Noblesville Schools

Overview

Noblesville Schools is a nationally recognized school district serving approximately 10,000 students, with over 1,500 employees in ten different school sites in Noblesville, Indiana. The academic achievements of students in Noblesville schools make it a top-performing district in the state of Indiana, and led Newsweek to name Noblesville High School one of the best high schools in the nation.

The innovative MillerShift approach to 21st Century education, borrowing the “Millers” label from the nickname of the secondary sports teams, means that students take advantage of inquiry-based instructional techniques that promote deeper, more relevant learning. The school district is a leader in eLearning technology and high school internship opportunities, and is often studied by other high-performing school districts. An

Our Vision

We are
+ engaged in intellectual pursuits
+ inspired to challenge the present
+ empowered to adapt, innovate, and succeed today and tomorrow.

Our Mission

Inspired by our students’ infinite potential, Noblesville Schools ensures student-centered learning that seamlessly integrates inquiry learning, 21st Century Skills, and technology in an interdisciplinary, authentic approach to learning.
accomplished academic staff, state-of-the-art facilities, and strong connection to the community are important components of the Miller spirit.

The district vision for digital learning is to create engaging, rigorous, student-centered learning experiences; to provide equitable, anytime access; and develop competent and responsible 21st century citizens in an interdisciplinary, authentic approach to learning.

An iPad initiative comprises all the efforts and programs that are part of Noblesville Schools’ shift to digital-age teaching and learning. Key elements of the new learning environment include an iPad for every student in grades 5-12, access to digital curricular materials, and updated learning spaces. Driven by the district vision and mission, educators in Noblesville Schools are engaged in intellectual pursuits, inspired to challenge the present, and empowered to adapt, innovate and succeed today and tomorrow.
Shared Leadership
School leaders take collective ownership of the initiative.

Individual Leadership
A credible and inspirational thought leader sets and articulates the vision.

Community Engagement
Broad community sponsorship supports the institution’s initiatives.

Shared Leadership
Noblesville Schools is passionate about what is best for kids. In today’s world that means, in part, seamless access to technology to connect and share learning. This technology enables student-centered learning, collaborative work, access to global expertise, real-world application, and more. Technology is used to

- Individualize instruction to match student needs
- Provide content for students to preview or review lessons
- Collaborate, even across physical locations
- Access real-world audiences and experts
- Creatively display learning

Instituting an approach like this requires strong leadership by the former and current superintendents, ongoing support from the school board, and a Technology Advisory Committee comprising teachers, parents, and administrators. This broad-based team researched best practices, visited 17 different schools, and attended multiple conferences. The team then developed a forward-thinking technology plan and assisted with its implementation.

Movie 1.1 Visionary Leadership

Individual Leadership
Director of Technology, Andrew Swickheimer led these efforts and provided organizational focus for this implementation. Andrew oversees the purchasing and implementation of technology equipment; coordinates planning, policy and procedures; and organizes professional development in instructional technology for faculty and staff. To distribute leadership, technology coaches were placed in all schools to ensure that teachers had the support they needed in order to transition to a new model of instruction. Quite simply, the study and integration of educational technology was made a top priority in the school district.
Community Engagement

The support and encouragement of the community are needed to achieve this goal, and several steps have been taken to educate community members and secure their support. An annual Learning Showcase demonstrates student and teacher accomplishments to the community and highlights the shift that has been made in curriculum and instruction, as supported by technology. Schools host Parent Technology nights, Meet the Teacher nights, and Parenting in the Digital Age sessions to assist parents with their own learning and to let them ask questions and be heard. An online digital parenting course and e-newsletter also support these efforts to connect with parents. To broaden the community connection beyond just parents, technology-savvy students provide training and support to local senior citizens via the public library and senior citizen community center.

Noblesville Schools is now viewed in the state of Indiana as a leader in the area of educational technology. The Director of Technology was named to a state-level educational technology leadership cadre to provide guidance to other districts. District schools have had the honor of hosting state technology conferences and been given significant grants for professional development programs like iPadaloozaIN. Principals model educational technology practices in their leadership roles, using apps and other technology tools to communicate with their staffs and parents. Teachers regularly attend and share their learning by presenting at conferences. Other high-performing school districts contact Noblesville Schools personnel for educational technology advice and benchmarking, and parents consider the district as innovative and forward thinking.

These are all testaments to the fact that Noblesville Schools has been purposeful and successful in pursuing the goal of transforming teaching and learning.
Innovative Learning and Teaching

Student Learning
Learning is a personal experience for every student.

Instructional Practices
Faculty are master learners who expertly guide their students through difficult and complex tasks.

Curriculum Design
Innovative and rigorous curriculum is designed to leverage technology.

Student Learning
Beginning in 2010 with new vision and mission statements, Noblesville Schools has transformed its instructional model and is revising its PK – 12 curriculum accordingly. Throughout this process various technology tools have supported the evolution toward more individualized learning for every student.

Student voice and choice are increasingly evident in learning activities in every grade and every school. In elementary classrooms a workshop model for not only reading and writing, but for math as well, provides instruction and feedback tailored to students’ specific needs.

An inquiry approach to teaching and learning forms the foundation of many classrooms, and is easily observed in Problem-Based Learning (PBL) and Project Lead the Way (PLTW) instruction. Students identify problems ranging from a chronic last-place finish in a charity bed race to rampant waste in a middle school lunch program. As a result of student research, design, and use of community resources, fourth graders designed a more competitive bed that raised money for the Boys and Girls Club. In the other case a Public Service Announcement was produced to raise awareness of school food waste and promote a local program to reclaim it for food kitchens. These learning experiences are only two of many that capitalize on student interest, authentic challenges, and real work to achieve real solutions.

Noblesville Schools is unusual in featuring K – 12 PLTW instruction. Pre-engineering modules lead kindergarten students to design and test tools; STEM challenges grow in complexity until fifth graders build and program robots to solve a real-world design problem. Middle school PLTW courses continue the pre-engineering content and introduce a biomedical science sequence. These strands are continued in the high school, where students design houses that are actually built by Habitat for Humanity and explore medical interventions to prevent, diagnose, and treat disease.

Notable developments from Noblesville Schools’ movement toward individualized learning include a high school Innovations course and an internship program.
program for seniors. The curriculum of the Innovations course derives from students’ interests and motivation: a framework exists for student learning and its assessment, but the student must create the content and develop a plan of action. Approval of this course by the state education department removed it from special waiver to permanent status, and other schools in the state plan to replicate the course with their students. The internship program similarly focuses on student interest and motivation to work for local businesses, receive credits, and clarify their future college and career plans. Over 30% of the class of 2016 is scheduled to follow their interests through internships during their senior year of high school.

Instructional Practices

Dating to 2007, when Noblesville High School was invited to participate in a state-sponsored pilot of 1:1 computing environments in English and science classes, teachers have accelerated their own learning to adapt to ever-changing possibilities for instruction. Now that all students in grades 5 – 12 are issued iPads, and the student-to-device ratio in grades K – 4 approaches 5:1, all teachers incorporate technology into their instructional practices.

iPads in particular have supported teachers’ reliance on formative assessment data to guide instructional planning and provide interventions when students struggle. iPads and other devices have allowed students to demonstrate their learning in non-traditional ways, such as writing the textbook for Chemistry I, assembling portfolios in visual arts, producing music in the high school recording studio, and creating videos ranging from how-to instructions to mini-movies of student-written narratives. Both formative and summative assessments like these suggest the transformation in teaching practices that Noblesville educators have experienced.

Some teachers record their direct instruction and conduct “flipped” lessons; certain summer school courses feature a blended model of digital and face-to-face learning. Nearly all teachers use the Canvas Learning Management System to communicate with both students and parents, house course content, administer assessments, provide feedback, and coordinate activities and share materials with their colleagues.
Teachers consult Bloom's [Revised] Taxonomy, and consider Webb's Depth of Knowledge scheme to evaluate the rigor of their instruction and assessments. The results of this thinking are more likely than ever to be open-ended, student-centered activities that encourage the 4Cs of contemporary learning: collaboration, creativity, communication, and critical thinking.

**Curriculum Design**

Noblesville Schools is entering its fourth year of curriculum revision according to the Understanding by Design (UbD) process. Enduring understandings, essential questions, transfer goals, and evidence of learning have been developed for most subjects and grade levels. Many teachers are now developing performance tasks and feedback/assessment rubrics to allow students to synthesize, apply, and demonstrate their understanding of course skills and content.

Curricula, including content and assessments, are much more fluid than in the days of paper curriculum guides and three-ring binders. Digital curriculum templates, Canvas courses and, perhaps most importantly, digital course content encourage the continual adaptation and improvement of learning materials and activities. Digital textbooks—or no textbook at all—are used in more and more classrooms. Because course content is no longer fixed for six years (or more) by a textbook, curriculum guide, and limitations on photocopying, teachers are more able to incorporate student interests and choice into classroom activities. Teachers are also able to collaborate without face-to-face meetings by using Google docs and hangouts, Skype, and other digital tools. This convenience has been especially helpful for middle school teachers, who share common UbD Stage 1 and 2 components, and will diverge only in their Stage 3 learning plans.

Teachers use both the SAMR and TPACK models to evaluate their use of technology in instruction. While a few teachers are still substituting and augmenting with technology tools, a majority have moved beyond those basic levels, and many have adopted instructional technology to the point that they no longer even consult the models because digital tools are wholly integrated into how they think about teaching and learning.

Jay McTighe presenting to educators from Noblesville at iPadpaloozaIN.
Click on the icons below to learn more about Noblesville students using the creative powers of the iPad.
**Relevant and Timely Professional Development**

**Internal Professional Learning**
- iPadpaloozaIN
- eLearning Days
- Early Release Days
- MS Vanguard
- Virtual PD Challenge
- Teacher Learning Academy
- #MillerShift Twitter Chats

**External Professional Learning**
- ISTE* - International Society for Technology Education
- ASCD* - Association for Supervision and Curriculum Development
- iPad Summit Boston*
- ICE* - Indiana Connected Educators (ISTE affiliate Conference)
- InstructureCon*
- iPadpalooza Austin, TX *(presenters too)*

**Relevant and Timely Professional Development**

Always keeping the end in mind, Noblesville Schools focuses professional development on learning. Working with a cohort of teachers, two instructional technology coaches divide time among the district's ten schools. They provide training, modeling and just-in-time support for 650 teachers in grades PK-12 focused on transitioning classrooms to blended learning environments in which students create, collaborate, research, and connect with their content. Additionally, instructional coaches and media specialists embedded in each building provide support for teachers. As shifts in curriculum, instruction, and assessment continue to occur, teachers have freedom to explore, create, and innovate.

With the support of Apple Professional Development and iPad training, Noblesville Schools empowers teachers to become experts in technology integration. Significant time has been devoted to furthering the effective use of technology in all curricular areas. Each year, teachers regularly attend and lead professional development during eLearning days and through online opportunities such as a Virtual Professional Development Challenge. Groups such as Lead Technology Teachers and 1:1 iPad Pilot teams train both teachers and students in ways that model how technology enhances student interest, provides
authentic challenges, and supports the shifts in today’s learning environments.

At the secondary level, eLearning days have been a powerful force for professional learning. The State of Indiana has permitted Noblesville Schools to conduct eLearning days for the past three years. During these days, students complete online assignments from home while teachers participate in professional development at school. The professional development team, composed of teachers and administrators, arrange several breakout sessions led by faculty members. The sessions’ topics derive from teachers’ curriculum development work and are selected by the school improvement committee. Assisted by this professional development, teachers design lessons to effectively implement technology. Students are the beneficiaries of teachers’ experiences on these days.

Teachers also use technology to support best instructional and assessment practices. Using the learning management system, teachers collaboratively curate standards-aligned digital curricular resources. Each month teachers reflect on and share their practices during districtwide MillerShift Twitter chats. Noblesville Schools strives to develop a culture of learning not only in students but also in faculty and staff, adopting the motto, “If it doesn’t challenge you, it won’t change you.”

As evidenced by the multiple professional presentations by faculty and administrators at state and national conferences, Noblesville Schools consistently demonstrates the strength and depth of professional learning in the district. This year the district hosted its most well-received professional development opportunity, iPadpaloozaIN. This learning festival allowed teachers to become leaders of their own learning in a fun and inspiring way, generating tremendous energy and enthusiasm for seamlessly embedding technology into their classrooms.
Compelling Evidence of Success

Research Practices
Data is routinely collected, analyzed, and shared to inform progress and measure success.

Research Practices
Quantitative

The collection of data is the cornerstone of the assessment system used by Noblesville Schools to determine the effectiveness of technology initiatives. The heart of this data collection is CASE™, a research-based framework developed by a team of educational researchers, higher-ed statisticians, and K-12 practitioners. The CASE Framework allows school districts to link programs and resources directly to student achievement outcomes. CASE provides the ability to measure and communicate the progress of technology initiatives to parents and other key stakeholders. Each year data is shared with teachers and administrators at the building level, as well as in a public school board meeting, after which it is available online as archived board meeting presentations. Twice a year students and staff are surveyed to identify the biggest issues regarding the effective use of technology in the district. This past year over 5000 students and 500 administrators, teachers, and instructional assistants provided feedback about the use of technology. Driven by this data, administrators and teachers develop goals and measurable objectives aligned with district and school improvement plans. The table below illustrates how data from the technology survey is used to develop goals and objectives in the school improvement process.

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<th>Rationale</th>
<th>Goal</th>
<th>Objectives</th>
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<td>Digital Citizenship:</td>
<td>Establish Integrated Digital Citizenship</td>
<td>• Students are taught how to cite online information (27% are infrequently taught this, if at all)</td>
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<td>To support children, teachers</td>
<td>curriculum K-8: Focus on creating an online</td>
<td>• Students are taught how to share information about themselves online</td>
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<td>must be confident with</td>
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<td>(26% students taught this on a regular basis)</td>
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<td>their own digital</td>
<td>cyberbullying, online safety. OP: 63% of</td>
<td>• Students are taught how to act respectfully online (63% students are</td>
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<td>citizenship skills</td>
<td>teachers know about this. LUWC: 81% of</td>
<td>rarely taught this, if ever)</td>
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<td>(National Cyber Security</td>
<td>teachers know about this CB: 80% of</td>
<td>• Students are taught how to respond to online bullying (48% of students</td>
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<td>Alliance, 2013). Students</td>
<td>teachers know about this OS: 88% of</td>
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Another source of data is the professional evaluation process. Each year teachers are evaluated through a series of classroom observations conducted by building administrators to assess teachers’ instructional practices. Following each observation evaluators give feedback related to the practices of the teacher and needs of the students in their classroom. This communication system is facilitated by an online management system, Standard for Success, which also allows administrators to collect, sort, and analyze data about teacher performance.

Standardized and classroom assessments are additional sources of data. Core instruction, interventions, and student supports are informed by NWEA MAP assessments, which are nationally normed. Locally, common assessments are developed and implemented, and their results are analyzed by teachers in professional learning communities both within their buildings and in districtwide work groups.

Qualitative

Teams of educators in various positions refer to a driving question as they gather qualitative evidence of the school district’s success: “As a school community, what is the present level of performance in reference to the goals articulated in the 1:1 initiative and the ISTE Standards?”

Using a locally developed observation tool and questionnaire, these teams annually conduct approximately 180 classroom observations, 70 teacher interviews, and 200 student interviews. Resulting data reveal strengths and opportunities for improvement. Team members develop a comprehensive analysis document that is shared with school improvement teams to help guide their efforts.

Each year the performance of students and teachers is highlighted through the annual Learning Showcase. At this event the innovative MillerShift approach to 21st Century education is the focus as faculty and students from all over the district demonstrate collaborative, real-world learning through over 70 interactive displays. Attendees

Noblesville Schools uses data from Bright Bytes, focus groups, and classroom walkthroughs to inform progress and measure success.
encounter a wide variety of experiences from all grade levels and subjects, including manufacturing, photography, aeronautics, media, cooking, engineering, music, business, art, robotics, community outreach, computer coding, and much more.

Further evidence of Noblesville Schools' success in integrating educational technology tools is implicit in the district's repeated recognition by the Indiana Department of Education. For instance, the district was selected by IDOE to host the 2015 Hoosier Student Digital Leaders Showcase. This event showcases student digital leadership skills in technology integration and innovation through positive models of digital citizenship and by assisting the school community with technology support.

In 2014 IDOE awarded Noblesville Schools $100,000 as a result of its development of a sustainable, well-developed 1:1 implementation plan. Funds from this grant were used for professional development, developing content and expectations, and creating avenues for parent and student communication, as well as for purchasing technology devices.

Most recently Noblesville Schools received $14,000 from IDOE to host a summer eLearning conference titled iPadpaloozaIN. This two-day teaching and learning festival explored how iPads can impact K-12 education. The event focused on creativity, social collaboration, engagement, and some of the innovative ways schools have integrated iPads and other technology tools to enhance student learning. In its inaugural year, over 500 teachers and administrators attended this event.

Noblesville High School is home to the largest and most successful high school internship program in the state. Part of its success comes from the school's block scheduling, which allows the students flexibility to work their internship into their school day two to three times a week. Noblesville Schools was also awarded a $142,000 workforce development grant by the state to further develop career training opportunities for high school students.

Find Out More

See the most recent versions of our observation tool, teacher focus group questions, student focus group questions.
School Design and Facilities

Facilities and schedules are designed to maximize learning opportunities that technology provides.

Information Technology (IT)

IT infrastructure supports innovation in teaching and learning.

School Design and Facilities

Noblesville Schools is a PK-12 School District that serves just over 10,000 students with 11 state-of-the-art facilities. Seven elementary schools house students in grades PK-5. Two middle schools house students in grades 6-8, and Noblesville High School houses students in grades 9-12 with a Freshmen Center within the building. In July of 2014, the district built a 21st century Educational Services Center and professional development training facility.

All classrooms throughout the district are equipped with digital projectors and integrated audio systems with AppleTV for students and teachers to share information within the classroom. Voice enhancement systems are being installed in all elementary classrooms. All NS buildings are Energy Star rated and designed to take advantage of the latest digital heating and cooling technologies.

Classroom furniture and physical spaces throughout the district are transforming into active and engaged learning spaces. Students have access to common areas, and furniture designs allow students to collaborate effortlessly. In 2014 the first Technology-Enhanced Active Learning Classroom was created at Noblesville High School and will continue to be a model for future classroom renovations throughout the district.

Blended Learning

Educators in Noblesville Schools believe that blended learning should create an environment where students and teachers have access to the best components of virtual and face-to-face instruction. Blended learning can provide students...
with choice and voice in their learning, and is dynamically customized for each student, engaging them through various learning modes.

Since 2013, teachers and students have utilized the Canvas Learning Management System for the curation and delivery of digital curricular materials, ongoing assessment and feedback, and innovative forms of instruction. Equipped with iPads, students and teachers in grades 6-12 are now taking advantage of eLearning days, when teachers come to school to engage in professional development while students are freed from seat-time requirements to learn and demonstrate mastery outside the school walls.

Many opportunities exist for students to connect with the Noblesville community. The flexibility of its block schedule has allowed Noblesville High School to develop the largest student internship program in the state of Indiana. Problem-based learning projects at all levels often include community service components. Students regularly use social media to discuss and interact with experts in various fields of study. Using the district hashtag #MillerShift, students, teachers, and community members frequently share their innovative learning experiences at Noblesville Schools.

Using locally developed online courses and curricular materials, teachers facilitate virtual summer school classes for students in need of remediation or enrichment. Students are able to earn credits towards graduation during the summer, even while they work summer jobs, take vacations, participate in sports, or just enjoy a change of routine.

Media Centers throughout the district are transforming traditional spaces into spaces where students can gather to collaborate on projects and share their learning with others. Makerspaces are also being developed to encourage creative thinking, problem solving, entrepreneurship, and other skills such as coding. One student saw a need for a digital hall pass at school, connected with local software developers, and learned the coding skills to develop an app that tracks students digitally as they travel through the hallways during classes. Another student created four video games and released them through multiple app stores. These are just two examples of the entrepreneurial skills being developed in innovative learning environments.

Interactive 1.3 Towne Post Article

Zack Baker takes advantage of Noblesville’s innovative learning environment.
Information Technology (IT)

Noblesville Schools began implementation of 1:1 learning environments in 2007 when 9th grade English and Science courses converted their classrooms to computer labs. Over the past eight years the district has continued to upgrade its underlying infrastructure to support digital learning. A key component of the MillerShift approach to education is that all students and staff have unlimited access to technology.

The district Director of Technology, Andrew Swickheimer, is a member of the district Department of Learning along with the Directors of Curriculum and Instruction, Special Education, and Student Services. This combination helps ensure synergy between the IT staff, students, and teachers. A network of building-based support staff collaborate with administrators, teachers, and others to share knowledge and provide job-embedded IT support.

In 2009 the WAN between school buildings was upgraded from T1 to 1 GB fiber connections. Continuing that trend, in 2011 a 10GB fiber connection was established between all buildings. Today that network is a 10GB Fiber Optic WAN, with 1GB egress. All school district buildings are fully wireless and provide access points in every classroom. The wired network supports 1GB to the desktop. The district utilizes VOIP phone systems and takes advantage of PRI phone services through AT&T.

Since early 2006 Noblesville Schools has utilized Apple Servers and professional services. Over the last five years the district has moved to a virtualized server model utilizing Apple hardware. In 2011 the district implemented the Filewave mobile device and software management system to manage software deployments on all district devices. Every teacher in Noblesville Schools is issued a Macbook Air laptop and iPad for educational use.

In 2011 Noblesville Schools purchased and deployed iPads and MacBook laptops in the entire high school science department. Based on the success of this deployment, the decision was made to bring 1:1 computing to all of Noblesville High School. All students at Noblesville High School were issued iPads in the fall of 2013, and iPads were made available throughout the district so all students had classroom access to these devices. In the fall of 2014, all students in grades 6-12 were issued iPads, and in 2015 1:1 computing was expanded to include students in select 3rd, 4th, and all 5th grade classrooms.
In addition to the school liaison, the following people are able to address these areas.

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