



TechYES Implementation Guide

Sample

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Advisory Board

The exemplary students and many of the nation's premier educators who are part of the TechYES Advisory Board helped mold the model into something special.

Hanako Conrad	Student, Olympia WA
Kathleen Fulton	Director, Reinventing Schools, Washington, DC
Jayne James	Director, High Plains R*TEC, KS
Deborah Jolly	Director of Intergovernmental Relations, Texas A&M University
Craig Costello	Counselor, Washington Middle School, WA
Trang Pham	Student, Olympia, WA
Marilyn Piper	Teacher at Washington Middle School, ISTE Board Member, WA
Ryan Powell	Student, Texas State University, Austin, TX
Megan Maki	Student, Olympia, WA
Gary Stager	Editor-at-Large, District Administration & Adjunct Professor of Education, Pepperdine Graduate School, CA
David Thornburg	Director, The Thornburg Center, IL
John Vaile,	President, Enterprise Learning Solutions, CA
Ron Walker	Teacher, Roberto Clemente Middle School, PA

Sample

Chapter 1: TechYES – Student Technology Literacy Certification

What is TechYES?

TechYES is a comprehensive technology proficiency and certification solution geared for students in grades 6–9. Generation YES, a national organization recognized for excellent student technology programs, provides the program materials and resources. The developer of the exemplary Generation Y program, Generation YES produces materials that are student-friendly, research-based, proven, and focused on the way students really learn—through doing.

The TechYES Student Technology Literacy Certification program is a high-caliber course that can be customized to address specific state or local technology standards. Every student who successfully completes the TechYES program requirements earns a nationally recognized technology proficiency certification. TechYES also meets and exceeds the ISTE NETS standards for middle school students, and enables schools to fulfill the No Child Left Behind mandate that all students be technologically literate by the end of 8th grade.

In order to receive TechYES Certification, students must demonstrate understanding of requirements related to Internet safety, ethics, and evaluating Internet resources. Students also complete two projects using technology in specific ways. These projects are evaluated in a three-stage process to make sure they meet Certification requirements. After these requirements are completed, the student receives TechYES Certification.

The TechYES Starter Kit includes all necessary resources for a single site: customized teacher/advisor materials, individual student guidebooks, handouts and resources, access to a fully interactive support Web Portal, and Certificates of completion. Leading educators designed the program materials specifically for students grades 6-9. These materials are the foundation of a self-sustaining program focusing on developing significant student leadership. This student involvement, combined with a cost-effective, three-stage certification process, moves all students towards technology competency.

TechYES is versatile enough to use in schools, after-school programs, and community organizations. It is highly flexible, allowing schools and community organizations to choose the materials and practices that suit them best. TechYES encourages students to complete technology projects that are fun and

personally rewarding. These projects are the basis for the TechYES evaluation and Certification.

TechYES Resources

TechYES is a comprehensive program with a variety of resources to ensure success in many settings—school, after-school, and community-based. These resources are:

- **TechYES Implementation Guide** – This is the main resource for the TechYES Advisor to plan and implement a successful program. This implementation guide is for a single site and is associated with one username and password that allows the program Advisor to request Certificates.
- **TechYES Student Guide** – All students receive a guidebook that becomes their main resource as they work their way through the TechYES Certification process. The students will use the guide and the forms inside to plan, design, and build their projects. Students should be allowed to write in the Student Guide and personalize them.
- **TechYES Advisor Resources CD** – Videos, handouts, letters, and more are on the CD-ROM located in the Implementation Guide binder.
- **TechYES Classroom Poster** – The poster shows the TechYES “Galaxy of Possibilities,” a visual representation of the endless possibilities that technology can offer for learning, work, and enjoyment.
- **TechYES Web Portal** – Find project ideas, submit new project ideas, find tutorials, learning resources, and more. TechYES Advisors can download program resources and input Certified student names once students have completed the program.
- **TechYES Certificate** – Each Student Guide represents a potential Certification for a student. When a student has completed all the requirements for TechYES Certification, and the Advisor submits the name to the TechYES Web Portal, a Certificate is mailed to the school or organization.

When a school or organization purchases a TechYES Starter Kit, there are 30 Student Guides in the kit, allowing 30 students to be TechYES Certified at that site. As additional students come into the program, or if you start with more students, additional Student Guides can be purchased from the TechYES Web Portal. These additional Guides add to the number of Certifications that the school or organization can issue at that site. There is no need to purchase additional Implementation Guides for your site. However, if additional sites are added, each site will need to purchase an Implementation Guide to get started and establish their own account.

No Child Left Behind

The Enhancing Education Through Technology section (Title II-D) of the National No Child Left Behind legislation lists student technology literacy as one of its major goals:

“To assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.”

Schools are already facing severe budget shortfalls, cutting back electives, extracurricular activities, and other student programs. They are also cutting back on technology expenditures and finding that integrating technology into the curriculum is not happening at the pace expected. How can schools fulfill this requirement without adding personnel to teach and programs to assess these technology skills?

Generation YES has designed a set of resources that meets this need by incorporating extensive research on project-based learning and authentic assessment with years of experience in student-centered technology. Backed by an advisory board of educational experts and tested in pilot sites across the country, TechYES provides everything schools, community organizations, clubs, or homeschools need to easily establish and run a student technology literacy program.

Project-Based Learning

It is not enough that students have technology skills. Giving students a multiple-choice or even a performance-based exam on a set of technology skills does not adequately measure their abilities. TechYES Certification requires a student to effectively use technology to complete a project meaningful to him or her.

Specific technology skills are not listed or required of the TechYES student. Later in this Implementation Guide, we'll discuss how to determine whether students have met technology standards.

Research shows that project-based learning results in higher student retention, deeper understanding of content and increased student motivation. These research results were incorporated into the design of the TechYES materials and process. Further research is in Chapter 3 – Research Basis, of this Implementation Guide.

ISTE NETS for Students

Each student must complete two technology projects to meet TechYES requirements. The TechYES Student Guide has been carefully designed to lead the student through the project process from beginning to end in a student-friendly manner. As the students follow the TechYES process, they will automatically address the six technology foundations developed by the International Society of Technology and Education (ISTE).

ISTE Technology Foundation Standards for All Students

The National Educational Technology Standards (NETS) are divided into six broad categories. Standards within each category are to be introduced, reinforced, and mastered by students. These categories provide a framework for linking performance indicators within the Profiles for Technology Literate Students to the standards. Teachers can use these standards and profiles as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

1. Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

2. Social, ethical, and human issues

- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

3. Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

4. Technology communications tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

5. Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

6. Technology problem-solving and decision-making tools

- Students use technology resources for solving problems and making informed decisions.

- Students employ technology in the development of strategies for solving problems in the real world.

Correlating ISTE NETS Standards To TechYES Student Project Criteria

Students demonstrate their fulfillment of the ISTE NETS standards in two ways:

- (a) Carrying out projects that yield evidence bearing on standards 1, 3, 4, 5, and 6.
- (b) Verifying that they have addressed matters involving standard 2.

In order for students to earn TechYES Certification, their projects must demonstrate the effective use of technology in relation to four criteria: **gather, organize, construct, and share**. Each criteria encompasses one or more of the ISTE standards 1, 3, 4, 5, and 6. In the following list, the questions that accompany criteria are ones a student seeks to answer during the completion of a project. The "typical technology skill" attached to the criteria illustrates one example of a skill a student might use.

- **GATHER** (ISTE Standards 1, 3, 5, 6)
 - What information do I want? How and where can I find it?
 - Typical technology skill - that of searching the World Wide Web.
- **ORGANIZE** (ISTE Standards 1, 5 and 6)
 - In what form will I compile and organize information?
 - Typical technological skill - that of preparing a spreadsheet.
- **CONSTRUCT** (ISTE Standards 4 and 6)
 - How do I find the best way to meet my project goals with technology tools? How do I solve the problems that arise as I build something new? What electronic technology will be useful in creating the project?
 - Typical technological skill - that of building an interactive web site using appropriate software tools.
- **SHARE** (ISTE Standards 3 & 6)
 - Who is my audience and how can I meet their needs? How can I share this project with others? How is it useful to others?
 - How does it differ from what other people have done? What is new about my project?
 - To demonstrate the creativity feature of standard 3, students are responsible for identifying one or more ways in which their project is unique.
 - Typical technological skill - sending email, saving files, creating CD-ROMs, making electronic presentations.

The number of projects a student must complete for TechYES Certification depends on how many of the four criteria are encompassed by a given project. It is quite likely that one project will demonstrate all four criteria. But it is also

possible for a project to demonstrate only two or three, such as gather, organize, and construct.

To ensure that students have a broad and deep command of the skills implied in the ISTE standards, they will be required to demonstrate their mastery of the ISTE standards in at least two projects. Therefore, students must satisfactorily finish a minimum of two projects to earn TechYES Certification.

Students' understanding of social, ethical, and human issues in the use of technology (ISTE Standard 2) is accomplished most efficiently by reading and assimilating prepared materials. Chapters 2 and 3 of the Student Guide cover these important issues. Students are asked to sign their Student Guides, signifying they have read and understood these issues. Individual programs may also decide to supplement these chapters with extensive resources as described in Section 6: Resources, and found on the TechYES Advisor Resources CD. Alternately, many schools and organizations have already covered these materials with students and may feel that this standard has been fully covered.

A full correlation matrix of the TechYES criteria and the ISTE NETS Standards for Students are in the Resources in Section 6.

The Models

The TechYES program can be delivered in a variety of settings. These include:

- Schools where all students take a required technology class.
- Schools where some students take an elective technology class.
- Schools where there are no technology classes.
- A school, community, or faith-based after-school technology program.
- Clubs, small groups, and camps.
- A homeschool environment.

The TechYES resources and materials can be adapted to each of these settings so that anyone can start a successful TechYES program quickly and easily. Section 5 of this Implementation Guide addresses special considerations on how to deliver TechYES in a variety of settings.