When students care passionately about something, nothing can stop them from learning. From around the country, Essential school students describe what has worked for them, and why.

What Makes for Powerful Learning?
Students Tell Their Own Experiences

WHAT WORKS BEST to engage, motivate, and challenge students to learn? In the midst of the national fervor to raise the quality of teaching and learning, educators and policymakers often forget to ask the students themselves. Yet if we listen to their words and look closely at the work they do, we can find clues to some of the most pressing questions that face schools.

The interviews, accounts, and samples of work in this issue of HORACE—contributed by Essential school students and teachers—serve as a useful text for discussion about the key question that links them all: “What makes a powerful learning experience?” In reflecting on the passages in which students speak at length about their learning, readers might also ask:

- What has this student learned in the experience described?
- How might a teacher assess and document that learning?
- What did the school do that helped that learning take place?
- What do all these experiences have in common?

In each of these examples, the Coalition’s Ten Common Principles show up as a specific design or strategy a school has chosen in its quest for more “essential” student learning. When rendered in the students’ own words, these yield a vivid picture of just how individual—and yet how common to us all—the experience of learning is.

Hixson High School in Chattanooga, Tennessee sends ninth-graders out to visit workplaces for a day, hoping to forge connections with the real world that will personalize their learning as the Fourth Common Principle suggests. Now a senior, Amber Osborne spoke with HORACE when she attended the 1999 CES Fall Forum:

As a freshman I went to a kindergarten class, and that’s when I realized I wanted to be a kindergarten teacher. I had never been around little kids much, and it was so different for me to see what they were like—how they learned and how loving and accepting they were. They’re so eager, wanting to learn.

Since that time I’ve visited a lot at Head Start, because my mother used to work there. A girl in the class was mentally challenged, and in a wheelchair; I’d never really been around that, either. Working with her was so neat; she needed so much help and it made me feel so important to be able to help her out.

I’ve also visited with other mentally impaired children, through school and my church. A couple of friends from my church are in special education programs at school; they’re autistic. I don’t work with them much at school, but I go to their houses sometimes and do things like cook with them. When we see each other in the halls, we say hi.

From that experience sprang all this other interest in me. I’m taking...
When I lay down on that clear night in the middle of the green grassy flat plains of the Dominican Republic, I told my cousin Ornella, "Look up at the stars, aren't they beautiful." The night sky seemed as if it had been pricked with a million pins and light from the other side was shining through tiny holes illuminating the earth. After that night of stargazing, I couldn't stop myself from thinking how things were outside of planet Earth, and wondering how I could find out more.

Upon my arrival to the United States, my dad told me that I could no longer continue my stargazing. There were no stars to see because the lights reflected from New York City to the sky prevented any stars from being seen. In addition, the city was too dangerous for young children to be out in the streets at night. I was extremely sad for a while; but when I enrolled in junior high school, I had totally forgotten about astronomy.

When I began high school, I took my first physics class. I fell in love with that class when we did a section in astronomy. Then it all started to make sense. It had to be destiny that had reunited me with what I wanted to learn about as a child.

As a senior in high school, I have learned innumerable new facts about the universe and the many things within it. I had the chance to work with a graduate student at Columbia University and design and conduct a year and a half of research on low-mass stellar objects in space. I was one of eight minority students accepted into the Pre-College Collaborative Program at the Museum of Natural History.

I learned that Brown Dwarf stars are low-mass objects. They are virtually invisible because of the space dust that blocks them, which makes it impossible for them to be seen in the optical view of a telescope. Even though I am studying low-mass objects, I've always had an urge to learn about Black Holes, the last stage after a star has collapsed. They have such a high concentration of gravitational force that not even light could escape from them.

The universe has always been a mystery to me because there are so many more things to learn about it. We humans are like microbe organisms compared to the universe. We know so little about our surroundings outside of earth.

In college, I am considering the possibility of majoring in astronomy or physics. Someday I hope to help build a spacecraft that could send humans up to space to explore territory yet uncharted. I want to learn everything I can about space and like a black hole suck all the information into my head and not even let the tiniest of details escape.

Because Boston Evening Academy expects all its students to reach for important understandings, it creates in-depth projects that culminate in an exhibition. Student Felicia Calhoun described to a Fall Forum workshop how she navigated a term-long boat-building project in the Core Science Review class taught by Gena Merliss. (For the assignment see sidebar, page 3.)

[The teacher] made us think about definitions and what we thought different words might mean. When she proposed the word density to us, we had to figure out a formal definition in our group. At first I was confused—I was trying to find a dictionary—but the assignment made me broaden my horizons a little bit. The first thing I thought of was a cloud, fog. I just figured it would be dense because all the water particles are trying to come together and make it compact, a very thick cloud.

[Learning] the vocabulary helped us a lot, because you have to use it in order to actually build the boat—if you remember certain definitions, you can use common sense. Most frustrating was getting our definitions together to make a formal one. We were in groups of five and we tried to brainstorm. I usually don’t like to work in groups at all;
I just like to get the definition and apply it. I like to learn off the board and then do an open lab.

When the teacher brought this boat project to us, I looked at her like, "Why do we have to build a boat? How long is this going to take?" Somewhat into the project I was like, "Whatever." But then I thought about seeing why a boat floats, not necessarily because of the weight—all my assumptions were wrong! So it made me want to find out more. We had to do our design on graph paper, and then the whole thing of making a model and then making it life-sized and actually putting somebody in it. I'm not a water person, so deciding what boat I would or would not get into was important. In real life, I would have to see the boat first and examine it. I kept thinking of the Titanic!

Overall, it was a good learning experience. I still hate working in groups, but I learned to accept the fact that I'm going to do what I have to do. The best thing: It pulled my class together as a whole. It brought everybody a little bit closer together.

Teachers at Irvington High School in Fremont, California regard themselves as generalists; they seek to connect course work with issues of decency and democracy not just in school but in the larger world. An American Studies class conducted a service learning project called "Hunger at Home" as part of their study comparing Depression-era policies with those of the present day. Abeda Bayanzai, Nicole McBicker, Minnie Whalen, Amanda Pitman, and Sean Asplund presented their learning at the 1999 Fall Forum:

Sean: The hunger education coordinator came to our class from the Alameda County Food Bank, which gives food out to the homeless and hungry people in our community. Not every person who needs food is homeless; many people have jobs and just can't afford food. When we received all this information we then had to integrate it into a project that would serve the community and satisfy the school-wide outcome that we were focusing on.

Nicole: We had to somehow help somebody who can't afford food, and we had to document it. Some of us wanted to educate kids about what we learned; some of us wanted to do a food drive; others wanted to change things out of school.

Amanda: We were planning to go teach a sixth-grade class about hunger in our area, but we didn't feel we had enough information. To see first hand how it worked, we went to a local organization that provides a free breakfast for anybody who needs it, no questions asked. We came up with a question, "What does this do for hunger- and poverty-stricken people?" We found that not only does this breakfast program feed people and offer them food to take home, but it also satisfies a social aspect of their life. Lots of people in the community don't really care about these people, so when they go there they talk and have a good time while they're eating breakfast.
A Student and Her Exhibition: One Teacher’s Portrait
by Peggy Silva, Souhegan High School, Amherst, New Hampshire

Peggy Silva, an English teacher at Souhegan High School in Amherst, New Hampshire, followed several students’ experiences closely in the process of writing a book about this Essential school founded in 1992. Here she describes a student preparing for the Division One Exhibition Souhegan requires midway through the high school career, a rite of passage at which tenth-grade students present work at a roundtable before family, teachers, and friends.

Alyce slouched, smoked, gossiped, cut classes, and fought with her parents. She became annoyed when teachers recognized flashes of brilliance—when she wrote an exquisite line of poetry, or when she became Mayella Ewell in the courtroom scene of To Kill A Mockingbird. Alyce was locked in a power struggle with her parents that prevented her succeeding in high school. Dad was a college professor; what better way to stick it to him than to fail at academia?

“Helping Alyce to prepare for her Division One exhibition was almost impossible,” according to her adviser, John Dowd, who coached her through the preparation for this rite of passage. “When questioned about behavior or missing work, she became very upset and acted badly. It was hard to have a substantive conversation with her because she always walked away, but when I could get her attention, she could acknowledge the truth of what I said. The one saving grace is that we both knew that she would eventually have to sit across a table from me and her parents, and discuss her work. She hated that.”

“I didn’t want to be here. I didn’t like it at all,” Alyce responds. “I didn’t want to be in school. . . . Truthfully, no adviser would have made a difference to me, but I focused a lot of anger on John.”

The night before her Roundtable, Alyce says, “My mom, two friends and I were frantically pulling work together, and I could see that I had been a complete jerk. I had the work I needed—it pissed me off when I realized that, because I had spent so much time running away from it.

“It was tough. My mom was late, and it was awful waiting. I was so nervous. I was really freaking out because I knew it was going to be a lousy time. I couldn’t have done it without my peer advocate. She just kept calming me down. My letter to my Roundtable was good because I can write and express myself well, but mostly, I just wanted to get through. And, in the end, I did. I passed.”

Alyce’s mother remembers vividly the days leading up to Alyce’s Division One Exhibition:

“Alyce was almost paralyzed by nerves as she tried to organize her work. I was struck by the way her friends responded—not that they had responded, but that she had asked for help. There was so much activity; the dining room table was covered, the kitchen was filled with Alyce’s stuff. Those days, she just kept saying over and over that she was not going to make it. But she did.

“I was blown away by her Roundtable. I didn’t fully appreciate what it meant to hear her to have to gather herself like that in front of teachers and parents and friends. This was so big, I was struck by how poised she was, despite her nerves.” Alyce’s dad was also impressed by her friends’ participation at her Roundtable. “It was so effective to formalize the role of a student advocate,” he says.

Alyce impressed her Roundtable panel with her dignity and composure as she engaged in a difficult conversation about the choices she made throughout her high school experience. She laughs today as a friend calls her a soap opera, full of high drama and rolling eyes. She is also very honest in her assessment of herself. She credits John Dowd as “one of the major contributors of my entire experience. I feel terrible when I think about how mean I was to him, how unwilling I was to help myself, but he continued to pull for me. My guidance counselor is great, and my freshman English teacher has stuck with me for four years of my being crazy.

“The thing that frustrates me most is that I brought most of the bad stuff on myself. Anger almost destroyed me, and when I finally woke up at the start of my senior year, I told the Dean of Students that I recognized I wasn’t giving him much to go on. I want to get it done, however, I want to leave this school. . . . I did connect in a couple of science courses. I hated Conservation Biology at first, but Melissa finally threw me in the river, and I discovered that I loved the work and the science of living things.

“My parents and I don’t argue about school anymore. I learned that it’s going to make my parents feel better if I let them help me, and they learned it is going to make me feel better if they don’t help me too much.”

Alyce says that her “transcript looks like crap,” and that her future is hostage to choices she made in high school. She plans to go to a local branch of the state university to build her grade point average. She makes eye contact when she talks about life after high school. She seems to have finished fighting with herself.

The Division One Exhibition was a highpoint in a low year for Alyce, and her happy ending is still in progress. After a disastrous junior year, Alyce began to focus on her learning. Her senior project, according to her mother, is a highly personal topic. “She has decided to study nutrition because she has always had a nervous stomach. It seems to me that her choice of topic is a sign that she is trying to take charge of herself in a positive way, in order to know herself better.”
“As we got more involved with the project, we wanted to actually do the project and forget about our grade.”

_Abeda:_ [The Food Bank] presentation taught us that anyone could come from a low-income family; it could be me, you, your friend, someone who you’re sitting next to in the cafeteria. Alameda County conducted a survey: 40 percent of the people benefiting from the food programs are children, 72 percent of all households have incomes of less than $11,500, and only 8 percent of households earn enough to meet babies’ needs. In 9 percent of households with children, the children have missed meals because of not enough money to buy food.

We shared these statistics with the sixth-grade kids and we talked about breakfast programs. Breakfast is the most important meal of the day. If students have breakfast, they have higher test scores and lower tardiness rates and absences, and they have fewer disciplinary problems and fewer health problems.

When we first started doing this project we did it just for the grade, just to get it over with. As we got more involved with the project, we wanted to actually do the project and forget about our grade. We wanted to do more for our community, so we just kept doing more.

_Sean:_ When we were gathering information from the breakfast program, we were getting live interviews with people that use it. And when we went to teach the sixth-grade class, there were a few students in the class that used the breakfast program. I saw real life people that I was helping and trying to make them prosper.

_Abeda:_ I really felt like we made a connection with the sixth graders, and they had a deep understanding of what we were trying to teach them, from their responses and the way they were acting. Everyone wanted to share their stories with us. It was really touching, and I also think it was really important. They had these awesome intellectual ideas. I was learning from them!

_Embrazing the Coalition’s metaphor “student as worker,” Eisenhower High School in Houston, Texas puts students in the driver’s seat when it comes to technology education. A group of students who call themselves the “Lab Rats” provide coaching to staff, students, and community in the school’s new Eisenhower After School Technology (EAST) Center. Though previously inexperienced in technology, they have become indispensable in their school of 2,200. Brandy Fonteneaux and Anjali Oza were two of the students who described their experience at the 1999 Fall Forum as follows.

Brandy: I set up the network of Pentium III PCs, using different ports. It was hard work. We learned their different functions, and if people have trouble, they raise their hand and we come help them.

Working with teachers and other students, you can’t have the attitude that “I’m better than you.” We’re all here together; we all have to do this as one, as a team. When we were doing staff development, a lot of teachers didn’t know how to use Adobe Photoshop. We helped them understand the program so they could go back to their classrooms and teach it.

This year a lot of students are working on their presentations at the center. If a student gets an attitude with us or isn’t having a good day, we work patiently with them. If they don’t understand something we teach them more slowly, or we try to work out the problems and help them out. We’re there beside them, we demonstrate things, but we don’t want to do it for them because then they won’t learn.

Even though you know something is wrong, sometimes it’s hard to tell somebody what they’re doing is wrong; you have to kind of cope with it and ask them questions rather than giving them the correct answer. Guide them step by step. And you learn how to work with others. This is our workplace. We share all our knowledge to each student and teacher, so they can share their knowledge to other people—and we become better students, a better campus, a better school.

“We’re there beside them, we demonstrate things, but we don’t want to do it for them because then they won’t learn.”

_Anjali:_ Last year in the science club we created a presentation at the EAST Center on personal hygiene, which we took to several elementary schools. This year, for the Key Club community service organization, I plan to use the Center to put photos I’ve taken into Premiere to make a video that we’ll present at our banquet—a cumulative thing of what we’ve done over the year.

I’ve also used the EAST Center to search for information for colleges, to download files, applications, to look for research on colleges. It provides us with so many opportunities to do research. The Associated Press has every photo that they take, and you can download all the pictures—you can find things about historical events or any photograph that you need. Things like that, you can’t do at home—or even at the library. You have access to so many things like that, which give you a broader perspective. It has helped me in my whole educational experience.
Because budget decisions make teaching and learning a priority, CES schools often find themselves thinking creatively about practical matters like textbooks and supplies. Far West High School in Oakland, California turned a cash shortage into a learning opportunity and a chance to practice democratic action. Students in a Community Investigation and Action class won a grant from a community agency to increase community understanding and awareness of their 100-student school, which lacked even a sign to identify it. Sophomore Natanael Marino and senior Nicholas Shere talked about the resulting projects at their 1999 Fall Forum presentation:

Natanael Marino: Our class focuses on social, environmental, and labor topics in the community. We worked together in groups on a project titled ‘Community Health Academy,’ asking for about $4,000 to improve the school. Our projects included computer upgrades, landscaping, and plumbing repair. A disabled student also worked on making the school compliant with disability laws. Everybody was feeling like they could learn by working with each other, not having the teachers giving us all the directions, because all the students had different choices.

"Everybody was feeling like they could learn by working with each other, not having the teachers giving us all the directions, because all the students had different choices."

One project advertised for a physical education teacher, and tried to get greater resources like basketball hoops to bring the P.E. facilities up to date. We got together in a group and learned to write up a newspaper ad, and after two weeks we had five people to interview. The students had a chance to interview the people who applied, not just the teachers and the principals like they always do.

When we started with the mural we had a contest in school for the students to draw sketches. We picked one we thought was the best and then the people who did the sketch did the mural, as well as other students. We went out as a class to ask for donations from different stores around the area.

To get our grant accepted, we had to go into the agency and make a presentation. One of the questions was how we were going to prove to them that we used the money the proper way. I decided I should make a video on the grant, and I did. It’s still in editing. It took me about six or seven months to finish. I did some footage of the P.E. classes and of students working on the mural—footage on everything.

Nicholas Shere: Our class took certain goals and we achieved those goals, and it came from and was executed by students, universally. One teacher served in an advisory position, but it was the students who were doing the work. That was important to a lot of us, particularly students who weren’t necessarily the most successful in other regions of schooling. It was really good for people to see that they could produce a real visible change.

There were other aspects to the class, too. At the beginning of the year, students grouped together by neighborhood and went out and did a visual and statistical research project for each neighborhood. We came back with presentations comparing the different areas of Oakland, which is a very diverse place.

I think student-centered learning is whatever draws on the student’s own mind and experience, whatever sends the student back to him or herself or back to his or her own experience, cultural background, neighborhood. As to how it meshes with the state and district standards, well, that’s hard. I don’t think we had our class worked out on the transcript until halfway through the year.

Curriculum in Essential schools often emerges from school designs in which teachers and students know each other well enough to inspire breakthroughs in learning. Michael Ferguson, a senior at the Francis W. Parker Charter Essential School in Devens, Massachusetts, posted this note to the school-community e-mail discussion group there:

I had a realization today about education, at our school in particular, [after] a friend of mine in Pennsylvania recently decided to drop out of high school. She said she didn’t like what it did to her, and she wanted to be done with it.

I’ve been taking great art classes these past two quarters. I’ve never thought of myself as an artist; I’ve certainly had no training or experience with art. I thought I would be doing painting, but I ended up creating all sorts of things from materials I would never even consider as art. We completed many exercises and projects, all aimed at visually representing an idea or a concept. Sometimes I just attached ripped-up pieces of paper to string; other times I used an old 3.5-inch disk drive from my closet. Not all of
it was spectacular, but I really surprised myself. Here I was making “art” and visually representing my ideas.

The most amazing thing to think about is that I would never do anything like this on my own. I would never wake up one morning and decide to alter a piece of copper wire in three ways; I would never attempt to visually represent the digital divide; I would never think of rearranging Paul Simon lyrics in a line. I probably would just forget about art altogether, I would never even bother. Yet I’ve found that I really enjoy a lot of the things that I’ve done in the art classes.

This isn’t just about expanding my horizons and trying new things; it’s something deeper than that. It’s something about years of projects, experiments, lessons, and explorations. There is so much to learn

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Coaching Students to Think and Speak for Themselves

A theatre arts teacher and a Critical Friends Group coach for the Narragansett, Rhode Island school system, Jan Grant works closely with teachers in three Essential schools—elementary, middle, and high school. Her work with high school students there sparked the following reflection:

The concept of Collaborative Inquiry was easy for me to accept when I first encountered it at a week-long summer conference. Though I found it more challenging to apply to practice in our own schools, it became clear that this idea could work in some form with my high school students. When I came back from the conference, I wrote to every student with whom I had worked during the previous year, inviting them to a meeting to hear about Collaborative Inquiry. Fourteen students ranging from ninth to twelfth grades came on an appointed evening.

We discussed the possibility of a small group of students working on extracurricular collaborative inquiry projects they would design, develop, implement, and document themselves. Students would decide their own goals and objectives, and they needed only a little prodding to initiate a complex and enthusiastic discussion about the endless possibilities, or “strands” of focus, open to them.

Although the Collaborative Inquiry process was as yet ambiguous, their intellects caught hold of the idea that each individual would design his or her own project and process. With mentoring, they would have ownership of this work as a group and as individuals. They would be in charge, responsible for the success or failure, the mediocrity or excellence of their plans.

As these students set out to learn “to know what they did not know,” their voices became increasingly important. I asked them to address a number of tasks and issues in future agendas: their group norms, overall goals and objectives, additional ideas for their own strands and projects, and methods of facilitation and giving feedback.

Their chance at facilitation started soon. Our meetings were held from 7 to 9 p.m. on a school night, and the person who volunteered to be recorder for one meeting would facilitate the next. Soon the meetings began to be as important as the projects being designed. The group was beginning to look like a Critical Friends Group.

This ever-changing group of truly extraordinary young people is now in its third year carrying out activities and projects. Among other things, students have researched and developed materials for teacher evaluation; looked into a student “hotline” at the high school; mentored elementary and middle school student projects; and videotaped their schoolwork for teachers to examine in study groups.

The skills they practice stand them in good stead. Meeting regularly provides them with a structure to support and encourage their own work. They are learning:

- to facilitate and use the methods and protocols of “reflective practice”
- to make public their ideas and opinions courageously and with appropriate methods
- to develop leadership skills
- to present at conferences and other public forums
- to know that their ideas can become viable projects
- to work with other faculty through “1-messaging”
- to move in and among a variety of groups and cliques at the high school
- to have confidence and build their self-esteem
- to have a voice.

This learning happened through the powerful process of creating a safe, non-judgmental environment, learning to create and respect their own group norms, taking part in workshops designed to develop interpersonal skills, learning that forthrightness and honesty matters, realizing that their truths are important, practicing teambuilding techniques, airing differences and diversity issues in order to work toward acceptance, honoring confidentiality and becoming real people with one another.

Some may argue that we don’t have time for this kind of process. I argue that we do not have the right, in good conscience, to eliminate it. Our content and process pieces must work together in balance. Knowledge is remembered and held dear when created on a foundation of respect, encouragement, and self-esteem. Don’t we forget the rest? What teachers do you remember? Why? What knowledge remains with you? Why? Which students emerge as leaders? Why? Where and when do at-risk students succeed? Why? How?

Jan Grant may be reached by e-mail at grantj@ride.ri.net.
CES Resources

Schools seeking help with implementing the Ten Common Principles can find help through the Coalition of Essential Schools in a variety of ways:

- **The CES School Benchmarks** spell out detailed "indicators" for how the Ten Common Principles play out in school structures and practices. To obtain the latest working copy, visit the CES Web site at <www.essentialschools.org>.

- **The CES Web site** (<www.essentialschools.org>) posts publications, discussion groups, and a "field book" of examples from Essential schools in action.

- **Ten years of the CES journal HORACE** have been published as *The Collected Horace* in five spiral-bound volumes, arranged by theme for easy reference. Volume 3, titled *School Structure and Design*, includes issues on small schools; new schools; getting reform started; reform in elementary schools; "what works, what doesn’t"; heterogeneous grouping; school-to-work; advisory groups; schedules; school culture; student roles in reform; equity issues in school design; and research supporting Essential School ideas. To order, phone 510-433-1843 or visit <www.essentialschools.org>. The complete set of five volumes is $310 plus $20 shipping; MC and Visa orders are accepted.

- **School coaching** by experienced consultants is available through both the CES national office and CES Regional Centers. For more information, telephone 510-433-1451 or visit <www.essentialschools.org>.

- **The Trek**, a year-long guided journey for school teams in the process of change, is offered by, among others, CES Regional Centers in Indiana (812-856-8216), Ohio (614-855-7331), Missouri (816-453-7733), Florida (954-382-6260), New Jersey (732-445-2071), and the San Francisco Bay Area (510-208-0160). For more information, contact the appropriate Center or the national CES office (510-433-1451 or visit <www.essentialschools.org>.

- **School Design and Leadership Institutes** in the summer and during the school year are sponsored by CES national offices (510-433-1451).

from these things, but I couldn’t possibly ever get myself to do them on my own. There are plenty of amazing people around me, who are not just smarter than me or more experienced, but know about something they are willing to share with me. And I’m willing to stick with it not just because I can learn more and expand my horizons or some cliche like that. I know I’m not mature or responsible enough to create those opportunities for myself yet. If I can’t do a project that is due next week, how can I ever expect myself to do something that I really want to do in my life? If I can’t do a research project on a genetic disorder, then I probably can’t be a musician, or a writer, or an artist, or environmentalist that is trying to save the rainforests.

I can think of many problems with the education system, but I think that if I look at it as an opportunity, a possibility for who I am practicing to become, then it works very well. And because we focus so intently on developing skills and responsibility at this school, I’m even more confident about the way it is affecting me.