

DIFFERENCE MAKING

AT THE
HEART OF LEARNING



Students, Schools, and Communities Alive With Possibility

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Foreword by Larry Rosenstock

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Please enjoy this complimentary excerpt from *Difference Making at the Heart of Learning* by Tom Vander Ark and Emily Liebtog.

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the first to experience superintelligent machines and help communities deal with all of the ethical issues associated with sharing the benefits and guarding against existential risks.

These great forces, climate change and artificial intelligence, are likely to be influential in shaping life on Earth in the coming years, but they represent only two of several dozens of the most important issues of our time. The 17 Sustainable Development Goals (SDGs) adopted by the United Nations (UN) in 2015 are a good start at identifying actions that will make life better, sustainable, and more equitable for more people.

Thousands of teachers around the world have committed to incorporating the Global Goals into their classrooms and advocating for them in their communities to help achieve the goals by 2030. The group, called Teach SDGs, expands in cohorts each year and shares successes on social media (#TeachSDGs).

25 Most Important Issues of Our Time

There are (at least) 25 important issues of our time that create urgency for our current and next generations to be solution-generators. The UN SDGs are a good starting point—a baseline for planetary justice and sustainability. It is, however, problem focused and missing a few emerging issues and impact opportunities. To make the list something like an owner's manual for the planet, we consulted expert organizations that have made similar efforts to enumerate the important issues of our time. They included the Grand

The 25 Most Important Issues in the World

Adopted in 2015 by world leaders, the United Nations Sustainable Development Goals provide a road map to a better future:

1. **No poverty:** End poverty in all its forms everywhere.
2. **Zero hunger:** End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. **Good health and well-being:** Ensure healthy lives and promote well-being for all at all ages.
4. **Quality education:** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. **Gender equality:** Achieve gender equality and empower all women and girls.
6. **Clean water and sanitation:** Ensure availability and sustainable management of water and sanitation for all.
7. **Affordable and clean energy:** Ensure access to affordable, reliable, sustainable, and modern energy for all.
8. **Decent work and economic growth:** Promote sustained, inclusive, and sustainable economic growth; full and productive employment; and decent work for all.

9. **Industry, innovation, and infrastructure:** Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
10. **Reduced inequalities:** Reduce inequality within and among countries.
11. **Sustainable cities and communities:** Make cities and human settlements inclusive, safe, resilient, and sustainable.
12. **Responsible consumption and production:** Ensure sustainable consumption and production patterns.
13. **Climate action:** Take urgent action to combat climate change and its impacts.
14. **Life below water:** Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
15. **Life on land:** Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
16. **Peace, justice, and strong institutions:** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.
17. **Partnerships for the goals:** Strengthen the means of implementation and revitalize the global partnership for sustainable development (The Global Goals, n.d.).
The National Academy for Engineering with support from other leading think tanks adds a few emerging challenges and opportunities (National Academy of Engineering, n.d.)
18. **Understand the brain:** Predict how interactions between the physical and social environment enable behavior. Inform AI and advances in health care, manufacturing, and communication.
19. **Cyber security:** Prevent intentional or unintentional attacks on public systems and uses of AI systems that do harm or pose an existential risk (Future of Humanity Institute, n.d.).
20. **Prevent nuclear terror:** A global war could kill a large percentage of the human population, and the resulting nuclear winter could be even deadlier than the war itself (Future of Life Institute, n.d.b)
21. **Biotechnology for good:** Reduce risk from especially dangerous pathogens and curb negative effects of cloning, gene splicing, and a host of other genetics-related advancements (Future of Humanity Institute, n.d.; Future of Life Institute, n.d.a).
22. **Engineer the tools of scientific discovery:** Acquire new knowledge about the physical and biological worlds; expand access to data science and impact partnerships.
The last three are widely supported but differently phrased contribution opportunities:
23. **Powerful expressions:** Extending the quality of and access to human expression and visual and performing arts.
24. **Getting along:** Values serve as a pillar of a healthy society (Global Shapers Community, n.d.). They are complemented by empathy, perspective, and self-regulation (Knowledge Works, 2017). They empower difference making in a diverse society (Asia Society, n.d.).
25. **Extraterrestrial Life:** Exploration of space and the potential for life on other planets. Jeff Bezos said, “We humans have to go to space if we are going to continue to have a thriving civilization.” And, “Eventually it will be much cheaper and simpler to make really complicated things, like microprocessors and everything, in space” (Clifford, 2019).

From *24 Goals to Save the Planet* (T. Vander Ark, 2020)

Challenges for Engineering from the National Academy of Engineering, the Bill & Melinda Gates Foundation Grand Challenges, and the Global Shapers Community sponsored by the World Economic Forum. We also consulted the Future of Life Institute, Future of Humanity Institute, National Science Foundation, and Seth Godin (2018) (who built his own list of 23 problems worth solving).

The list of the most important issues of our time could serve as an Earth Owner's Manual, a guide for difference makers. It could be used as a framework for schools to introduce young people to the issues of our time in a relevant way that allows them to start contributing right now.

How to Get Started

What if, instead of teaching subjects in high school, we allowed students to explore the Global Goals that provide a road map for a just and sustainable future while they learn about their strengths, interests, and values, and where they want to begin making a difference?

If half of high school were devoted to projects exploring the Global Goals (and the other half to skill building), there would be time for a week or two on each goal and three or four deep dives for juniors and seniors. Integrate a few projects, and you've got a great opportunity to teach history and science in the making. Every goal has a big data set behind it, which is well suited for math applications.

If it feels daunting to redesign a high school around the Earth Owner's Manual, teachers can start small and look for opportunities to weave the goals into the curriculum. Pick Martin Luther King Jr. Day, for example, and use it as an opportunity to study the history and future of efforts to reduce inequality (Goal #10) in America. Use the goals to inspire knowledge, skill, and action.

Starting to work on these goals does not have to be a massive undertaking, rather find ways to start small and act locally. While the goals pertain to global issues, there is probably a local version of the problem that learners can address. The community you teach in likely is experiencing a challenge that learners can incorporate into a project or a design challenge.

Integrating subject areas into cross curricular projects can also be a good starting point. Time is of the essence in core subject area classes, often leaving educators feeling as though there is no choice but to teach their standards. But when even two subject areas are taught and there are natural and meaningful ways that learners can apply what they are learning, the engagement and deeper learning increase.

Learners all deserve to know they can make a difference, and K–12 experiences ought to provide them opportunities to see themselves as being able to make positive change in their communities. No matter how big or how small, if it is locally or globally; everyone has a big next step.