The Transferable Skills: We define the Transferable Skills as the following five skills sets:

1. Communication
2. Problem-Solving
3. Informed Thinking
4. Self-Direction
5. Collaboration

Supporting Beliefs: Our beliefs about teaching the Transferable Skills are based upon the research cited below. These beliefs have guided the creation of our materials and scoring certification system.

- Every student is capable of complex thought and problem-solving
- The transferable skills are essential for success after secondary school
- Higher order thinking and problem-solving within the context of authentic tasks and real-life challenges promote student engagement
- It is the responsibility of public schools to support the development of Transferable Skills along with content-area knowledge
- The development of students’ skills in these areas can result in improved academic outcomes, such as grades or test scores, as well as improved outcomes after graduation.

Key Practices: These key practices for teaching the Transferable Skills are emphasized in the research cited below.

- Students are provided with real-world models (from both adults and children) of proficiency in the transferable skills.
- Students are given opportunities to apply these skills to complex and authentic problems.
- Students are given opportunities to practice the transferable skills and are given feedback on their efforts.
- Students are given opportunities to reflect on their progress in the Transferable Skills and to select evidence of their proficiency.

Research on The Importance of the Transferable Skills:

In his book *How Children Succeed; Grit, Curiosity, and the Hidden Power of Character*, Paul Tough discusses how essential it is to teach students the skills of perseverance and self-control while also teaching academic skills and knowledge. Through a series of profiles of schools and programs that teach the Transferable Skills, he explores techniques that can be used to teach these skills and
benefits that students receive from them. He points out that while perseverance is often associated with hardship, there is no guarantee that just because children in poverty face many challenges does not mean that they will automatically translate these challenges into survival skills. Rather, he argues, it is the job of schools and teachers to help them learn the organizational and personal skills that will enable them to overcome the obstacles in their way.


2. “[I]n a study of more than 2,000 students in 23 restructuring schools, most of them in urban areas, Neumann, Marks, and Gamoran (1995) found much higher levels of achievement on complex performance tasks for students who experienced what these researchers termed “authentic pedagogy”—instruction focused on active learning in real-world contexts calling for higher-order thinking, consideration of alternatives, extended writing, and an audience for student work.”


3. “Though public schools are currently held accountable for students’ scores in math and reading proficiency alone, evidence from both psychology and economics shows that a wide range of non-academic skills play a big role in determining success later in life.”


4. Some argue that ... [Skills For Success] can only be instilled early in life. **However, research demonstrates that these skills are malleable, and many can be easily developed through young adulthood.** Others argue that K–12 schools cannot, or should not, influence the attainment of these skills. But as some schools begin to experiment with different approaches to imparting these skills, the evidence indicates otherwise. Some of these approaches attempt to directly “teach” SFS, while others focus on ensuring that the climate—the school and classroom environment, policies, and practices—promotes positive teaching and learning conditions that can bolster SFS. Finally, some say schools must confine themselves to academic content due to accountability systems that focus only on outcomes on subject tests. But research shows that many of these skills, such as self-regulation and cooperation, are, in fact, closely linked to academic achievement.”

--Tooley, Melissa, Bornfreund, Laura. (2014). *Skills for Success: Supporting and Assessing*
“Deeper learning can be supported through teaching practices that create a positive learning community in which students gain content knowledge and also develop intrapersonal and interpersonal competencies. For example, an integrated science-literacy curriculum was tested in 94 fourth-grade classrooms in one southern state. The curriculum combined collaborative, hands-on science inquiry activities with reading text, writing notes and reports, and small group discussions. When teachers were randomly assigned to either implement the integrated curriculum or to teach science and literacy separately (using their regular materials), students exposed to the integrated curriculum demonstrated significantly greater gains on measures of science understanding, science vocabulary, and science writing. At the same time, the students developed the intrapersonal competencies of oral communication and discourse, as well as the interpersonal competencies of metacognition and positive dispositions toward learning.”


**Guidelines from the National Research Council for Integrating Transferable Skills Into All Classes (for the full guidance see the book referenced below):**

- “Using multiple and varied representations of concepts and tasks, such as diagrams, numerical and mathematical representations, and simulations....

- Encouraging elaboration, questioning, and explanation—for example, prompting students who are reading a history text to think about the author’s intent and/or to explain … as they read...

- Engaging learners in challenging tasks, while also supporting them with guidance, feedback, and encouragement to reflect on their own learning processes and the status of their understanding.

- Teaching with examples and cases, such as modeling step-by step how students can carry out a procedure to solve a problem and using sets of worked examples.

- Priming student motivation by connecting topics to students’ personal lives and interests, engaging students in collaborative problem solving, and drawing attention to the knowledge and skills students are developing, rather than grades or scores.

- Using formative assessment to: (a) make learning goals clear to students; (b) continuously monitor, provide feedback, and respond to students’ learning progress; and (c) involve students in self- and peer assessment.
The Transferable Skills

Research and Resources

- Using modeling and feedback techniques that highlight the processes of thinking rather than focusing exclusively on the products of thinking.”


Additional Resources and Readings:

**Brief Articles:**


   This article describes the uncertainty around what jobs will look like in the future. Author Benjamin Herold talked to more than two-dozen experts in the fields of artificial intelligence, computer science, economics, education, and history, and also reviewed dozens of reports and studies, to come to this conclusion: “Every young person entering the 2030 labor market might need a solid grounding in statistics and data science, the thinking goes. Farmers, for example, would need to make sense of torrents of data generated by sensors and drones on soil and weather conditions.

   To maintain their edge, workers would also need to focus on cultivating the human qualities that robots still lack, such as creativity, empathy, and abstract thinking.”


   This article describes how approaches in math education that emphasize problem-solving and integrative thinking yield stronger math students than approaches that focus on speed in calculation.

   “The classrooms that produce high achieving students are those in which students work on deep, rich mathematics through tasks that they can take to any level they want.”


   This article discusses strategies that have been proven to be effective at increasing students’ self-direction and self control.

This work by Great Schools Partnership is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

This article outlines a series of strategies that a Title I school in Washington State used put problem-solving at the heart of its mathematics classes.

**Books and Reports:**


   *This text explains the research and brain science related to learning including how we learn, what makes experts different from novices, and how to promote transfer as well as the implications for classroom and instructional design.*


   *This report discusses wide-ranging research on the central practices that are most effective for integrating instruction in the transferable skills across the curriculum.*


   *The study examines the relationship between deeper learning and student outcomes. The study includes strategies to develop three types of deeper learning competencies: cognitive (mastery of core content, critical thinking skills), interpersonal (collaboration skills, communication skills), and intrapersonal (learning-how-to-learn skills, academic mindsets).*


   *This book explores various strategies that classroom teachers can use to assess transferable skills. “We must shift from reliance on traditional, selected-choice and completion instruments to a greater*
emphasis on alternative measures of authentic learning. This requires a re-focus from once-a-year, large scale measures of literacy and numeracy to multiple and local models of assessing higher-level thinking, creativity, collaboration, digital skills and global understanding.”

Video:

This video presents some strategies for teaching students to communicate through infographics.

**Problem-Solving:** [Teaching Channel]. Real World Problem-Solving: Designing An iPad Case. [5.6 min video file]. Retrieved from [https://www.teachingchannel.org/videos/high-school-engineering-lesson](https://www.teachingchannel.org/videos/high-school-engineering-lesson)
This video presents an example of a teacher who has designed a challenge that allows his students to engage in every part of the problem-solving process.

**Collaboration:** [Teaching Channel]. Deepening Text Analysis Through Student Talk [8 min video file]. Retrieved from [https://www.teachingchannel.org/videos/text-analysis-lesson-ousd](https://www.teachingchannel.org/videos/text-analysis-lesson-ousd)
In this video, a teacher models ways to engage students in academic discourse with one another.

**Self-Direction:** [Teaching Channel]. Encouraging Students To Persist Through Challenges. [6 min video file]. Retrieved from [https://www.teachingchannel.org/videos/persist-through-challenges-perts](https://www.teachingchannel.org/videos/persist-through-challenges-perts)
In this video, a teacher creates classroom routines and practices that encourage persistence.

In this video, the teacher encourages his students to widen their definitions of places they can look for information.

This work by [Great Schools Partnership](https://greatschools.org) is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).