Amid a struggling economy, a raft of foreign-policy headaches, and the tail end of a heated campaign season, President Barack Obama carved out time in his schedule this month to watch students in the State Dining Room demonstrate a solar-powered model car, a water-purification system, and a soccer-playing robot.

That might seem like a surprising distraction. But to hear the president tell it, those activities—part of what was dubbed the first annual White House science fair celebrating winners of STEM-focused student competitions—are just what the nation needs to prosper.

"In many ways, our future depends on what happens in those contests," Mr. Obama said at the event. "It’s in these pursuits that talents are discovered and passions are lit, and the future scientists, engineers, inventors, entrepreneurs are born."

The science fair was the fifth White House event he has personally hosted over the past year or so focused on education in the STEM subjects: science, technology, engineering, and mathematics.

Given the myriad issues competing for his attention, it’s striking how much Mr. Obama talks about the topic, observers say.

"I don’t think there’s been a president as vocal about these areas, maybe even back to Sputnik times," said Francis Q. Eberle, the executive director of the Arlington, Va.-based National Science Teachers Association, referring to the era of heightened U.S. concern about science and related fields following the Soviet Union’s launch of a satellite into orbit in 1957. "He continues to revisit this, which is really terrific."

When President Obama discusses the issue, he emphasizes the need to inspire more young people to engage in the STEM fields. He also highlights the role of STEM education in helping to drive innovation and scientific discovery, and to maintain the nation’s economic competitiveness.

By most accounts, the president’s interest is genuine. Nonetheless, some observers say the White House may well perceive a political benefit, as the issue lends itself especially well to highlighting Mr. Obama’s concern for jobs and the economy and his ability to work with business leaders, who in some industries see STEM education as vital to their bottom lines.

"I do believe that he and his administration feel very strongly about the issue," said Vic Klatt, an education lobbyist and a former aide to Republicans on the House education committee. "I also
think that they see an advantage in emphasizing this issue. It gives them a chance to work closely with the business community, who they are fighting tooth and nail with on virtually every other front."

‘Educate to Innovate’

Early in his term, Mr. Obama signaled that scientific research and development—as well as STEM education—would be a high priority. In an April 2009 address to the National Academy of Sciences, he vowed to ramp up federal aid for R&D and bring a “renewed commitment” to math and science education.

“This is something I care deeply about,” he said. “Through this commitment, American students will move ... from the middle to the top of the pack in science and math over the next decade.”

As part of the effort, he promised to participate in a “public-awareness and -outreach program to encourage students to consider careers in science and mathematics and engineering.”

A series of events has ensued, starting with an astronomy night Mr. Obama hosted with students in October of last year on the White House lawn. The next month, he announced a White House initiative called Educate to Innovate, a public-private campaign to boost the participation and performance of students in the STEM fields. At that event and others, he’s announced commitments and initiatives by companies, foundations, and government entities to advance STEM education.

Its advocates give the president high marks for bringing the issue visibility, but offer a mixed review on whether he’s matched the rhetoric with sufficient commitments in federal policy and spending.

The White House has proposed some significant increases in K-12 funding for STEM activities at the U.S. Department of Education, though analysts say it remains to be seen whether the aid will materialize and how hard the White House will fight for it.

For instance, as part of his fiscal 2011 budget request, the president proposed creating three new “teaching and learning” funds, one focused on STEM. The $300 million price tag would increase aid for those subjects at the department by more than $100 million, but that plan was pegged to changes in the stalled attempt to reauthorize the Elementary and Secondary Education Act.

Some advocates lament that the president has requested little, if any, increase for STEM education at the National Science Foundation in his fiscal 2011 plan. The federal stimulus package he championed last year, however, contained at least $100 million in onetime aid for math and science teacher-training and -recruitment programs at the NSF.

Another concern, STEM supporters say, is that the president’s blueprint to overhaul the ESEA doesn’t call for adding student achievement in science to the law’s accountability framework, an idea backed by many STEM proponents.
“He certainly is talking about the importance of this,” said the NSTA’s Mr. Eberle. “But when the president says STEM, we don’t necessarily see that being wrapped into other policies or at least the [ESEA] blueprint.”

**Sparking Excitement**

Leaving aside debates about federal policy and funding, the way President Obama talks about STEM education is getting plaudits.

At the White House science fair, middle and high school students who had won STEM competitions were front and center.

“He’s shaking these kids’ hands and congratulating them,” said James Brown, an assistant director of the American Chemical Society and the co-chairman of the Washington-based STEM Education Coalition. “There’s nothing better than the president being a role model for students to study science and technology.”

“The emphasis on trying to raise awareness, particularly about these majors and careers, and to get children excited ... is the right approach,” said Christopher Roe, the deputy director of the Business-Higher Education Forum, a nonprofit group in Washington.

“He’s communicating to students and parents directly, which I think is really important,” Mr. Roe added. “Kids want to be excited; they want to see the awe of science and technology.”

When Mr. Obama has spoken about actions to be taken on STEM education at the White House events, he has tended to place less emphasis on federal policy and spending levers than on private ventures.

“The success we seek is not going to be attained by government alone,” he said at an event last year. “It depends on the dedication of students and parents and the commitment of private citizens, organizations, and companies.”

In September, for instance, Mr. Obama announced the launch of **Change the Equation**, a coalition of more than 100 companies aiming to improve and expand corporate efforts in STEM education.

Some STEM advocates say the White House is helping ramp up the private sector’s engagement.

That said, Linda Rosen, the chief executive officer of Change the Equation, cautioned that while the White House role is welcome, it’s by no means the main spark for the business sector.

“The corporate interest was already there, by and large,” she said. “I think that it is perhaps heightened in some cases” by the White House attention.

Joel Packer, an education principal at the Raben Group, a Washington lobbying firm, said he’s not surprised Mr. Obama focuses mainly on private-sector investments at the events.

“It gives the president an opportunity to talk about something instead of just saying, ‘Congress is not doing what we asked,’” he said. “You don’t have to worry about getting Congress to agree.”
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