Contents

Introduction

How many students come home after school sharing that they walked around the solar system during class? How often do our students have the opportunity to create 3D worlds or hold holograms in their hands? The chances are unlikely that many students get to engage in these types of learning activities, however, with the technology flooding to the public, we're beginning to see more of these experiences adapted for the classroom and popping up in lesson plans.

Many educators think the only way for students to have these kinds of experiences is through an expensive technology purchase or by having a technology expert bring it together. The truth is that many resources are available now on the devices that are already in the classroom. The implementation of these tools can be as simple as opening an app or loading a website. Although the media is hyping the latest gadgets that can carry enormous costs, companies are creating tools that meet the same educational needs for free or at a fraction of the price.

The goal of this book is to show you the possibilities for bringing immersive technologies to your students. While the field is new and the technology constantly changing, we can begin to see the potential these tools have for creating uniquely engaging learning experiences. While exploring the many resources available for students, you'll find recommendations to provide the most successful implementation. As districts are beginning to make decisions, you'll also get purchase suggestions from the classroom, curriculum, and technology perspective. Having access to a full picture and a realistic plan of action when making these purchases will make every dollar count and ensure a greater chance for success.

Using This Book

The first part of this book defines and describes immersive technology in the context of education. For those unfamiliar with the term, immersive technology refers to "technology that blurs the line between the physical world and digital or simulated world, thereby creating a sense of immersion" (Wikipedia, 2017). For the purposes of this book, immersive technology refers to virtual, augmented, and mixed reality. Many of us first heard about virtual reality in the '90s, when movies like *Lawnmower Man* and *The Matrix* painted pictures of computer-generated worlds we could access through complicated hardware. The direction virtual reality has taken is decidedly different and no longer available to only a select few. Augmented reality, too, has grown from QR codes to experiences that add interactive layers to our everyday surroundings; think Pokemon Go! Mixed reality, an experience that combines elements of virtual and mixed reality, brings virtual objects to the real world, where we can engage with them in lifelike simulations. Readers will become familiar with these terms and what types of experiences characterize them.

Successful implementation depends upon careful research and planning. Chapters three and four address what to consider before bringing immersive technology to the classroom, including which device to choose and how space, infrastructure, and training should be factored into planning.

When you are ready to take the plunge, the next three chapters will get your feet wet exploring a variety of augmented, virtual, and mixed reality tools. Chapter 5 takes you through the process of sharing immersive technology with your students in the form of six full lesson plans. Designed for use with existing technology, these lessons address different content areas and are mapped to standards. Chapter 6 invites you to get inspired by trying out several tools as part of learning activities with your students. Find out how to plan a virtual field trip or scavenger hunt. Today's students are eager creators, not just consumers, of content. Find out how to design and customize your experiences in Chapter 7. For a look to the future, Chapter 8 explores the unique ways that immersive technology is shaping storytelling and Chapter 9 shares some of the newest technologies coming to mixed reality.

For help navigating the myriad of tools and terms, the book includes a glossary and appendix of apps.

Experiencing This Book

Enjoy interactive features in the book that provide links to content, 3D objects, and videos. When you need additional support, or want to engage further in the material, these interactive features provide an immersive experience to deepen your understanding. You can access the directions on how to engage in the book on my website at **arvrinedu.com**.

Another way to interact with the book is by participating in activities. At the end of every chapter, you can take the Learning Transported Challenge. These challenges will give you the chance to put into practice the suggestions and concepts from the book. When you complete the challenge, you can share what you've created with other educators on social media using the hashtag #ARVRinEDU. Each challenge will include beginner and intermediate options to provide flexibility and opportunity for growth. The challenges can give you the practice and support to successfully use immersive technology with your students.