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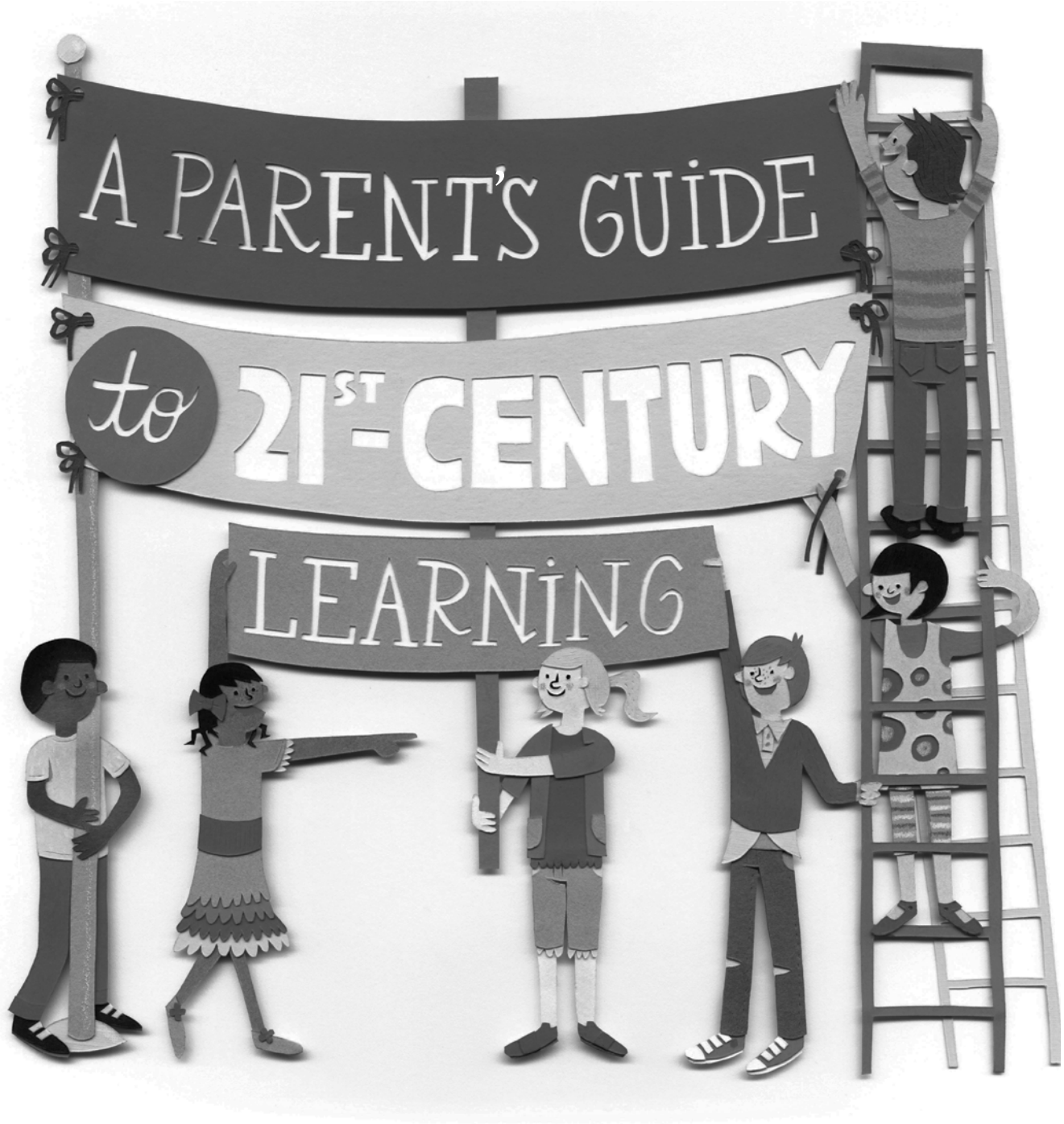

Discover the tools and techniques today's teachers and classrooms are using to prepare students for tomorrow—*and how you can get involved.*

21ST-CENTURY LEARNING

STEP-BY-STEP, schools from the elementary through high school levels are making the transition to 21st-century learning. Some have crossed the threshold almost entirely. Where does your child's school exist on the new teaching-learning continuum?

In today's progressive classrooms, yesterday's rows of quiet listeners have given way to small groups of active learners, thoroughly engaged in discussions and explorations. And where's the teacher? Instead of standing front and center to deliver instruction, he or she is apt to be on the move, observing, asking questions, and guiding students to make their own sense of the world. Even the classroom walls have expanded, with technologies connecting students to the wider global community.

In many schools, the Internet has opened access to a vast world of information, and students are learning critical-thinking skills to filter out the noise and decide which sources are reliable, which information to trust. Kids now create and share their own content too. This means students need to master new technologies and also learn to navigate online communities safely and responsibly.

This guide is intended to bring more parents into the conversation about improving education. You'll get a glimpse of outstanding online resources and projects, sorted by grade levels, and a list of tips to help you bring 21st-century skills home. The guide also lists organizations that offer more in-depth information about project-based learning, social and emotional learning, and other strategies to improve education. We hope you'll share this guide with other parents, teachers, and school leaders.

—Suzie Boss @suzieboss
Edutopia blogger and co-author of Reinventing Project-Based Learning

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Illustrations by Jared Andrew Schorr

SKILLS FOR TOMORROW

TO PREPARE FOR COLLEGE, careers, and citizenship, it's not enough to master academics. Students also need to acquire a set of skills that will last for a lifetime. To be able to solve problems in our complex, fast-changing world, students must become nimble, creative thinkers who can work well with others. (Not surprisingly, an IBM 2010 global study of chief executive officers revealed that — more than any other skill — creativity is most important for succeeding in today's increasingly complex society.) These competencies — known as 21st-century skills — are summed up as the "4Cs" by the Partnership for 21st Century Skills **(p21.org).** They include the following:

Collaboration: Students are able to work effectively with diverse groups and exercise flexibility in making compromises to achieve common goals.
Creativity: Students are able to generate and improve on original ideas and also work creatively with others.
Communication: Students are able to communicate effectively across multiple media and for various purposes.
Critical thinking: Students are able to analyze, evaluate, and understand complex systems and apply strategies to solve problems.

The 4Cs don't replace academic learning goals. Students still need to become good readers and writers, even though they may be learning and publishing on new platforms. Using mathematics to solve problems, and seeing the world through the lens of the scientist are essential for today's learners. Students also need to draw their own findings from history's lessons. The ambitious goal is to integrate 21st-century skills with rigorous core content so that students will master the 4Cs *and* the three Rs.

Schools are accomplishing this tall order via exciting new approaches. Through project-based learning, students investigate real-world problems and design their own solutions. Students use technology not just to access valuable content but also to create it. By working collaboratively, students are tackling big issues — in their communities and the larger world. Through effective teamwork, they're also honing important social skills, learning to respect diverse viewpoints and to resolve conflicts peacefully.

DISCOVER GREAT LEARNING RESOURCES

The following pages show examples of what 21st-century learning looks like in action and across different grade levels. Throughout these sections, look for the "How to Get Involved" suggestions for parent participation.

SET THE STAGE

- **To learn more about why 21st-century skills matter and how schools are integrating them, explore this blog series by Ken Kay, CEO of EdLeader21 and former president of the Partnership For 21st Century Skills:** edutopia.org/blog/21st-century-leadership-overview-ken-kay

- **Judy Willis, neurologist and former classroom teacher, explains how the human brain develops and offers strategies to teach critical thinking. She says the right kind of learning experiences help children activate their brain networks in ways needed to become proficient problem solvers and creative thinkers:** edutopia.org/blog/understanding-how-the-brain-thinks-judy-willis-md

- ***Did You Know? 2.0,* a hugely popular video developed by educators Karl Fisch and Scott McLeod, shows with convincing statistics how the world is changing what young people can expect in the future:** youtube.com/watch?v=pMcfrLYDm2U

- **PTChat (or Parent Teacher Chat) is a weekly conversation on Twitter that brings together parents and teachers to connect in real time. Join the dialogue by following the Twitter hashtag #ptchat. If you're new to Twitter, read this helpful introduction, "How to Use Twitter to Grow Your PLN":** edutopia.org/blog/twitter-expanding-pln

The Elementary School Years

BUILDING FOR SUCCESS

DURING THE ELEMENTARY SCHOOL YEARS, an introduction to 21st-century skills helps children build a solid foundation for future success. Early lessons in sharing and cooperation set the stage for effective teamwork. Young readers and writers begin to use their emerging literacy skills to communicate important ideas. When children are encouraged to ask good questions and indulge their curiosity, they acquire inquiry skills that help them solve tomorrow's challenges.

1 THE WORLD PEACE GAME

edutopia.org/blog/world-peace-game-john-hunter

If given a chance to apply their critical-thinking skills to the world's biggest problems, there's no limit to what kids might accomplish. The World Peace Game, developed by veteran teacher John Hunter, immerses students in global problem solving. Watch his TED (Technology, Entertainment, Design) Talk to get a glimpse of his young problem-solvers in action. One class of fourth graders developed a solution for climate change — in just a week!

HOW TO GET INVOLVED: *World Peace and Other 4th-Grade Achievements* is a documentary by Chris Farina that describes Hunter's immersive classroom project. Watch the website for screenings in your area **(worldpeacegame.org/)** and invite others from your school community to join you for a post-film discussion.

2 SKYPE IN THE CLASSROOM

education.skype.com

Students are expanding their horizons via Skype, a free service that uses the Internet for voice or video conferencing. Using Skype in the Classroom, teachers find partners for projects that extend learning beyond the school and even across time zones. For young learners, collaborative projects open new opportunities to communicate for engaging, real-world purposes.

HOW TO GET INVOLVED: If you're a parent who travels occasionally, arrange to Skype with your child's classroom and offer a parent-on-the-street report or tour from another part of the world. One creative elementary teacher has used this strategy to help his kids connect with people on almost every continent.

3 PEACE HELPERS BECOME CLASSROOM PROBLEM SOLVERS

edutopia.org/conflict-resolution-peace-helpers-video

When children are in the role of settling disputes between classmates, they put key communication skills to work and also help create a more positive climate for learning. After you watch this video of the Peace Helpers program in action, download the how-to guide for practical tips from the Morningside Center for Teaching Social Responsibility.

HOW TO GET INVOLVED: Parents play a key role in developing their children's emotional intelligence. Learn more about EI so you can partner with schools to build children's conflict-resolution skills by reading "Emotional Intelligence Is the Missing Piece" **(edutopia.org/emotional-intelligence-missing-piece).**

The Middle School Years

PICKING UP THE PACE

THE MIDDLE SCHOOL YEARS are a time of rapid change. Along with physical growth spurts come cognitive changes as the young adolescent brain matures. That means middle school students are ready for more complex challenges, such as evaluating online information sources, that allow them to apply their emerging critical-thinking skills. Engaging projects help to focus their attention on learning while also teaching important life lessons about managing time, planning ahead, and working effectively with peers. Digital activities that invite creativity provide adolescents with positive outlets to express themselves to their selected audiences.

1

DOWN THE DRAIN

k12science.org/curriculum/drainproj/

How much water does your household send down the drain in a day? How does your family's water consumption compare with families in Africa, India, or elsewhere in the world? Students are investigating these questions with peers from around the world in a collaborative project called Down the Drain. Many students become motivated to suggest innovative solutions around water consumption, which are showcased in a student gallery on the project website.

HOW TO GET INVOLVED: Use your child's budding interest in the environment as a springboard for household conservation. Find a hundred (or more) ideas for shrinking your family's water footprint by visiting the Water — Use It Wisely site: **wateruseitwisely.com/100-ways-to-conserve/index.php.**

2

DIGITEEN: DIGITAL CITIZENSHIP FOR TEENAGERS

digiteen.ning.com

To promote digital citizenship and 21st-century skills, this global project enables students to connect so they can discuss issues and take action. As a matter of course, kids develop skills in writing, multimedia, global education, and more.

3

WORLD OF WARCRAFT IN SCHOOL

wowinschool.pbworks.com

If you think digital gaming is a waste of time, think again. *World of Warcraft*, a massively popular online game, isn't about blood and guts. Winning requires strategic thinking and building skills as players set off on daring quests. Creative teachers are leveraging WoW to encourage in-depth studies of the hero's journey theme in literature. Created by educators, the site, called World of Warcraft in School, describes language arts connections that develop students' abilities as writers and readers — and gamers.

The High School Years

PREPARING FOR THE FUTURE

SETTING GOALS and getting ready for life after high school become increasingly important as students advance through the upper grades. Older teens may direct their problem-solving skills to tackle social or political issues as they prepare to be active citizens. Youth who have grown up with good advice about navigating the digital world know how to locate, evaluate, and analyze online information, and they also create original content. Some teens readily share what they know, teaching younger students to be safe and responsible online.

1

WORLD YOUTH NEWS

worldyouthnews.org

As presidential-election season kicks into high gear, student reporters are delivering their own media coverage and analysis of unfolding news events on World Youth News. Students from 10 schools in the United States are part of an innovative Journalism 2.0 project funded by the U.S. Department of State and coordinated by iEARN **(iearn.org),** a global education nonprofit. American youth are connecting with peers from four other countries — Ecuador, Pakistan, Tajikistan, and Thailand — that are also electing new leaders in the coming year. In addition to publishing their own multimedia news stories, students exchange cross-cultural ideas about citizen engagement, campaign funding, and other hot topics.

2

DIGITAL YOUTH NETWORK

digitalyouthnetwork.org

Learning doesn't stop with the school bell. DYN is a hybrid digital-literacy program that creates opportunities for students to learn both in-school and out. Increasingly, community libraries are becoming popular hangouts for teens eager to use digital tools to create their own music, movies, and more. Working with peers and mentors, they're redefining how and when learning happens. For a glimpse of a new national model for informal learning focused on teens' interests, take a look at YOUmedia, a collaboration between DYN and the Chicago Public Library: **youmediachicago.org.**

HOW TO GET INVOLVED: So far, a dozen sites have been selected as locations where 21st-century learning labs will be built in libraries and museums. The initiative, cosponsored by the federal Institute of Museum and Library Services, will expand the YOUmedia model of informal learning. Find out more about these projects from the John D. and Catherine T. MacArthur Foundation **(macfound.org).**

3

MONEY CORPS: FINANCE EXPERTS AS GUEST TEACHERS

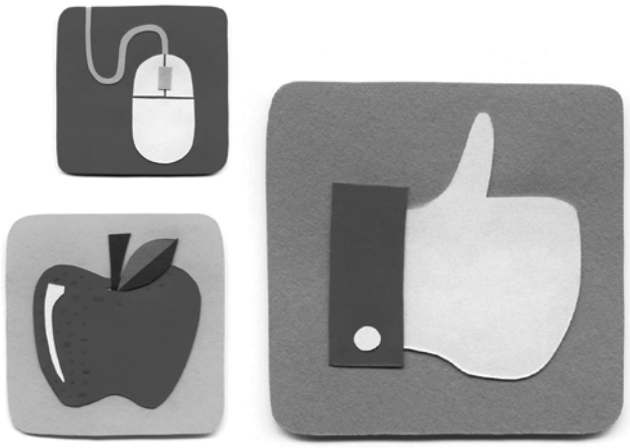
edutopia.org/credit-card-education

Learning to manage personal finances is an important life lesson for teens. To make sure students don't learn the hard way about the perils of credit card debt, community volunteers share their expertise through financial-literacy efforts. Entrepreneurship programs put students in the role of business creator. Students apply teamwork skills as they write business plans and roll out marketing campaigns. Read more in the blog "Entrepreneurship Education Stresses Learning by Doing": **edutopia.org/blog/entrepreneurship-education-pbl-suzie-boss.**

HOW TO GET INVOLVED: Anyone with budgeting experience — whether it's for a business or a household — has practical insights worth sharing. Volunteer as a classroom speaker or offer to serve on an entrepreneurship panel to provide feedback on students' business proposals.

Across the Grades

MORE IDEAS THAT WORK



1 DIGITAL MEDIA: NEW LEARNERS OF THE 21ST CENTURY

pbs.org/parents/digital-media/

This nearly hour-long program on the PBS Parents website looks inside schools that are pushing the edge of classroom innovation. See what students and educators are accomplishing with inquiry-rich projects at the Science Leadership Academy in Philadelphia; place-based learning in Middleton, Wisconsin; and game-based learning at Quest 2 Learn in New York. The website includes extensive online resources.

2 22 SIMPLE IDEAS FOR HARNESSING CREATIVITY IN THE ELEMENTARY CLASSROOM

edutopia.org/blog/creativity-in-classroom-trisha-riche

In this popular blog, kindergarten teacher Trisha Riche shares easy-to-implement suggestions for bringing more creativity to class. She explains that being creative energizes teachers as well as students, and it means being passionate, innovative, and thinking outside the box.

3 PROJECT-BASED LEARNING: ANATOMY OF A PROJECT: "KINETIC CONUNDRUM"

edutopia.org/stw-maine-project-based-learning-kinetic-art-video

To see what project-based learning is like in action, look no further than this interdisciplinary project that focuses on how science, math, and engineering connect to art. Kinetic Conundrum combines visual art, history, language arts, technology, and communications. Watch student creativity unfold in response to an intriguing, open-ended challenge about creating art.

HOW TO GET INVOLVED: In project-based learning, students often need to consult with outside experts. Volunteer for this role and share what you know. It's a short-term way to connect with the classroom, and in the process, you'll get a better appreciation for the deep learning that takes place during a challenging project.

4 SOCIAL NETWORKS: HOW DOES EDMODO SUPPORT PROJECT-BASED LEARNING?

biepbl.blogspot.com/2011/12/how-does-edmodo-support-pbl.html

In Dayna Laur's Pennsylvania social studies classroom, students use social networking to start discussions and share ideas for projects, such as reducing crime in their county. In her blog, Laur explains how she uses Edmodo, a social-media site for education, to connect parents with the lively conversations happening in the classroom. Using social networking for a serious purpose builds students' 21st-century skills of communication, collaboration, and critical thinking. To see Laur's class in action, watch "Mixing Art + Politics — Integrated Studies in High School" **(edutopia.org/stw-integrated-studies-york-resources-video)**, a video about an interdisciplinary project.

HOW TO GET INVOLVED: Download Edutopia's Home-to-School Connections Guide **(edutopia.org/home-to-school-connections-resource-guide)** for more ideas on connecting families with classrooms.

TEN TIPS TO BRING 21ST-CENTURY SKILLS HOME

Look for more opportunities to emphasize the four C's at home and after school. For starters, check out these ten ideas:

1. **INVESTIGATE INTERNSHIPS AND MENTORSHIPS** that will give your child firsthand experience with the world beyond the classroom. Watch this Edutopia video: **edutopia.org/stw-career-technical-education-community-partnerships.**

2. **LOOK FOR SUMMER CAMPS AND OTHER LEARNING EXPERIENCES** that build 21st-century skills. For example, Girl Scouts of the USA offers girls a chance to earn innovation-minded badges in science, technology, engineering, and math. Learn more at **girlscouts.org/program/basics/science/.**

3. **LOOK FOR EXPERIENCES TO EXPAND YOUR CHILD'S GLOBAL UNDERSTANDING** of how people live in economically challenged countries. Watch this Edutopia video for one example: **edutopia.org/heifer-international-global-village-video.**

4. **EXTEND THE SCHOOL DAY** with experiences that help kids pursue interests and build new skills. Here's a look at some engaging after-school programs: **edutopia.org/new-day-for-learning.**

5. **ENCOURAGE YOUR TEENS TO SHARE THEIR KNOWLEDGE** as volunteers by mentoring younger students or teaching adults about technology. Find ideas at **compassionatekids.com.**

6. **BUILD ON YOUR KIDS' INTEREST IN GAMING** by getting them connected with Massively Minecraft, a digital-media learning community created by parents and teachers for students ages 4-16. Learn more at **massivelyminecraft.org.**

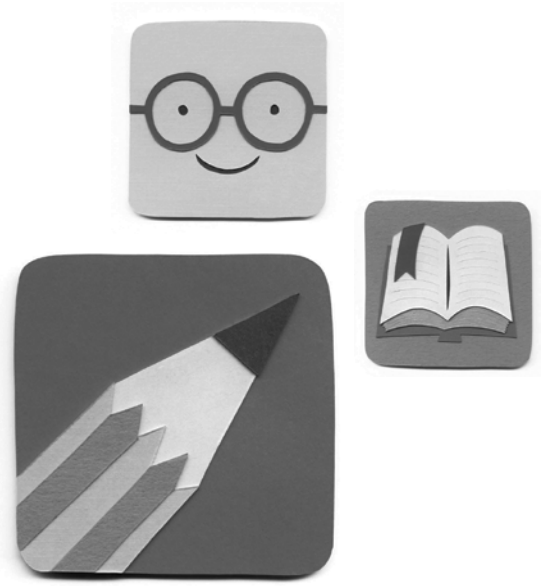
7. **PRESERVE THE SWEET MEMORIES OF FAMILY VACATIONS** by making digital scrapbooks with your kids. Read this blog post to learn more about digital storytelling: **edutopia.org/blog/transmedia-digital-media-storytelling-laura-fleming.**

8. **UNLOCK YOUR CHILD'S CREATIVE POTENTIAL** through community arts programs. Find out why the arts are critical: **edutopia.org/arts-education-art-music-report.**

9. **GET INVOLVED IN THE DO-IT-YOURSELF MAKER MOVEMENT** with your family and tap the benefits of tinkering. Learn more in this blog post: **edutopia.org/blog/education-maker-faire-young-makers-program.**

10. **HELP YOUR CHILDREN MASTER COMMUNICATION AND CONFLICT-RESOLUTION SKILLS** by practicing social and emotional learning at home. Borrow ideas from the Edutopia article, "Raise Your Student' Emotional-Intelligence Quotient," **(edutopia.org/10-tips-creating-caring-school)** and visit this social and emotional learning resource page: **edutopia.org/social-emotional-learning.**

BRING THE C'S TO YOUR SCHOOL



The following organizations offer resources for teaching the 4Cs in schools. You'll find background information along with resources to recommend to parent-teacher associations or share with your child's teacher or school leaders.

THE WHOLE CHILD

wholechildeducation.org

The Whole Child, a project of ASCD (formerly known as the Association for Supervision and Curriculum Development) advocates for communities to prepare children for the future. Look for a scorecard that assesses how well schools and communities are doing in your area.

BUCK INSTITUTE FOR EDUCATION

bie.org

The Institute offers research, resources, and professional development to schools interested in project-based learning.

COLLABORATIVE FOR ACADEMIC, SOCIAL, AND EMOTIONAL LEARNING (CASEL)

casel.org

Read about the benefits of social and emotional learning, see programs in action, and find tools to help families encourage positive discipline at home.

COMMON SENSE MEDIA

commonsensemedia.org/

Common Sense Media presents tools and resources to help families support their children in becoming responsible digital citizens.

PARTNERSHIP FOR 21ST CENTURY SKILLS

p21.org

Learn more about the thinking behind 21st-century skills and find resources for parents and communities.

TEDx

ted.com/pages/tedx_kids_youth_events

An offshoot of the high-profile TEDTalks, TEDx events for youth are locally organized, independent sessions that bring together educators, organizations, and youth for live talks and storytelling about learning in new and different ways. The website includes resources for organizing your own local event.

In addition, we hope you'll take part in ongoing discussions about what works in education. "Like" us on Facebook at **facebook.com/edutopia** and join our new Parents group: **http://on.fb.me/ykz1kA**

A PARENT'S GUIDE TO 21ST-CENTURY LEARNING

ABOUT EDUTOPIA

Edutopia is where The George Lucas Educational Foundation's vision to highlight what works in education comes to life. We are a nonprofit operating foundation dedicated to improving K-12 learning by documenting, disseminating, and advocating for innovative strategies that prepare students to thrive in their future education, careers, and adult lives.

Through our award-winning website, videos, and growing online community, Edutopia is supporting and empowering education reform by shining a spotlight on real-world solutions and providing proven strategies, tools, and resources that are successfully changing how our children learn.

To find and share solutions, visit **Edutopia.org.**

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Identify key attributes of successful learning environments

Bridge the gap between those who are struggling and those who have solutions

Improve online tools and resources for educators to collaborate and share with one another

Highlight districts and schools that have impactful and replicable solutions

Please join us in ushering in a new world of learning. To make your tax-deductible donation, **go to edutopia.org/support**