Vail School District
8th Grade
Practice Writing Prompt #2
Argumentative

DIRECTIONS:	Read the information in all three articles and writing prompt below. Then use scratch paper for your prewriting/planning and your draft.

PROMPT: Some people believe that all school children should be taught how to code as part of the school curriculum. Do you agree or disagree? Use specific evidence to support your argument.

Your essay should:

- clearly state your position.
- provide reasons and supporting details.
- include a counterclaim

Remember to edit for spelling, grammar, punctuation, and capitalization.

Up for Debate: Should Every Kid Learn to Code?

2014-04-03 by **Katy Bowman, Cogito (*Connecting Young Thinkers Around the World: John Hopkins Center for Talented Youth.)***

Microsoft Chairman Bill Gates was 13 years old when he first learned to do it. Facebook founder Mark Zuckerberg was in middle school, and NBA superstar Chris Bosh was in college. And now they—and a bunch of other people—all think you should learn to do it too.

The skill is computer programming, and a movement to get the world's youth on the fast track to coding literacy is rapidly gaining momentum.

The "learn to code" movement aims to train enough young people to meet the programming demands of the very near future. And those demands are high: by the

year 2022, the number of software-development jobs in the United States is expected to increase 22 percent; computer-systems-analyst jobs, 25 percent; and computer and information systems jobs, 15 percent, according to the U.S. Bureau of Labor Statistics. All of those jobs require computer-programming skills. Six years from now, according to Code.org, America will have one million more software jobs than trained coders.

World leaders and technology corporations are in a race to get enough people equipped to fill this mounting need. The way to do so, champions of the coding movement believe, is to start introducing computer-programming instruction right alongside basic addition and subtraction in elementary schools.

“Forget Foreign Languages and Music. Teach Our Kids to Code,” reads the headline of a recent Wired article that avows, “In a perfect world, kindergartners would receive instruction in both programming and foreign language as part of their day. But if a school has to choose, a strong case can be made for code.” Similarly, Keith Wagstaff of The Week writes, in an op-ed titled “Forget Cursive: Teach Kids How to Code,” “Think about an eight-year-old’s future: What is his or her future boss going to be more impressed by, the ability to write cursive or to code?”

England has become the first country in the world to mandate computer-coding curriculum in its schools: this fall, students in the United Kingdom will begin learning to code in kindergarten, according to a mandate set in place last year. Teachers are being trained to teach the tech-heavy curriculum. Students will learn algorithms, digital-app development and network programming, and they will learn about which careers will best fit their talents.

But does coding curriculum come at a cost? A recent Forbes editorial warns that without an ethical undercurrent, it could be turning British kids into future hackers.

And it puts an emphasis on coding when people should instead be learning basic problem-solving and computer skills, writes Jeff Atwood, a California software developer and creator of the website Stack Overflow. Not everyone should learn to code, just like everyone should not learn to be a plumber, despite high demand, Atwood says.

“Please don’t advocate learning to code just for the sake of learning how to code. Or worse, because of the fat paychecks,” he writes. (By the way, computer programmers in the U.S. make about $74,000 per year.) He suggested instead that we spend time learning how the things around us work at a basic level, and learning to communicate effectively with other human beings.

Teach Coding As Early as Possible

by Hadi Partovi is founder and chief executive officer of Code.org. **MAY 12, 2014**

We teach elementary-school students long division or how weather works because these are relevant, foundational concepts. At a time when most first graders can already navigate through websites and apps, why aren't we teaching them how the Internet works or how to program a computer?

By high school, it can be too late. In 2013, not one female student took the Advanced Placement Computer Science exam in Mississippi or in Montana. In 11 states, not one black student took the test. In eight states, no Hispanic students.

To make computer science opportunities accessible to all students, we need to start in elementary school, where the playing field is still relatively level. To make computer science opportunities accessible to all students, we need to start in elementary school — where classrooms are split equally with students of all backgrounds, and the playing field is still relatively level.

Students learn fast at a young age, before stereotypes suggest coding is too difficult, just for nerds, or just for boys. Besides, building apps or games is far more engaging than arithmetic, yet these activities all teach the same concepts. Third-grade students can learn about angles as they work on animation, not just with multiple-choice questions.

I often hear from elementary teachers who have offered an Hour of Code: the kids loved it so much that it became a day of code, then a week of code and then a whole club. One 5th-grade teacher said, "I've seen fireworks go off over students' heads, not light bulbs."

We're on the right track. But in the United States, the so-called land of opportunity, the chance to learn to code shouldn't just be available to a lucky few. Every student should have a fair chance to take part in building the technology that will change our world.

Reading, Writing, Arithmetic, and Lately, Coding

By MATT RICHTEL, MAY 10, 2014

MILL VALLEY, Calif. — Seven-year-old Jordan Lisle, a second grader, joined his family at a packed after-hours school event last month aimed at inspiring a new interest: computer programming.

“I’m a little afraid he’s falling behind,” his mother, Wendy Lisle, said, explaining why they had signed up for the class at Strawberry Point Elementary School.

The event was part of a national educational movement in computer coding instruction that is growing at Internet speeds. Since December, 20,000 teachers from kindergarten through 12th grade have introduced coding lessons, according to Code.org, a group backed by the tech industry that offers free curriculums. In addition, some 30 school districts, including New York City and Chicago, have agreed to add coding classes in the fall, mainly in high schools but in lower grades, too. And policy makers in nine states have begun awarding the same credits for computer science classes that they do for basic math and science courses, rather than treating them as electives.

There are after-school events, too, like the one in Mill Valley, where 70 parents and 90 children, from kindergartners to fifth graders, huddled over computers solving animated puzzles to learn the basics of computer logic.

It is a stark change for computer science, which for decades was treated like a stepchild, equated with trade classes like wood shop. But smartphones and apps are ubiquitous now, and engineering careers are hot. To many parents — particularly ones here in the heart of the technology corridor — coding looks less like an extracurricular activity and more like a basic life skill, one that might someday lead to a great job or even instant riches.

The spread of coding instruction, while still nascent, is “unprecedented — there’s never been a move this fast in education,” said Elliot Soloway, a professor of education and computer science at the University of Michigan. He sees it as very positive, potentially inspiring students to develop a new passion, perhaps the way that teaching frog dissection may inspire future surgeons and biologists.

But the momentum for early coding comes with caveats, too. It is not clear that teaching basic computer science in grade school will beget future jobs or foster broader creativity and logical thinking, as some champions of the movement are projecting. And particularly for younger children, Dr. Soloway said, the activity is more like a video game, but not likely to impart actual programming skills.

Some educators worry about the industry’s heavy role: Major tech companies and their founders, including Bill Gates and Facebook’s Mark Zuckerberg, have put up about $10 million for Code.org. The organization pays to train high school teachers to offer more advanced curriculums, and, for younger students, it has developed a coding curriculum that marries basic instruction with video games involving Angry Birds and hungry zombies.

The lessons do not involve traditional computer language. Rather, they use simple word commands — like “move forward” or “turn right” — that children can click on and move around to, say, direct an Angry Bird to capture a pig.

Across the country, districts are signing up piecemeal. Chicago's public school system hopes to have computer science as a graduation requirement at all of its 187 high schools in five years, and to have the instruction in 25 percent of other schools. New York City public schools are training 60 teachers for classes this fall in 40 high schools, in part to prepare students for college.

"There's a big demand for these skills in both the tech sector and across all sectors," said Britt Neuhaus, the director of special projects at the office of innovation for New York City schools. The city plans to expand the training for 2015 and is considering moving it into middle schools.

The movement comes with no shortage of "we're changing the world" marketing fervor from Silicon Valley. "This is strategically significant for the economy of the United States," said John Pearce, a technology entrepreneur. He and another entrepreneur, Jeff Leane, have started a nonprofit, MV Gate, to bring youth and family coding courses developed by Code.org to Mill Valley, an affluent suburb across the Golden Gate Bridge from San Francisco.

Parents love the idea of giving children something to do with computers that they see as productive, Mr. Pearce said. "We have any number of parents who say, 'I can't take my kid playing one more hour of video games,' " he said. But if the children are exploring coding, the parents tell him, " 'I can live with that all night long.' "

The concept has caught on with James Meezan, a second grader. He attended one of the first "Hour of Code" events sponsored by MV Gate in December with his mother, Karen Meezan, the local PTA president and a former tech-industry executive who now runs a real estate company. She is among the enthusiastic supporters of the coding courses, along with several local principals.

Her son, she said, does well in school but had not quite found his special interest and was "not the fastest runner on the playground." But he loves programming and spends at least an hour a week at CodeKids, after-school programs organized by MV Gate and held at three of Mill Valley's five elementary schools.

James, 8, explained that programming is "getting the computer to do something by itself." It is fun, he said, and, besides, if he gets good, he might be able to do stuff like get a computer to turn on when it has suddenly died. His mother said he had found his niche; when it comes to programming, "he is the fastest runner."

Other youngsters seemed more bewildered, at least at first. "The Google guys might've been coders, and the Facebook guys — I don't know," said Sammy Smith, a vibrant 10-year-old girl, when she arrived at the coding event at Strawberry Point.

But well into the session, she and her fifth-grade friends were digging in, moving basic command blocks to get the Angry Bird to its prey, and then playing with slightly more

complex commands like “repeat” and learning about “if-then” statements, an elemental coding concept. The crowd had plenty of high-tech parents, including Scott Wong, director of engineering at Twitter. His 7-year-old son, Taeden, seemed alternately transfixed and confused by the puzzles on the laptop, while his 5-year-old brother, Sai, sat next to him, fidgeting.

The use of these word-command blocks to simplify coding logic stems largely from the work of the Massachusetts Institute of Technology Media Lab, which introduced a visual programming language called Scratch in 2007. It claims a following of millions of users, but mostly outside the schools.

Then, in 2013, came Code.org, which borrowed basic Scratch ideas and aimed to spread the concept among schools and policy makers. Computer programming should be taught in every school, said Hadi Partovi, the founder of Code.org and a former executive at Microsoft. He called it as essential as “learning about gravity or molecules, electricity or photosynthesis.”

Among the 20,000 teachers who Code.org says have signed on is Alana Aaron, a fifth-grade math and science teacher in the Washington Heights neighborhood of Manhattan. She heard about the idea late last year at a professional development meeting and, with her principal’s permission, swapped a two-month earth sciences lesson she was going to teach on land masses for the Code.org curriculum.

“Computer science is big right now — in our country, the world,” she said. “If my kids aren’t exposed to things like that, they could miss out on potential opportunities and careers.”

DIRECTIONS:	Now write your final copy on the following pages.

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