State School Officers, which NASA engaged to coordinate the search for the teacher to ride the shuttle, some 100,000 inquiries poured in.

Chiefs Go Along

According to Mr. Ladwig, NASA asked the C.C.S.S.O. to coordinate the search because "we needed an organization that had a network in place" that reached into schools in all of the states.

Although among its members were outspoken critics of the Administration's education policies, the group agreed to help "based on the fact that it seemed appropriate to us to have a teacher be the first civilian in space," said George Rush, the director of technology projects for the C.C.S.S.O.

Aided by representatives from six state education agencies, the chiefs developed and distributed application materials for the project. NASA then set up a system to screen applicants.

The lengthy forms, developed in the winter of 1984 and made available to teachers on Dec. 1, were also credited with dissuading all but the most interested teachers from applying.

114 Semifinalists

From the more than 11,000 teachers who had applied by Feb. 1, 1985, each of the 50 states, overseas territories, agency schools, and Bureau of Indian Affairs schools chose two nominees, for a total of 114.

Under the guidance of the chiefs, each of the states and the other entities established procedures for selecting their two semifinalists. Some, like Massachusetts, set up a "sensitive commission that recommended a half-dozen or so teachers, from whom the state education commissioner chose the final two.

In other states, a civilian commission chose the two semifinalists, in Ms. McAuliffe's home state of New Hampshire, the commission made its selections from among 74 applicants.

"In our state, we made a definite commitment that whomever we picked had to be an outstanding teacher and also be able to project herself, realizing what they were going to have to do," said Robert L. Bruselle, the state's education commissioner.

The week of June 22, 1985, the 114 semifinalists gathered in Washington, D.C., where they were informed of current developments in the space program and met with a national review panel, which chose the 10 finalists.

The 20-member panel was chosen by NASA and the C.C.S.S.O.

Initially, NASA had intended only to select a flight candidate and a back-up. But during the June ceremonies, it dubbed the 114 semifinalists "space ambassadors," creating a nationwide network of teachers who could promote the goals of the space program.

"That kind of developed after we realized that we had all of these excellent teachers from all of the states," Mr. Ladwig said.

Similarly, the agency decided that the eight finalists not chosen for the mission could be useful working at NASA centers around the country. "That also evolved as we proceeded," Mr. Ladwig said.

Ten Finalists

Mr. Beggs announced the 10 finalists on July 1, and six days later, they traveled to the Johnson Space Center in Houston for a week of medical examinations and briefings about space flight.

Later that month, the finalists visited several other NASA installations.

From July 15-18, the space-flight participation committee interviewed the 10 finalists. It submitted recommendations to Mr. Beggs, who selected Ms. McAuliffe as the flight candidate and Ms. Morgan as her alternate.

On July 19, Vice President George Bush announced their selection at a White House ceremony attended by Mr. Beggs, Secretary of Education William J. Bennett, and the 10 finalists.

In August, the 10 finalists reviewed the proposed lesson plans that the 114 semifinalists had submitted for use on the shuttle, and decided on the ones that Ms. McAuliffe would present, according to Doris K. Griggsby of NASA's educational-affairs division.

The agency hired consultants to help Ms. McAuliffe and Ms. Morgan write the lesson plans and prepare the teacher guidebooks that it distributed to schools across the country.

Ms. McAuliffe and Ms. Morgan began their flight training on Sept. 9 at the Johnson Space Center, where they spent some 100 hours learning about life on the shuttle.

"They require some special attention you don't need to pay to professional astronauts," said John Lawrence, a spokesperson for the Johnson Space Center.
The seven crew members were back row, left to right, El Ozinski, Christina McAuliffe, Greg Jarvis, and Judy Resnik; front row, left to right, Mike Smith, Dick Scobee, and Ron McNair.

The Crew of Shuttle Mission 51-L

Following is a list of the six astronauts killed aboard the space shuttle Challenger along with teacherShar on Christa McAuliffe. Gregory B. Jarvis, 41. A civilian engineer with the Hughes Aircraft Company, Mr. Jarvis was a payload specialist on the Challenger mission, assigned to conduct six days of orbital experiments in fluid dynamics. He is survived by his wife and three children.

Ronald E. McNair, 35. A physicist and mission specialist on the Challenger crew, Mr. McNair was the second black American astronaut in space. He had been on one previous shuttle mission. During the flight, he was to launch a small science platform to study Halley's comet. He is survived by his wife and three children.

Ellison S. Onizuka, 39. A lieutenant colonel in the Air Force and an aerospace engineer, Lt Col. Onizuka was to act as a mission specialist aboard Challenger, which was his second shuttle voyage. He is survived by his wife and two children.

Judy A. Resnik, 36. An electrical engineer and mission specialist aboard Challenger, Ms. Resnik became, in 1984, the second American woman to travel in space when she served on the maiden voyage of the space shuttle Discovery. Survivors include her brother, who was at the launching site last week.

Francis R. Scobee, 46. A veteran test pilot and commander of the Challenger mission, Mr. Scobee also served as pilot of the Challenger's voyage in 1984. He is survived by his wife and two children.

Michael J. Smith, 30. A commander in the Navy and an astronaut since 1980, Comdr. Smith was pilot aboard the Challenger. Although he had never been in space, he was one of the most seasoned pilots in the astronaut corps. He is survived by his wife and three children.

The 10 teacher-in-space finalists during their first look at Houston's space center last July. From bottom right, Kathleen Beres, Robert Foerster, Judith Garcia; Peggy Latblae, David Marquart, Christa McAuliffe, Michael Metcalf, Richard Methia, Barbara Morgan, and Niki Wenger.

Finalists Knew of Risks on 'the Frontier'

By James Crawford

"This is our 'frontier,'" says Michael W. Metcalf, one of 10 finalists in the competition to become the first teacher in space. "Pioneers have always taken risks, and all of us reached for those risks gladly."

"I'd go tomorrow if they'd let me," adds Niki Mason Wenger, another finalist whose support for NASA's teacher-in-space project remains unsubscribed despite the worst disaster in the history of the space program.

"Especially now since the accident, it's more important than ever that we continue efforts to explain aerospace as our future."

Ms. Metcalf, a government and geography instructor from Hardwick, Vt., and Ms. Wenger, who teaches gifted and talented students in Parkersburg, W.Va., are among eight finalists who took this year off from teaching to work for NASA in promoting links between education and space exploration.

Both teachers expressed personal grief at the loss of Sharon Christa McAuliffe and the six other crew members of the space shuttle Challenger. Last summer, before Ms. McAuliffe was chosen for the mission and Barbara R. Morgan was designated as her back-up, the 10 candidates had trained together at the Johnson Space Center in Houston.

Since then, the group has kept in close touch, writing a curriculum together and coordinating the lesson plans that Ms. McAuliffe was to teach from space.

Based at the Goddard Space Flight Center in Maryland, Mr. Metcalf has spent most of this school year addressing groups of educators on what he calls "a three-fold agenda": the need not only for improved mathematics and science education, but for a "holistic approach" in applying other disciplines to the problems of space, and for an international perspective.

"Some of the kids in our classrooms today will be the first Martians," he explains. "They'll need to know how to present and answer questions in . . . space law, space economy."

The systemic problems of social interactions will be of as much concern in space as on earth, he predicts, adding that Ms. McAuliffe, also a social-studies teacher, shared this view.

"I agree very much with Christa's philosophy that history should be taught as a chronicle of the people, not of battleships or political campaigns," Mr. Metcalf says, citing her emphasis on the experiences of women pioneers crossing the plains in Covered wagons.

Metcalf predicts that the problems of social interactions will be of as much concern in space as on earth, he predicts, adding that Ms. McAuliffe, also a social-studies teacher, shared this view.

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Wenger maintains that all participants in the teacher-in-space project were conscious of the considerable risks of space flight, even though they were seldom discussed.

Exhalation and Risks

During the project, Ms. Wenger says, "Christa was exhilarated and happier than she'd ever been. She achieved her dream and she died accomplishing it."

In interviews since last summer, Ms. McAuliffe frequently minimized the dangers of her upcoming mission, on one occasion describing it as safer than "driving around the New York streets." But her life insurance company apparently disagreed, canceling her policy after she was selected for the flight.

A week before the accident, Corron & Black Inspace, a Washington firm that specializes in insuring space equipment and astronauts, gave Ms. McAuliffe a $1 million personal-accident policy.

"We donated it as an act of goodwill, to show our appreciation for her and our support of the teacher-in-space idea," said Gayl Gramato, an assistant vice president of the company.

Other Finalists

Following is a list of the eight teacher finalists and a description of their work at NASA facilities:

Kathleen Anne Beres of Balti­more, Md., is working at the Mar­shall Space Flight Center in Hunts­ville, Ala., producing video tapes of research processes at NASA laborato­ries.

Robert S. Foerster of West Lafayette, Ind., is assigned to the Lewis Research Center in Cleveland, where he is helping NASA distribute materials through the National Dis­tribution Network.

Judith Marie Garcia of Alexan­dria, Va., has worked at NASA head­quarters in Washington and the Langley Research Center in Hamp­ton, Va., producing materials on the work of space scientists, engineers, and technicians and coordinating various education projects.

Peggy J. Latham of Friendswood, Tex., is based at the Johnson Space Center in Houston, where she is in­volved in curriculum development and setting up a mentor program.

David M. Marquart of Boone, Ia., has been working at the Ames Research Center in Mountain View, Calif., on an electronic networking system and has edited a newsletter for the 114 state finalists in the teacher-astronaut competition.

Michael W. Metcalf of Hardwick, Vt., is assigned to the Goddard Space Flight Center, Md., and is de­veloping a teacher resource center in Vermont.

Richard W. Methia of New Bed­ford, Mass., serves as a liaison at NASA headquarters with the Young Astronaut Organization.

Niki Mason Wenger of Parkers­burg, W.Va., is based at the Langley Research Center in Hampton, Va., where she serves as a link to organi­zations devoted to educational pro­grams for gifted and talented stu­dents.
Applicants for the "Teacher in Space" program were asked to answer several essay questions. Christa McAuliffe's responses follow:

Why do you want to be the first U.S. private citizen in space? I remember the excitement in my home when the first satellites were launched. My parents were amazed and I was captivated with their wonder. In school, my classmates would gather around the tv and try to follow the rocket as it seemed to jump all over the screen. I remember when Alan Shepard made his historical flight—not even an orbit—and I was thrilled. John Kennedy inspired me with his words about placing a man on the moon, and I still remember a cloudy, rainy night driving through Pennsylvania and hearing the news that the astronauts had landed safely.

As a woman, I have been conscious of those men who could participate in the space program and who were encouraged to excel in the areas of math and science. I felt that women had indeed been left outside of the most exciting careers available. When Sally Ride and other women began to train as astronauts, I could look among my students and see ahead of them an ever-increasing list of opportunities.

I cannot join the space program and restart my life as an astronaut, but this opportunity to connect my abilities as an educator with my interests in history and space is a unique opportunity to fulfill my early fantasies. I watched the Space Age being born and I would like to participate.

Space-Shuttle Special Project Description:

In developing my course, The American Woman, I discovered that much information about the social history of the United States has been found in diaries, travel accounts, and personal letters. This social history of the common people, joined with our military, political, and economic history, gives my students an awareness of what the whole society was doing at a particular time in history. They get the complete story. Just as the pioneer travelers of the Conestoga wagons on days kept personal journals, I, as a pioneer space traveler, would do the same.

My journal would be a trilogy. I would like to begin it at the point of selection through the training for the program. The second part would cover the actual flight. Part three would cover my thoughts and reactions after my return.

Perceptions as a nonastronaut would help complete and humanize the technology of the Space Age. Future historians would use my eyewitness accounts to help in their studies of the impact of the Space Age on the general population.

I would also like to record much of the daily activity on videotape and slides. A visual message would have a greater impact on an American public than just the written word. Interpersonal relationships would be so different in a spacecraft where people have to live and work in such a limited environment. Stress, reactions to problems, and the daily exchange of information would be ideal material for sociology, American culture, and history courses and the course on The American Woman.

The dress of astronauts, the inside of the space shuttle, the opportunity to ask questions about what people are doing and feeling would certainly add a new dimension to a person's primary source material.

How do you expect to communicate during the year following your return from the space flight mission?

The chance to share my experience with educators and to have a direct impact on education is an exciting prospect. The network of national, regional, and state educational conferences would provide me with the opportunity to disseminate information after the space flight.

For example, over 4,000 educators attended the most recent National Social Studies Conference in Washington, D.C. Annually, conferences are held throughout the country for every educational discipline. The conference system of large audience lectures and small personal workshops would make it possible to reach many educators and thereby have a direct impact on students across the United States.

As a conference speaker, I would share my space flight experience through a slide or videotape presentation and lecture, followed by a question and answer session. As a presenter in the workshop format, I would have the opportunity to meet with small groups of educators from different disciplines and give them suggestions for class projects and activities. These would include not only problems in space travel, journal writing, comparing fantasies about space travel with the realities of the trip, researching the history of space exploration, model building, and collecting oral history. These projects would make it possible to compare perspectives about the progress of the Space Age, and debating the merits and uses of space technology in terms of politics, science, defense, art, and as an aid to humanity.

'Slip the Surly Bonds of Earth'

President Reagan concluded his televised message on the death of the seven space-shuttle crew members last Tuesday with a poetic fragment that sent many viewers searching through literary references.

"We will never forget them," the President said, "nor the last time we saw them this morning as they prepared for their journey and waved goodbye and 'slipped the surly bonds of earth to touch the face of God.'"

" Were the last dozen lines from Shakespeare, many wondered? Or James Michener's novel Space? Or perhaps the popular motion picture "Out of Africa," in which the Danish writer Isak Dinesen conveys the joy of turn-of-the-century flight? Actually, the President had juxtaposed lines from a World War II-era sonnet, written by a 19-year-old American airman who had volunteered for the Royal Canadian Air Force.

Titled "High Flight," the sonnet reads:

I still can't believe that I'm going.

In a July 22, 1985, interview on NBC-TV's "Today" show, Christa McAuliffe discussed her selection by NASA with Bryant Gumbel. Excerpts from the network's transcript follow.

Gumbel: Simple question: Why you?

McAuliffe: It's really hard to say. There were 10 people. We were such a cohesive group that I think any one of us would have done a really good job. I don't know what put me over the top, but I'm delighted to be here.

Gumbel: When you first applied for this, did you think you had even a prayer?

McAuliffe: I really didn't. I wasn't doing it kind of like you when you play the lottery. If you don't play it, you don't win. And when I filled out that application, that's really how I felt. I figured there'd be at least 50,000 people across the country who would be filling that into the mailbox at the same time I did it.

Gumbel: What about when you made it down to the last 10? Did you think, then, maybe?

McAuliffe: Well, then the possibility was there. But I really started to think what the impact would be on my teaching career and my family. But it was still really exciting.

Gumbel: Has it hit all hit you yet, McAuliffe?

McAuliffe: No. No, I don't think so. I still can't believe that I am going to actually be going into that shuttle. It just really doesn't seem possible. Maybe when I'm on the launch pad it will.

Gumbel: What are you most excited about?

McAuliffe: Seeing that Earth from that perspective. You know, it's such a big place, here, but being able to look at it from a new perspective. And I hope I could bring that wonder and that excitement back to the students.

Gumbel: Maybe just a little bit of fright, too?

McAuliffe: Not yet. Maybe when I'm strapped in and those rockets are going off underneath me there will be, but space flight today really seems safe. We had a good example of that when NASA shut down the last one through the computer because one of the back-up systems wasn't working.

Oh, I have slipped the surly bonds of earth,

And danced the skies on laughter-rolled wings;

Sunward I've climbed and joined the tumbling mirth

Of sun-split clouds—and done a hundred things

You have not dreamed of—wheeled and soared and swung

High in the suncharmed silence of the flight.

I've chased the shouting wind along and flung

My eager craft through footless halls of air;

Up, up the long, delirious, burning blue,

I've topped the wind-swept heights with easy grace,

Where never lark, or even eagle, flew;

And while with silent, lifting mind I've trod

The high, unperced soles of pine-forest

Put out my hand, and touched the face of God.
Leaders Pay Tribute to Shuttle Crew

Mary Hatpod Putrell, watching in Minneapolis, Minnesota, as she should have "just sat here and cried," after realizing that the Challenger had exploded 74 seconds into its flight, said, "I think of her as a very positive, very outgoing kind of a person.

Albert Shanker, president of the American Federation of Teachers, called Ms. McAuliffe a "symbol of hope," and "the nation's children.

"This is a very sad day for all of us. You should be proud of Christa McAuliffe, of her teachers, and of the other brave Americans who were willing to take a great risk for the good of all of us," he said.

The National Science Teachers Association, which coordinates student programs with the shuttle program for NASA, is encouraging teachers to use the lessons presented for the first time "with the benefit of space assistance," said Bill G. Alridge, executive director of the association.

The Council of Chief State School Officers, which helped select the first teachers for the shuttle program, said, "We are all deeply grieved. "The group, which had urged students to leave porch lights on to celebrate Ms. McAuliffe's launch from space, now asks "everyone" to turn on a light in conjunction with any national commemoration.

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So the tragedy is not for our space program, but for a few Americans who share a sense of loss.

Secretary of Education William J. Bennett, as Mr. Reagan had, addressed the nation's schoolchildren.

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Special Telecasts Today Serve as NASA's Hubble Experiments

Bellevue is a list of the teachers designated by NASA on "spaceambassadors."

All were seminarians in the "Teacher in Space" competition. Participants were reviewed each month to form an organization to maintain the ties they had developed in recent months.

The Council of Chief State School Officers.

Alabama: Sophia Ann Clifford, Erwin High, Birmingham; Pamela Sue Gray, Millard High, Franklin; Marcia Wilson, Clayton High, Cherokee.

Maryland: Alphonso M. Wilkins, Dulan High, Parkville; David J. Monroe, Gateway High, Laurel; Jennifer A. Bohn, Magnolia High, Salisbury; J. R. Brown, Eutaw High, Baltimore.

Virginia: Judith A. Morgan, Denbigh High, Newport News; Richard D. White, Westhampton High, Williamsburg.

Texas: Troy A. Bowers, Dumas High, El Paso; Kyle Palmore, Odessa High, Odessa; Michael J. Williams, Brownsville High, Brownsville.

Florida: pleased by the story, which had "put a lid" on its astronomers, refusing to allow the story to appear on television, Mr. Ceci said.

According to Mr. Ceci, at least three major spa affiliates—White 

Mr. Alridge was also to have conducted a series of experiments on the space station, which would have been transmitted to schools. Ms. McAuliffe's lessons would have been videotaped and made available to schools after the flight.

An event not merely an event!

Despite its failure—perhaps in part because of it—last week's space mission created an outpouring of attention from the public and from private sources.

A grassroots movement that had been scheduled for the National Science Foundation's Space in Education program had been the most visible component of the program, given the high level of public interest generated by the story. In the case of the shuttle program, the response was immediate and overwhelming.

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On Friday morning, a few teachers, we were told, felt that science might have "meant something" to them after watching the launch.

Mr. Ceci said.

We're Going, Bill G. Aldridge, John M. Fergul, Jr., Robert W. Thompson, National Aeronautics and Space Administration, Washington, D.C.

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"Why?" examined the month-long experiment, which would have been videotaped and made available to schools after the flight.

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