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Physics Teaching in Times of Change

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Powerful political forces have been at play in building a mandate to change the schools. The latest, on-going manifestation is in the No Child Left Behind Act, but the mandate for change was being formulated in the early 1980s in the A Nation at Risk report. As physicists we may feel somewhat removed from such goings on, but our children attend school and their teachers come through our classrooms. Physics education research offers extensive, carefully collected data on the consequences of standard physics teaching. The data challenges conventional beliefs about physics learning. It is said that times of crisis represent both opportunity and danger. Because the mandates to change are up to the individual states, each of us in our own state has the opportunity to shift the focus in physics/science teaching toward something better. We also face the danger that existing physics/science teaching will be even more deeply entrenched than it already is.