

Getting Started with

Virtual Reality in the Classroom



an ebook by Monica Burns
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Introduction

Welcome! I'm so glad you're here!

In this ebook you will find a handful of tips, tricks and strategies for getting started with virtual reality this school year.

I've pulled together some of my very favorite resources including a list of discussion prompts, ways to explore virtual reality without a headset, and plenty of websites to explore.

If we haven't met yet... one the very last page of this book you can learn more about how I work to energize and elevate teaching and learning in classrooms around the world!

Best, Monica Burns

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Virtual Reality Without a Headset? Real Classroom Strategies for VR

Can virtual reality happen without a headset? I was invited to speak at the 3rd European iPads in the Classroom in Amsterdam about creation and collaboration on digital devices. Although my keynote topic was set months in advance, a few weeks before the event the organizer shared an opportunity to be part of session where multiple presenters would lead discussions on virtual reality in education.

Partially because I was travelling straight from TCEA in Texas and knew I wouldn't be able to fit anything else into my carry-on... and partially because I love thinking about how virtual reality can be accessible for teachers with limited resources... I offered to lead a discussion on "Virtual Reality Without a Headset."

We often think of virtual reality as a fancy, expensive, gimmicky way of grabbing someone's attention. You've probably seen the same YouTube videos that I have where a person who received a VR headset as a holiday gift falls out of their chair while their whole family laughs. Although these videos capture funny family moments, they often paint the picture that virtual reality is silly, fluffy, or something for out of school hours.

I love virtual reality in the classroom for lots of reasons and if you follow my blog you know how excited I am about this type of technology. Virtual reality has the power to transport students to new places. It helps students empathize with people in other parts of the world. It can lead children to wonder and ask questions like never before.

So how can you use virtual reality without a headset? The answer is pretty straightforward. The same 360 videos and 360 images you can use with a headset are accessible on web browsers for anyone to view. All you have to do is search for the place you'd like to transport your students to and they can spin around or swipe back and forth as they explore.

Work with what you've got

Interactive whiteboard, smartphone, Chromebook, iPad... you don't need to have the "perfect" device to make it work. A few months ago I joined a group of Kindergarten students to lead a virtual reality lesson to compliment their study of different animal habitats. I knew these students had access to iPads so I set up a virtual reality lesson with Nearpod (one of my favorite tools).

For our lesson on animal habitats, I sat with students in a circle on the rug. We started to discuss the animals that lived in a forest. Using Nearpod's interactive presentation tool, I pushed out a 360 image of a forest which popped up on their screen. While sitting on the rug (without headsets) students were able to move their arms back and forth and watch as the iPad screen moved along with them to show off every corner of the forest in the 360 image.

Websites for Virtual Reality

National Geographic

On an interactive whiteboard you can pull up the 360 videos posted on National Geographic's YouTube Channel. Moving your finger across the screen you can show off different places and spaces to your students. This website works on web browsers too. So you might choose a video and post the link to Google Classroom for your students to explore. You'll find plenty of videos to explore on National Geographic's YouTube channel. It's a wealth of resources that stretches beyond one content area or grade level.

360cities.net

I shared this website with lots of educators while talking about virtual reality in Amsterdam last month. First, I asked one of the teachers to name a place she would like to virtually take her students. Sheto and she said the Taj Mahal. Then, I typed in "Taj Mahal" while the group watched and dozens of 360 images popped up on 360cities.net's website. I also typed in "Bryce Canyon" (on my national parks bucket list) and watched as dozens more images popped up on the page. Bottom line: there are lots of awesome examples on this site. You are sure to find what you're looking for when you type your keyword into the search bar.

Apps for Virtual Reality

NYTimes VR

I've shared this mobile app (and companion website) with readers in the past. I'm constantly amazed at all of the wonderful content available for viewers. From videos that feel like feature articles in a magazine to playful videos that show the power of 360 video in action, NYTimes VR offers plenty of videos to choose from if you're looking for something that connects to your content area goals. If you're not sure where to start, take a look at their collection of the new seven wonders of the world – a fantastic series of videos for virtual reality in education.

Discovery VR

Discovery VR is a favorite resources for high-quality, engaging virtual reality videos. Both of the apps on this list also have content hosted on their corresponding website. This means you can open up the mobile app and view content on a tablet or smartphone. Or you can simply head over to their website to watch the same videos on a Chromebook, laptop, or interactive whiteboard.

Now Discovery VR was created for a consumer audience meaning that not all of the content is classroom-friendly. That being said, don't ignore the high-quality engaging content on this website. Just pick out what you want students to see and show those videos off to your class.

I hope you'll agree that the answer to my question, Can virtual reality happen without a headset? Is absolutely, yes!

Virtual Reality Discussion Prompts for Students

It's been so exciting to watch as students and teachers across the country embrace virtual reality. As a consultant and professional development provider, I spend lots of time in classrooms in different parts of the country.

One of my favorite parts of this role is leading demo lessons for teachers and working side-by-side with students.

Virtual reality is a powerful learning tool when integrated thoughtfully into the classroom. This past month I've had the chance to introduce virtual reality experiences to students in PreK through adult learners. These embedded, interactive experiences can lead to in-depth discussions.

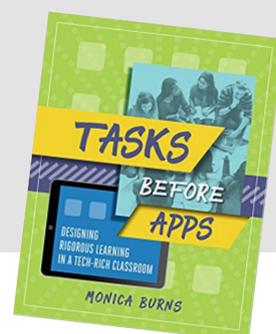
So I've put together a list of virtual reality discussion prompts you can tailor to your classroom. I can't wait for you to check them out and make them your own!

Tasks Before Apps and VR

In my book *Tasks Before Apps: Designing Rigorous Learning for a Tech-Rich Classroom*, I talk about the power of virtual reality to spark questions. Here's an excerpt from page 43:

“Our goal on the journey of thoughtful technology integration is to take the best practices of the past to the next level with digital tools. We want to build on the foundation of traditional tasks to empower students as wonderers and answer-seekers. As students inquire about matters both on their own and with our guidance, we can help them come to see tablets, smartphones, and computers as portals to an entire world of innovative problem solving: virtual reality (VR) experiences provoke questions, online search tools bring answers to our fingertips, and videos show how classroom skills are applied in the real world.”

Purposeful technology integration can take many forms. Virtual reality might seem flashy and gimmicky at first. When integrated thoughtfully into instruction, virtual reality experiences can transform the way your students look at the world!



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Virtual Reality Discussion Prompts

If you're a regular follower of this website, you've seen me share lots of virtual reality resources over the past few years. You can use virtual reality in the classroom without headsets or with the low-cost Google Cardboard.

There are lots of virtual reality apps and videos to explore – including the ones on this list. But how do you make sure these experiences are high-quality and purposeful for students?

In the list on the next page, I've gathered discussion prompts I've used with students and examples of ones you can fit into your own instruction.

When leading whole-group virtual reality experiences using a tool like Nearpod, I encourage students to talk within their small groups about what is happening on their screen. If your students are using headsets with Google Expeditions, or a Google Cardboard connected app, you can have students pause to talk about what they see.

Virtual Reality Observations

- What do you see?
- What do you hear or think you would hear?
- What time of day is it here?

Virtual Reality Wonderings

- What do you think the weather is like in this place?
- How do you think someone captured this moment?
- What might be missing from this shot?
- What do you think it smells like?
- How would this look different at daytime/nighttime?

Building Empathy with Virtual Reality

- What might it be like to live in this place?
- How is what you see similar to a place you've lived?
- How is this place different than a place you know?
- Is this a place you would want to visit?
- How far away are we from this place?
- How long would it take us to get to this place?

Remember, you can tailor these general questions to the specific experiences your students have when using virtual reality.

For example, earlier this year I shared a panoramic view of the Grand Canyon with third-grade students. Questions on this list can be tailored to this particular experience – What animals might live in this place?

Extending VR Discussions

Try these discussion prompts in a whole group setting, small group setting, or a think-pair-share. As students talk with their classmates, interject when necessary, but allow students to think freely. These types of discussions can also be used as “fact-finding” missions to gauge student interests in other topics.

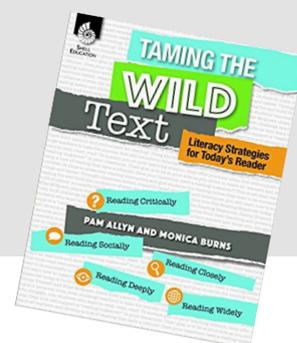
In addition to using these prompts for discussion, they could spark written or video reflections after a virtual reality experience. You might set up a Flipgrid page for students to use to share their observations or wondering. This way they can hear from all of their classmates even if discussion time in your classroom is cut short. Alternatively, you might use these prompts for written responses in a discussion forum in Edmodo, Google Classroom, or Schoology.

Virtual Reality Implementation Tips

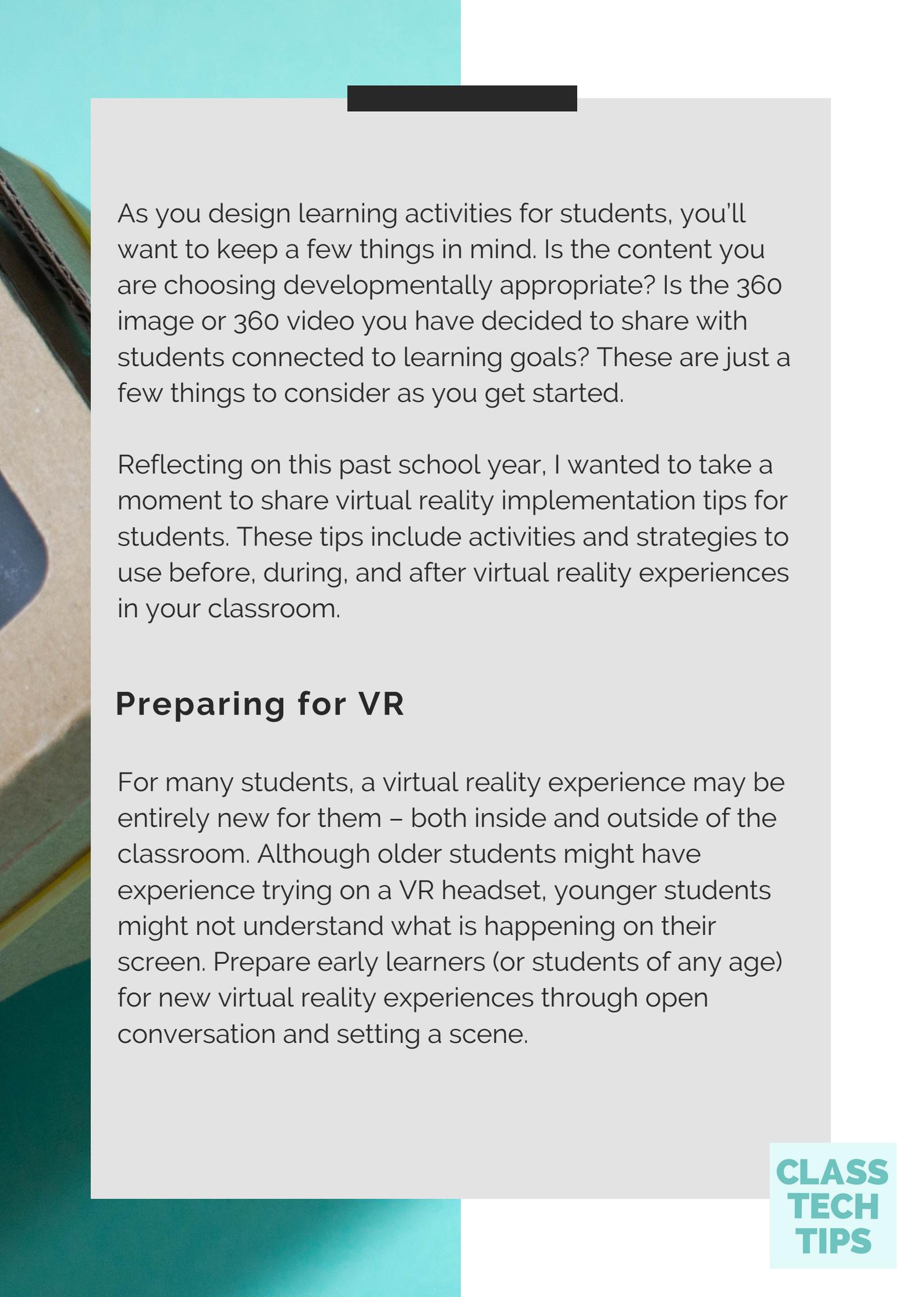
Virtual reality in education can be a game changer for students. It can help them explore faraway spaces and spark conversations. For our youngest learners, it can help them envision what life is like in other parts of the world.

In *Taming the Wild Text: Literacy Strategies for Today's Reader*, a book I co-authored with Pam Allyn, we describe some of the reasons virtual reality is used in today's classrooms:

“Virtual reality is technology that simulates the real world. The most popular form of virtual reality uses a headset. With virtual reality, students can be “transported” to new places, like a coral reef or a rainforest... Tailor a virtual reality pre-reading activity to the book you are reading and the technology you have available. In a low-tech classroom, this could mean exploring a 360-degree video with students on an interactive whiteboard. In a high-tech classroom, students can take turns using VR headsets with a smartphone.”



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As you design learning activities for students, you'll want to keep a few things in mind. Is the content you are choosing developmentally appropriate? Is the 360 image or 360 video you have decided to share with students connected to learning goals? These are just a few things to consider as you get started.

Reflecting on this past school year, I wanted to take a moment to share virtual reality implementation tips for students. These tips include activities and strategies to use before, during, and after virtual reality experiences in your classroom.

Preparing for VR

For many students, a virtual reality experience may be entirely new for them – both inside and outside of the classroom. Although older students might have experience trying on a VR headset, younger students might not understand what is happening on their screen. Prepare early learners (or students of any age) for new virtual reality experiences through open conversation and setting a scene.

When introducing virtual reality experiences to a group of students, it's tempting to want the element of surprise to be center stage. I would encourage you to abandon this idea and prepare students thoughtfully for virtual reality experiences. You might say something like, "Today we are going to watch a movie clip on our big screen where we can look side-by-side and up-and-down like we are really there!"

Practice Movement

If you are introducing students to virtual reality experiences on a tablet, you will want to prepare students by practicing how to move their device. Virtual reality experiences, including the embedded 360 images in Nearpod, are often responsive. As a user moves their device in their hand, they will be able to see a 360 video or 360 images from a new angle.

Have students practice movement before the virtual reality appears on their screen. This practice might include asking students to stay seated at their desks or sitting on a rug. Without a device in their hand, ask students to move their outstretched arms side-to-side to get a feel for their range of motion. With early learners (and even older students) I usually remind them to move their hands like they are driving a car, not driving a rocket ship. This phrase reminds them not to lift their device over their head and keep it at or near eye level.

Set Intentions for Virtual Reality

Although virtual reality absolutely has a “wow” factor, you’ll want to make sure you are introducing it thoughtfully to students.

When working with a group of early learners this year, the content area goals included an exploration of animal habitats. I shared 360 images with students to illustrate different places where animals lived. Even though it would have been plenty of fun to “swim” around a coral reef. Our goal was to make observations and discuss the animals we saw in this habitat.

In addition to clear learning goals, you may want to refer to the list of virtual reality discussion prompts earlier in this book. You can tailor the prompts on this list to many different learning environments. They can be used during a virtual reality experience or at the conclusion of a VR exploration.



Hello!

When I started my career in education as a classroom teacher in New York City, writing an “About Me” page for a website would not have been on my to-do list. My teaching career began in a classroom with chalk, textbooks, and looked pretty much the same as when I was a fifth grader. But within a few years, we traded overhead projectors for iPads... and that’s a big part of the reason we’re connected today.

I credit the start of my journey with a phone call... from an organization who wanted a teacher (me) to tell just a couple more teachers about ways to use technology with students.

Well, I showed up to an event that wasn’t just a few teachers, but a few hundred educators looking for help as they navigated the fast-changing world of education technology. So I jumped on stage in front of a packed house and starting sharing the ways my students and I used technology in our classroom.

When the teachers who showed up that night started asking for the name of my blog, my Twitter handle, a link to my presentation... I didn’t have an answer.

I hadn’t thought that my knowledge or experience was worth sharing, that it could help someone else, or that just maybe... my tips, strategies, and EdTech favorites would be useful to a larger audience.

That was 2012, fast forward to today, I’ve had the chance to work with educators on three continents, speak at events like ISTE, SXSWedu, and EdTechXEurope, and reach thousands of readers through my books, my website ClassTechTips.com and my social media accounts. It’s been an exciting ride for sure, and I’m so lucky to spend most of my time with teachers and kids in classrooms, connecting with educators at conferences, and writing about EdTech.

So now that you know a bit more about my story, I want to make sure you know a few ways I can support your work this year:

- Reach me here
→ hello@classtechtips.com
- Or follow along on social media
→ [@classtechtips](https://twitter.com/classtechtips)



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