

XR Terra Professional Development: XR (*Extended Reality*) Foundations for Educators

Alignment with ISTE Standards Section 2: Educators

[Link to ISTE Standards](#)

<p>2.1. Learner</p> <p>Teachers continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. Teachers:</p>	<p>Extended Reality (XR), consisting of Augmented Reality (AR) where digital information is superimposed on live, real-world images, Virtual Reality (VR) encompassing entirely simulated experiences, and Mixed Reality (MR) combining the two is a new, promising family of media technologies.</p>
<p>2.1.a</p> <p>Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness.</p>	<p>This course helps educators navigate XR environments, create XR experiences for classroom use., and review their work with instructors and peers.</p>
<p>2.1.b</p> <p>Pursue professional interests by creating and actively participating in local and global learning networks.</p>	<p>Participants in this course engage online in team projects, class discussion and are invited to remain part of a national network of alumni after course completion.</p>
<p>2.1c</p> <p>Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.</p>	<p>This is a new field with much to be learned. Participants are exposed – and contribute to - research and best practices in the use of XR for teaching and learning,</p>

<p>2.2 Leader</p> <p>Teachers seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Teachers:</p>	<p>Extended Reality is an emerging technology with a handful of k-12 educators employing AR, VR or MR in class. Taking the course is an act of leadership on behalf of student empowerment</p>
<p>2.2.a</p> <p>Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders.</p>	<p>By taking this course, educators embark on a journey to bring XR into the classroom and integrate it with the curriculum. This will require ongoing engagement with students, parents, colleagues, curriculum, instruction and purchasing managers and potential employers in the region. The course discussion and relationships with network members will offer ideas and support.</p>
<p>2.2.b</p> <p>Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.</p>	<p>The principal equity and diversity issue raised by XR is literacy. XR is fast infused into every aspect of modern lives. Students who lack access to this technology in school are unlikely to navigate, create and assess XR experiences. Like not being able to read or write at grade level, poor XR literacy will be a great disadvantage in society, politics and the economy.</p>
<p>2.2.c</p> <p>Model for colleagues the identification, experimentation, evaluation, curation and adoption of new digital resources and tools for learning.</p>	<p>The first teachers to take this course will guide the rest in their schools and districts.</p>

<p>2.3 Citizen</p> <p>Teachers inspire students to positively contribute and responsibly participate in the digital world. Teachers:</p>	<p>Students find XR technology fascinating in everyday life. As such, it is a good medium for teaching any subject. In creating their own XR experiences, teachers get a hands-on feeling for responsible participation in the digital world and a built-in forum for discussing these issues.</p>
<p>2.3.a</p> <p>Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationships and community.</p>	
<p>2.3.b</p> <p>Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency.</p>	
<p>2.3.c</p> <p>Mentor students in the safe, ethical and legal practice with digital tools and protection of intellectual rights and property.</p>	
<p>2.3.d</p> <p>Model and promote management of personal data and digital identity and protect student data privacy.</p>	

<p>2.4. Collaborator</p> <p>Teachers dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Teachers:</p>	<p>This course provides teachers with in-class discussion time, live support sessions, team XR projects for classroom use, presentations, and on-line access to colleagues.</p>
<p>2.4.a</p> <p>Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.</p>	
<p>2.4.b</p> <p>Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues.</p>	<p>This course teaches teachers to teach XR to students.</p>
<p>2.4.c</p> <p>Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally.</p>	<p>This course is taught live on-line in lecture, workshop, Q&A and presentation formats. Teachers are invited to join a teacher network after completion.</p>
<p>2.4.d</p> <p>Demonstrate cultural competency when communicating with students, parents and colleagues and interact with them as co-collaborators in student learning.</p>	<p>Our instructors, experienced with a wide range of demographic diversity, make every effort to model this standard.</p>

<p>2.5 Designer</p> <p>Teachers design authentic, learner-driven activities and environments that recognize and accommodate learner variability. Teachers:</p>	<p>This course teaches teachers to work with XR. This includes a range of tools and techniques teachers can apply flexibly to meet individual students needs and interests. Instructional strategy is regularly discussed with instructors and course mates.</p>
<p>2.5.a</p> <p>Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs.</p>	
<p>2.5.b</p> <p>Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning.</p>	
<p>2.5.c</p> <p>Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.</p>	

<p>2.6 Facilitator</p> <p>Teachers facilitate learning with technology to support student achievement of the 2016 ISTE Standards for Students. Teachers:</p>	<p>This course supports ISTE Teacher facilitation goals by modeling positive teacher practices throughout the course.</p>
<p>2.6.a</p> <p>Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings.</p>	<p>Teachers select, own and are accountable for their projects.</p>
<p>2.6.b</p> <p>Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field.</p>	<p>Class takes place live online and in specific XR authoring applications.</p>
<p>2.6.c</p> <p>Create learning opportunities that challenge students to use a design process and/or computational thinking to innovate and solve problems.</p>	<p>Teachers create and assess AR and VR projects from the ground up</p>
<p>2.6.d</p> <p>Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.</p>	<p>Teachers have ready access to relevant materials, fellow teachers and on-call instructors. Project discussion is encouraged during online class and support sessions.</p>

<p>2.7 Analyst</p> <p>Teachers understand and use data to drive their instruction and support students in achieving their learning goals. Teachers:</p>	<p>This course teaches teachers to teach XR. Teachers must create various AR and VR projects. These projects are assessed against well-defined objective criteria, documented in clearly stated rubrics. Fellow students and instructors help teachers to meet these objectives by coaching, modeling and scaffolding. In so doing the course prepares teachers for the same process with their own students.</p>
<p>2.7.a</p> <p>Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.</p>	
<p>2.7.b</p> <p>Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction.</p>	
<p>2.7.c</p> <p>Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.</p>	