SWOT Analysis Template for Technology Planning Needs Assessment
What is the current reality in our school?

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ESSENTIAL CONDITION ONE: Effective Instructional Uses of Technology Embedded in Standards-Based, Student-Centered Learning	

ISTE Definition: Use of information and communication technology (ICT) to facilitate engaging approaches to learning.

Guiding Questions:
- *How is technology being used in our school? How frequently is it being used? By whom? For what purposes?*
- *To what extent is student technology use targeted toward student achievement of the Georgia Learning Standards (GPSs, QCCs)?*
- *To what extent is student technology use aligned to research-based, best practices that are most likely to support student engagement, deep understanding of content, and transfer of knowledge? Is day-to-day instruction aligned to research-based best practices? (See Creighton Chapters 5, 7)*

Strengths	*Weaknesses*	*Opportunities*	*Threats*
Teachers, students, and administrators use technology to: ✓ Access internet ✓ Access email ✓ Access gradebook ✓ Use productivity software ✓ Access/maintain class website ✓ Utilize Web 2.0 tools ✓ Maintain class website ✓ Access digital cameras and camcorders for multimedia projects ✓ Utilize student response systems ✓ Analyze data via reports generated in the Student Information	✓ Access to technology is not equal. The ratio of interactive white boards to classrooms is 2:5. Even fewer classrooms have document cameras. ✓ Technology integration leans toward low-level thinking tasks ✓ Web 2.0 tools are only used by a few teachers	✓ As the building becomes wireless in the coming year, students and teachers will have opportunity to bring their own technology devices in order to have greater access to the internet and various types of software. The media center is considering purchasing a class set of tablets to circulate to classrooms. If this is successful, additional class sets may be purchased with administration or media center funds	✓ Teacher resistance is a threat, sometimes because of unwillingness to change, but often because planning for technology is time-consuming and frustrating when there is no guarantee computers will be available at the point of need ✓ Securing additional funding to make additional purchases and pay for professional learning is not guaranteed

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System (Administrators) ✓ Create student schedules (Administrators) Technology is integrated into instruction for: ✓ Productivity ✓ Fact-finding research ✓ Drill-and-practice ✓ Test preparation ✓ Occasional simulations ✓ Occasional multimedia or Web 2.0		✓ Professional learning on how to use technology for higher order thinking projects needs to take place.	✓ Limited availability of computer labs and multimedia software

Summary/Gap Analysis:
Technology is widely available at school, but is not often being used for best practices. There are some teachers who integrate technology for higher order thinking projects, but the majority use it only for fact-finding internet research, test prep, drill and practice, and productivity software. One reason for the low level of technology integration may be the limited access to computer labs. There is 1 general lab (including the media center) for every 25 classrooms. There is one very unreliable mobile lab per 75 classrooms. Teachers frequently complain of the difficulty of reserving computer time for projects and of not having adequate classroom technology. Only 2 in 5 teachers have access to interactive whiteboards and document cameras in their classrooms. During the 2013-2014 school year the system rolled out a Bring Your Own Technology (BYOT) Policy. Since then many students and teachers bring their own technology devices to school. BYOT opportunities are limited, however, because only 1/3 of the school has wireless access. This should change with the technology upgrades expected in 2014-2015 which will include 100% wireless coverage. Another factor influencing low level integration is teachers lack the knowledge of how to integrate technology for higher learning

Data Sources: Paulding County School District Technology Plan, 2011-2014, Technology Leadership Survey, June, 2014

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ESSENTIAL CONDITION TWO: Shared Vision

ISTE Definition: Proactive leadership in developing a shared vision for educational technology among school personnel, students, parents, and the community.

Guiding Questions:
- *Is there an official vision for technology use in the district/school? Is it aligned to research-best practices? Is it aligned to state and national visions? Are teachers, administrators, parents, students, and other community members aware of the vision?*
- *To what extent do teachers, administrators, parents, students, and other community members have a vision for how technology can be used to enhance student learning? What do they <u>believe</u> about technology and what types of technology uses we should encourage in the future? Are their visions similar or different? To what extent are their beliefs about these ideal, preferred technology uses in the future aligned to research and best practice?*
- *To what extent do educators view technology as critical for improving student achievement of the GPS/QCCs? To preparing tomorrow's workforce? For motivating digital-age learners?*
- *What strategies have been deployed to date to create a research-based shared vision?*
- *What needs to be done to achieve broad-scale adoption of a research-based vision for technology use that is likely to lead to improved student achievement?*

Strengths	*Weaknesses*	*Opportunities*	*Threats*
✓ The system has a vision statement as part of their technology plan ✓ The vision is aligned to nationally recognized technology standards ✓ Teachers desire to learn the pedagogy of teaching with technology ✓ The principal believes improving classroom integration of technology will prepare	✓ The school has no vision statement or technology plan ✓ Administrators and teachers are mostly unaware of the system plan ✓ There is no technology leadership at the school level ✓ The principal is unaware of ISTE or other standards for technology	✓ The school needs to establish a technology committee made up of members from all stakeholders to develop a vision and plan for technology ✓ The technology committee needs to plan and carry out professional learning in technology integration for project-based, authentic, higher order thinking	✓ Resistance from stakeholders who may not view technology as essential ✓ Difficult to identify parent and community stakeholders willing to contribute their time to the technology committee

students for the 21st Century	✓ Most teachers are unaware of technology standards other than those in their content area		

Summary/Gap Analysis:
The Paulding County School System Technology Plan details a technology vision aligned with national standards and best practices, however, the media specialist who serves on the system technology committee was only recently made aware of this plan. The teacher survey and principal interview revealed lack of awareness in the stakeholders outside the system's central office. The principal has a strong belief that we need to increase the use of technology in the classrooms, but has not developed a vision statement or technology plan. His efforts are focused on getting interactive whiteboards into each classroom. He was unaware of the CCGPS standards for technology and the ISTE standards as well. Teachers have shown interest in technology training. The professional learning courses offered by the county are some of the first to fill up and they have voiced their desire for more professional learning in technology to their media specialist and administrator. The principal has agreed to start a technology committee in 2014-2015, to develop a vision and plan and to explore ways to improve technology integration in the classroom.

Data Sources: Data Sources: Paulding County School District Technology Plan, 2011-2014, Technology Leadership Survey, June, 2014, & Principal Interview, June 16, 2014

ESSENTIAL CONDITION THREE: Planning for Technology

ISTE Definition: A systematic plan aligned with a shared vision for school effectiveness and student learning through the infusion of ICT and digital learning resources.

Guiding Questions:
- *Is there an adequate plan to guide technology use in your school? (either at the district or school level? Integrated into SIP?)*
- *What should be done to strengthen planning?*

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Strengths	*Weaknesses*	*Opportunities*	*Threats*
• There is a plan at the district level aligned to standards • Professional learning opportunities at the system level include technology training	• The principal is unaware of the district level plan • There is no school level plan even though our SACS review identified technology as an area that needs improvement • System level professional learning opportunities are for low level, productivity tool and interactive whiteboard training	• Establish a school-level technology committee to analyze and evaluate the state of technology and to lead changes in technology administration and integration • Construct a school-level technology plan to guide future purchases and professional development that incorporates technology on a critical thinking level	• Resistance from teachers who are already overwhelmed with teaching classes of 38 students, sponsoring clubs, coaching sports, etc. • Lack of funding

Summary/Gap Analysis:
Currently, there is no technology plan in place at the school level, but the principal has agreed to start a technology committee and develop a plan in 2014-2015. The district plan will serve as a guide for the school plan. It is lacking any references to the ISTE standards or CCGPS standards for technology and focuses more on hardware and software than on pedagogy of teaching technology. These standards need to be addressed with clear goals and objectives and with a plan to continuously evaluate progress in technology integration. Roles of all stakeholders need to be defined clearly.

Data Sources: Principal Interview, June 16, 2014

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ESSENTIAL CONDITION FOUR: Equitable Access
ISTE Definition: Robust and reliable access to current and emerging technologies and digital resources.

Guiding Questions:
- *To what extent do students, teachers, administrators, and parents have access to computers and digital resources necessary to support engaging, standards-based, student-centered learning?*
- *To what extent is technology arrange/distributed to maximize access for engaging, standards-based, student-centered learning?*
- *What tools are needed and why?*
- *Do students/parents/community need/have beyond school access to support the vision for learning?*

Strengths	Weaknesses	Opportunities	Threats
✓ The school houses 2 general computer labs with 30 computers each and the media center with 40 student computers. There is one mobile laptop cart for classroom use. The student to computer ration is approximately 4:1 ✓ The Exceptional Students Education Program (ESEP) has 2 mobile labs and a higher ratio of interactive white boards to students than the school average ✓ The Career, Technical, and Agricultural	✓ Demand for computer labs exceeds their capacity. Only the media center will hold a full 38 student class ✓ The laptop cart is unreliable ✓ The operating system is outdated (Windows XP) ✓ Internet access is often down for short periods	✓ With the addition of 100% wireless availability in the coming year, the BYOT policy should increase student access to technology ✓ The media center could locate funding to purchase a classroom tablet set to circulate ✓ The system refresh in the coming year will upgrade the operating system to Windows 7 and improve the network infrastructure	✓ Lack of funding ✓ Increasing class sizes ✓ Physical space limitations

Education (CTAE) classes include 4 business computer labs and 1 Computer-Aided Design (CAD) lab. These labs have some types of software not available in other classrooms ✓ The 40 media center computers are available to students before and after school each day and the nearby public library offers extended hours outside of school ✓ Students and parents can view grades and attendance from home			

Summary/Gap Analysis:

Student access to computers at school during general education classes is limited to the 2 computer labs, 1 mobile lab, and the media center. The media center has before and after school hours when students can use computers. During the school day, students can visit on a pass or with their class. Computer labs are only available for class visits with teacher accompaniment. There is a mobile laptop lab available for classroom use, but it is very unreliable and in need of repair. All computers are loaded with internet access and productivity software. Special education and CTAE classrooms have their own computers and software to support their programs. The media center circulates digital cameras and digital video cameras to teachers for them and their students to use. Multi-media software is limited to Windows Movie Maker and Paint. Many classrooms are equipped with interactive whiteboards and document cameras. The infrastructure for student engagement through technology is there, but access can be a problem with the competition to reserve space in computer labs or the media center at point of need.

The CTAE department has 6 classroom computer labs which are loaded with software specific to the content they teach. The ESEP department also has 2 mobile labs for use with their students.

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Via home or community computers, students and parents are able to access the parent portal in order to check grades and attendance. They can also get information about the school through the school website and about classroom activities through the individual teacher websites.

More computer labs are needed to meet demand and encourage teachers to integrate technology more often. With lack of physical space, they will have to be mobile. The introduction of BYOT and complete wireless coverage in the school should help alleviate demand on computer labs to a degree.

Data Sources: Paulding County School District Technology Plan, 2011-2014

ESSENTIAL CONDITION FIVE: Skilled Personnel

ISTE Definition: Educators and support staff skilled in the use of ICT appropriate for their job responsibilities.

Guiding Questions:
- *To what extent are educators and support staff skilled in the use of technology appropriate for their job responsibilities?*
- *What do they currently know and are able to do?*
- *What are knowledge and skills do they need to acquire?*

(Note: No need to discuss professional learning here. Discuss knowledge and skills. This is your needs assessment for professional learning. The essential conditions focus on "personnel," which includes administrators, staff, technology specialists, and teachers. However, in this limited project, you may be wise to focus primarily or even solely on teachers; although you may choose to address the proficiency of other educators/staff IF the need is critical. You must include an assessment of teacher proficiencies.

Strengths	*Weaknesses*	*Opportunities*	*Threats*
✓ A ✓ ll administrators, teachers, and classroom support staff meet or exceed the basic proficiency in productivity software ✓ All teachers and administrators possess	✓ Many teachers lack basic troubleshooting skills ✓ Most teachers lack the pedagogy necessary to incorporate technology into higher learning projects	✓ Teachers are aware they lack the pedagogy to incorporate technology and are eager to learn ✓ Basic troubleshooting skills can be taught through professional learning	✓ Administrators have limited time and budget for professional learning and technology may not be at the top of their lists ✓ Lack of training for LSTs means their effectiveness varies

basic or better skills with email ✓ All teachers possess basic to considerable skill in maintaining classroom websites ✓ Some teachers are early adopters of technology innovation ✓ There is a Local School Technologist (LST) who helps maintain technology in working order	✓ There is no effective training for new LSTs who have to learn by doing. They frequently have no or limited technology experience when hired		widely across the district

Summary/Gap Analysis:

In keeping with the work demands of the 21st century, all teacher, administrators, and certified support personnel are at least basically skilled in using communication and productivity software included in the Microsoft Office suite. They may encourage their students to use Movie Maker for multimedia projects. In addition, all teachers are trained in using their electronic gradebook and their teacher website software. Support is provided by the LST and media specialist. Many teachers have been trained on using interactive whiteboards, but most rarely incorporate this device for student engagement, instead using it as a front-and-center navigation tool during lecture. Teachers use the internet with their classes mostly for fact-finding research with some drill and practice and test preparation. A few will use it for simulations or for higher order thinking projects.

Teachers need to learn to branch out of installed software and discover how to use the myriad of Web 2.0 tools that are available to enhance classroom instruction. They also need to learn to use the tools they already have in more challenging, creative ways.

Data Sources: Paulding County School District Technology Plan, 2011-2014 & Principal Interview, June 16, 2014

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ESSENTIAL CONDITION SIX: Ongoing Professional Learning

ISTE Definition: Technology-related professional learning plans and opportunities with dedicated time to practice and share ideas.

Guiding Questions:
- *What professional learning opportunities are available to educators? Are they well-attended? Why or why not?*
- *Are the current professional learning opportunities matched to the knowledge and skills educators need to acquire? (see Skilled Personnel)*
- *Do professional learning opportunities reflect the national standards for professional learning (NSDC)?*
- *Do educators have both formal and informal opportunities to learn?*
- *Is technology-related professional learning integrated into all professional learning opportunities or isolated as a separate topic?*
- *How must professional learning improve/change in order to achieve the shared vision?*

Strengths	Weaknesses	Opportunities	Threats
✓ Teachers with interactive whiteboards have had training in using them ✓ The system offers professional learning opportunities in technology ✓ Teachers attend professional learning for 1 hour a month each month during the school day ✓ The media specialist is eager to work with teachers to create challenging lessons creating technology ✓ The principal supports technology integration	✓ Professional learning opportunities in technology are for learning how to work the software or hardware, not how to integrate it into instruction ✓ Professional learning in technology is optional, so resisters do not take advantage ✓ The monthly professional learning in the school rarely involves technology	✓ Integrate technology into the monthly professional learning meeting ✓ Take advantage of faculty who are strong in technology to coach teachers in technology integration	✓ Limited professional learning time means technology education has to compete with content pedagogy ✓ Resisters may not take advantage of professional learning in technology

Summary/Gap Analysis:

At the system level, a variety of professional learning opportunities are offered. The ones pertaining to technology are limited to how-to sessions on various software or equipment and are often the first to fill up. At the school level, teachers attend 1 hour of professional learning each month on topics selected by the principal. These topics rarely include technology training, though when technology is the focus, teachers have been very appreciative and commented that more technology training would be very helpful. Professional training is in line with content standards, but not necessarily technology standards. The media specialist occasionally conducts lunch break or after school professional learning for teachers which are attended by interested teachers. More of an effort needs to be made to offer, at the system and school levels, technology training focused on ISTE standards for students and teachers in order to provide teachers with the pedagogy they need to incorporate technology into challenging, 21st century projects.

Data Sources: Paulding County School System Professional Learning Webpage, Principal Interview, June 16, 2014

ESSENTIAL CONDITION SEVEN: Technical Support

ISTE Definition: Consistent and reliable assistance for maintaining, renewing, and using ICT and digital resources.

Guiding Questions:
- *To what extent is available equipment operable and reliable for instruction?*
- *Is there tech assistance available for technical issues when they arise? How responsive is tech support? Are current "down time" averages acceptable?*
- *Is tech support knowledgeable? What training might they need?*
- *In addition to break/fix issues, are support staff available to help with <u>instructional</u> issues when teachers try to use technology in the classroom?*

Strengths	Weaknesses	Opportunities	Threats
✓ There is a LST at our school full time. Our current LST is highly motivated and helpful and is learning more all the time	✓ The LST position is a paraprofessional position and it is difficult to find qualified personnel at that salary	✓ There are many faculty members who are knowledgeable and could help if given rights to modify desktops	✓ Insufficient training of new LSTs by the technology department in our school system ✓ Lack of funding to hire qualified, experienced

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✓ The media specialist often helps teachers troubleshoot problems and coach teachers on integrating technology into instruction ✓ There is an effective ticketing system in place to request technical assistant and the LST is very responsive	✓ LSTs have to train themselves so there is a learning curve before they become effective (IF they become effective) ✓ We do not have an instructional technology coach position at our school ✓ Faculty access to desktops is limited which restricts troubleshooting by those who are knowledgeable and willing to help	✓ If teachers were given more access to computer desktop, they could troubleshoot their own problems more effectively	personnel to serve as LSTs

Summary/Gap Analysis:

The school opened during the economic crash in 2009. At the opening, teacher computers were new, but the labs and media center were stocked with computers salvaged from the system warehouse. They were given upgraded memory, but that was all. In addition to the outdated hardware, our network runs Windows XP. This meant the computers are slow and often in need of repair. There is a LST whose job it is to troubleshoot and fix minor problems. The LST is mostly self-trained though the county technology department does offer email and phone support. The current LST has been in the position for 1 year and has become capable in problem-solving and fixing hardware. It is recommended that if the school system wants to continue hiring minimally qualified personnel in these paraprofessional technology positions that they provide a course of training to better prepare the LSTs for problems they will face. Instructional technology issues are usually coached by the media specialist.

Data Sources: Paulding County School System Professional Learning Webpage, Principal Interview, June 16, 2014

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ESSENTIAL CONDITION EIGHT: Curriculum Framework

ISTE Definition: Content standards and related digital curriculum resources

Guiding Questions:
- *To what extent are educators, students, and parents aware of student technology standards? (QCCs/NET-S)*
- *Are technology standards aligned to content standards to help teachers integrate technology skills into day-to-day instruction and not teach technology as a separate subject?*
- *To what extent are there digital curriculum resources available to teachers so that they can integrate technology into the GPS/QCCs as appropriate?*
- *How is student technology literacy assessed?*

Strengths	Weaknesses	Opportunities	Threats
✓ There are technology standards embedded into the Common Core Georgia Performance Standards (CCGPS) ✓ Many teachers require students to use productivity software and conduct internet research on a regular basis ✓ CTAE students must pass an End of Pathway exam to assess their proficiency with technology	✓ Nine out of 17 teachers surveyed don't know if content is aligned to technology standards ✓ The principal was unaware of the CCGPS technology standards and the ISTE standards ✓ Instructional integration of technology standards is not evaluated ✓ No partnerships exist with the community to fund or support technology in the school	✓ Teachers requiring students to use productivity software and internet research can be shown how to use these tasks for higher order thinking projects ✓ The media specialist can disseminate information regarding the ISTE standards for teachers, students, and administrators ✓ The administrators can begin continuously evaluating the integration of technology among our faculty members	✓ Teachers and administrators lack of knowledge of the standards and how to integrate them ✓ Lack of collaboration with community ✓ Lack of a mechanism for evaluating technology integration

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Summary/Gap Analysis:

The teacher survey and principal interview confirmed a lack of awareness in our faculty of the ISTE standards for technology in education and the CCGPS technology strands embedded in content standards. The standards are there to help teachers integrate technology skills into day-to-day instruction and teachers are addressing these standards in a rudimentary way. The majority require the students to use the internet for information gathering followed by word processing and presentation software and then check off that they have met the standards. Assessments are more about the content, not the use of technology. Students who use other tools out of personal interest or access at home may impress teachers, but they do not always see these accomplishments as something they need to pursue with the entire class. Teachers have access to Web 2.0 tools, but are not always aware of them or have the training they need to know how to incorporate these tools into their instruction for critical thinking and collaboration. The only assessments for student technology mastery are in the CTAE arena. These students are assessed on their computer skills because that is part of the course content. They also are required to take End of Pathway assessments for a series of courses in this department.

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Appendix A

Principal Interview Questions

1. What is your vision for technology at NPHS?

2. Does NPHS have a technology committee that includes members from all stakeholders?

3. Is there a technology plan in place which is aligned to state or ISTE technology standards?

4. Is there funding at NPHS for technology professional learning to support technology innovation?

5. Do all NPHS students and employees have equal access to current and emerging technologies?

6. Are there technology leaders among the NPHS educators, support staff, and administration skilled in the selection and effective use of digital resources?

7. Is technology training a part of the professional learning plan at NPHS?

8. Is adequate technical support provided at NPHS to keep digital resources operating?

9. Are content standards and digital curriculum resources aligned with digital learning?

10. Is instructional planning, teaching, and assessment student-centered?

11. Is the integration of technology into instruction continuously evaluated?

12. Does NPHS have partner or collaborate with community members to support and fund digital learning resources?

13. What policies, financial plans, accountability measures, and incentives in the district support the use of digital learning resources?

14. What national, regional, or local policies support teacher preparation programs to promote the effective use of technology for enhancing student achievement?

Technology Leadership Survey

1.   What is your vision for technology at NPHS?

2.   Does NPHS have a technology committee that includes members from all stakeholders?
   - Yes
   - No
   - I don't know

3.   Is there a technology plan in place which is aligned to state or ISTE technology standards?
   - Yes
   - No
   - I don't know

4.   Is there funding at NPHS for professional learning to support technology integration??
   - Yes
   - No
   - I don't know

5.   Do all NPHS students and employees have equal access to current and emerging technologies?
Choose one that is your best estimate
   - 100% have equal access for all
   - 75-99% have equal access
   - 50 - 74% have equal access
   - 26 - 39% have equal access
   - 0-25 % have equal access

6.   Are there technology leaders among the NPHS educators, support staff, and administration skilled in the selection and effective use of digital resources?
   - Yes
   - No
   - I don't know

7.   Have your received technology training as part of the professional learning plan at NPHS?
   - Yes
   - No

8.   Is adequate technical support provided at NPHS to keep digital resources operating?

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Choose one that you think best fits
- Very Adequate
- Adequate
- Not Adequate

9. Are content standards and digital curriculum resources aligned with digital learning?
- Yes
- No
- I don't know

10. Is instructional planning, teaching, and assessment student-centered?
- Very student-centered
- Somewhat student-centered
- Not student-centered

11. Is the integration of technology into instruction continuously evaluated?
- Yes
- No
- I don't know

12. Does NPHS have partner or collaborate with community members to support and fund digital learning resources?
- Yes
- No
- I don't know

13. What policies, financial plans, accountability measures, and incentives in the district support the use of digital learning resources?

Please check any that apply
- Policies
- Financial Plans
- Accountability Measures
- Incentives