30-Day Plan

A 30-day guide for implementing virtual reality
seamlessly in educational institutions

Introduction

If we're lucky, we can think back to a special teacher or professor who made a difference in our lives. Someone who went out of their way to inspire, motivate and guide us. When we think about why they meant so much to us the one thing that sticks out is they cared.

The worst possible thing that can happen to an educator is for their students to walk away from class feeling like they wasted time and did not learn anything. Today, every school has educators who try their hardest to be that memorable teacher who can break through boundaries to inspire their students. Unfortunately, time is stretched, funding is tight and as technology progresses many teachers find themselves competing for their students' attention against social media, smartphones and video games.

VR has the ability to change this. Textbooks have been the cornerstone of education for hundreds of years but what if we could bring textbooks to life and transform the learning experience into something more magical and memorable? What if we could animate a molecule, transport students to a historical site or push boundaries of student empathy by experiencing homelessness first hand?

"

VR has been the life-blood of our newly remodeled learning space. Although we have many technologies at our center, VR generates the most excitement for both students and teachers.

DEREK CREASON
UNC Chapel Hill

We've created this 30-Day Plan to be your A-Z guide from basic setup to implementing VR into your curriculum. We based this guide on conversations with dozens of successful K12 schools, Universities, and Libraries who paved the way for institutions like yours.

We want you to be the teacher remembered for bringing VR to your students. The next 30 days will be the launching point to having engaged students whose eyes light up and rush to tell their friends about their recent learning experience.

Here's What We Will Cover in this Guide

1.   Setting Up Hardware & Software

2.   Holding an Open House

3.   Hosting a Follow Up Event

4.   Integrating Content into Curriculum

5.   Making Your Case to Decision-Makers

Before You Begin

VR has many educational applications. This guide will specifically cover how to introduce VR to students in a centralized lab setting using high-end gaming PCs and tethered headsets. Although standalone headsets such as the Oculus Quest are increasing in popularity, our experience with educators shows that VR labs powered by PC VR headsets currently offer the largest library of the highest quality content.

Let's start by turning to the next page to begin setting up your hardware and software.

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Setting Up Hardware & Software

A major issue when setting up hardware and software is that information is fragmented across the web. In this section, you'll find guides to help with setting up hardware and installing educational content for your institution. If you have already installed your hardware and software skip this section and go to **Week 1: Open House**.

HARDWARE

SpringboardVR supports the HTC Vive, HTC Vive Pro, and all Windows Mixed Reality (WMR) headsets through the SteamVR bridge. Our opinion is the HTC Vive Pro and the HP Reverb VR Headset Pro Edition offer the best experience for you and your students. The HTC Vive Pro provides excellent tracking thanks to its use of base stations but the setup process can be challenging. The HP Reverb, on the other hand, is lighter, less expensive, and offers inside-out tracking which allows for easier setup.

Recommended Computer Hardware
If you are looking for computer hardware we recommend the HP Z1 Entry Tower from our partners at HP. For those interested in a premium experience we recommend HP's VR Backpack PC. HP's VR Backpack boasts higher specs, allows for a faux-wireless experience being a wearable PC, and can be docked thereby functioning as a desktop.

SETTING UP A VR STATION

What is a VR Station? Simply, a VR station is a high-end computer coupled with a VR headset. To set up a VR station the first thing you'll need to do is plan your space. Once you know how many VR stations you'll have and how much room each station will occupy then you'll be ready to order computers and headsets.

It's recommended that each VR station is a minimum of 8ft x 8ft. Here are some guidelines to help with planning your space, hardware and setting up your stations:

Planning Your Space
» **Setting Up Your First VR Workstation**
Read the article here

» **Samples of Other Educational Setups:**
Libraries
Local Museums
UC Denver

Planning Your Hardware
» **Recommended PCs:**
HP Z1 Entry Tower
HP VR Backpack

» **Recommended Headsets:**
HP Reverb VR Headset Pro Edition
HTC Vive Pro

Setting Up Your Hardware
» **Setting Up Your Vive Pro**
Read the guide

» **Placing Your Base Stations**
Read the guide
Watch the video

» **Setting Up HP Reverb Pro Edition**
Watch the video

HTC Vive Pro FAQ	Vive Reddit Forum

SOFTWARE

After your hardware is set up you'll need to download and install Steam. In this step, you will need to create a separate Steam account for each PC in order to have SteamVR installed on all your computers. If you are using a Windows Mixed Reality headset like the HP Reverb VR Headset Pro Edition, you will also need to install Windows Mixed Reality for SteamVR.

» **Installing SteamVR**
Read the guide

» **Create a Shortcut from SteamVR**
Watch the video

Now that SteamVR is installed you are ready to get set up with SpringboardVR. Get in touch with us here to get setup.

Once setup with SpringboardVR you can begin browsing our large library of educational and edutainment content via the SpringboardVR Marketplace.

Note that you are not restricted to only using content from our marketplace. You can also source content from Steam, directly from the studio/content creator, or of course create it in-house. Regardless of where you source content from, you can use SpringboardVR to efficiently manage your entire library of VR content.

Once you've completed the setup of your hardware and content you're ready to move to the next section where **Week 1: Open House** begins.

Holding an Open House Event

Next, you will want to launch an Open House to showcase the power of VR to excite students, department heads and potential donors. It's important to remember that without proper processes and planning this event may result in slim attendance or run into unforeseen issues.

Educators have told us their greatest challenge in this process was having decision-makers understand the true value of VR in education. For them, the Open House functioned as the perfect solution to introduce stakeholders and staff to the power of VR through experience.

Using this approach, we will cast a wide net to maximize the number of stakeholders and decision-makers who put on a headset. Once you have the correct processes and marketing procedures in place your Open House will help attract key allies who will intuitively understand your vision. The goal of this section is to help you find support for VR at your organization by maximizing your marketing efforts and minimizing your operational risk.

MARKETING

Marketing is critical to your success and without proper communication, many people may overlook the event. The goal is to make it easy for busy students and teachers to take time out of their day to come experience the life-changing effects of VR. These tips are based on experiences from successful schools, universities, and libraries.

Identify Each Department
Name all departments and their department heads. You'd be surprised who could become your biggest ally. One of the most emotional responses we've seen is from an English professor using VR for the first time to supplement a capstone project they had used for over 10 years.
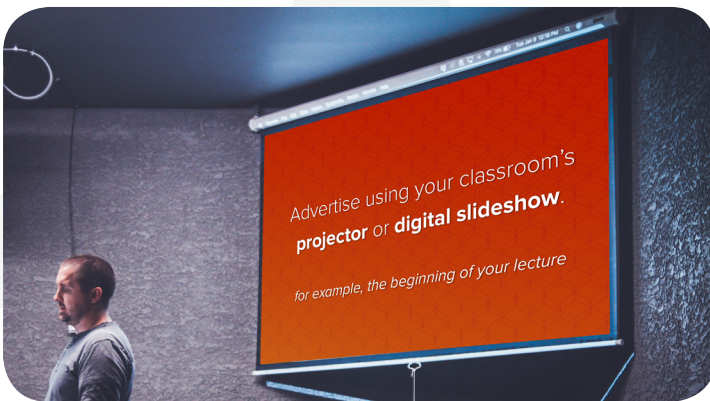
Identify Marketing Heads
Contact each department's marketing head and let them know you are testing out a new learning technology on campus through an Open House. Make sure to emphasize that it's short, free and academically impactful. Ask them to use their marketing channels to spread the word. You can also try inviting them to try it for themselves.

Advertise

To ensure you are reaching as many people as possible consider the following advertising techniques to get potential users excited to try VR:

» Email Marketing

» A Calendar System

» Social Media

» Physical Signage

» 3rd Parties

» Scholarships

Look for opportunities to take advantage of digital signage around campus if it's available. Use a slideshow on TVs you control and add a slide to digital signage around campus.

Advertise using your classroom's **projector** or **digital slideshow**.

for example, the beginning of your lecture

Advertise in high traffic areas like **campus billboards.**

for example, a digital billboard like this one

Advertise in common areas like **Student Unions** or **communal spaces** that have consistent, high traffic.

for example, digital marquees like this one

SETUP FOR SUCCESS

With your marketing machine set up, it's important to make sure your VR space is optimized for guests. If guests show up and you haven't thought about the following ideas then you may run into issues.

Position Your Monitors Facing Outwards
This allows observing stakeholders to see what is happening inside the headset. It also makes troubleshooting easier for you and your staff while potentially grabbing the attention of those passing by.

Have Throughput Policies
Throughput is the act of having a guest enter the line, put on a headset, have an experience and leave with the system set up for the next person. It's basically how many people you can get through the experience. To help maximize throughput consider these policies:

» **Lines**
How will you handle a line of people? A basic reservation system is included with a SpringboardVR subscription to help you set appointments ahead of time. You can use the SpringboardVR system, an existing system or pen and paper to manage lines.

The added benefit of using the SpringboardVR's booking system is that it allows for people to sign up ahead of time from their phone or a computer and syncs with all of our other systems.

» **Hygiene Policy**
How will you clean the equipment? Clean habits are an absolute must for this technology. Unfortunately, the foam padding in many VR headsets collects sweat and skin cells. Consider buying exhibition leather VR Covers that are comfortable and easy to clean. Also, be sure to have disinfectant wipes next to each computer to wipe down any surface that touches the skin. This can include the headset straps and faceplate, controllers, headphones, etc. IMPORTANT: Make sure to only use a microfiber cloth on the lenses as they can easily scratch.

» **Safety**
Always have someone nearby as a spotter to ensure the user does not accidentally bump into physical objects or get tangled in the cord connected to the computer.

Block off the area with rope, curtains or some kind of physical barrier. Include on this barrier signage letting others know that only one person can occupy the VR space at a time.

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Rules

It's a good rule of thumb to have policies clearly outlined and visible for guests. For instance, many schools have a waiver that details the risks associated with VR and outlines the rules. If you'd like to include a waiver in your process here are some samples from Spectrum Virtual Reality Arcade in Fort Wayne, Indiana:

- » [Waiver](#)

- » [Rules](#)

- » [Media Release](#)

Comfort

How will you offer a comfortable experience? Comfortable guests are happy guests.

- » **Deluxe Audio Strap**
  If you are using Vive and not Vive Pro Consider buying the Deluxe Audio Strap to add better balance. In addition, the [Deluxe Audio Strap](#) makes it easier to put on/take off and to adjust.

- » **Face Wipes**
  Another idea is to have face wipes for guests for when they take off the headset. People remember how experiences end and this is a great way to have them leave feeling refreshed.

- » **Glasses**
  Most glasses fit both the HTC Vive Pro and the HP Reverb, provided the headsets are put on correctly.

Gearing Up and Down

How will you take the equipment on and off of your guests? This is worth putting thought and practice into. Your guests will likely have no idea how to put on or take off the equipment themselves.

Enlist Help

Who will help you? Most schools recruit student aids and volunteers. Having extra help is crucial to delivering a great experience. Share your mission and vision with them and the importance of these policies to ensure a positive Open House. Trying to run the open house by yourself can be a recipe for disaster.

Self Consciousness

Keep in mind that some people may be more resistant than others to putting on a VR headset. It's important that people feel safe and secure while wearing the headset. The user will be essentially blindfolded from the outside world and will be trusting you and your staff to keep them safe in the real world.

Network

Lastly, make sure to collect business cards, email addresses or phone numbers from as many people at the event as possible. Consider placing a business card bowl for them to place their cards in and advertise that you'll draw one for a free gift card. Collecting names and email addresses will be paramount to the success of the next **Invitation Only Event**.
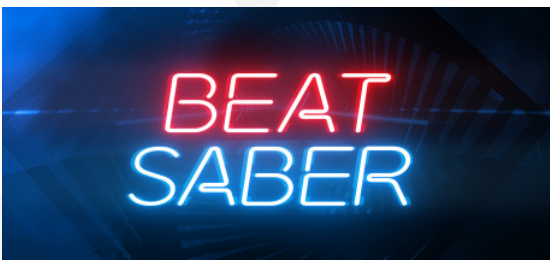
SUGGESTED SAMPLE CONTENT
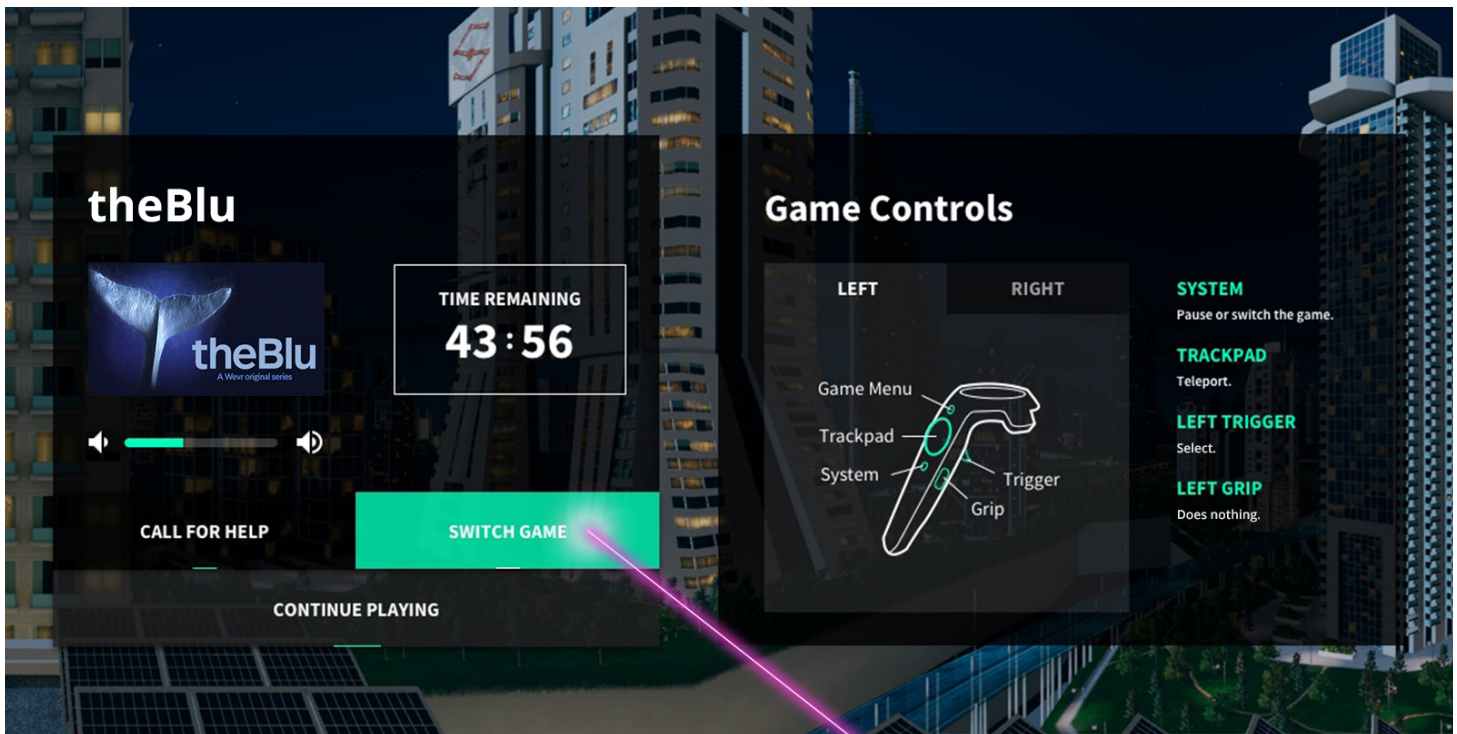
TheBlu

Nature Treks

Beat Saber

Google Earth

FEATURE SHOWCASE: LAUNCHER OVERLAY

The Experience Launcher Overlay is activated with a single button by the VR user and allows them to easily switch between content, call for help, view the controls, and see the time remaining.

" Participating in the SpringboardVR education case study enabled our library to quickly and easily move forward with the pilot of a new virtual reality studio. The management tools neatly solved several potential content management problems. The launcher allows new users a high level of independence when exploring virtual reality for the first time.

DOROTHY OGDON
University of Alabama, Birmingham

Hosting a Follow-Up Event

Next, you're ready to leverage the excitement you've created with the Open House to build stronger connections through an Invite Only event. Without a follow-up event many of the connections you made at the Open House may grow distant. The Invite Only event narrows your focus, keeps the momentum going and fosters deeper bonds with influencers and connections from the open house.

CONTENT

First, you'll want to decide on the content for your Invite Only Event. We recommend programs like 3D Organon, Fantastic Contraption, Mod Box, Firebird La Peri, Masterpiece VR, and Nanome. These programs are educationally focused and demonstrate the power of VR for science, problem-solving, experimentation and immersive storytelling. There are many other titles in the SpringboardVR marketplace but the important thing is to choose content that new users can understand and you feel confident showcasing.

Once set up with SpringboardVR, you will have access to our growing library of Lesson Guides. Our Lesson Guides provide a map or framework for introspection and give participants a provocative reason to enter a VR application. These guides aim to enhance our relationship with the VR application to expand a user's world view through contextual/ conceptual thinking and self-reflection. Careful consideration is taken regarding what the user considers before, during and after the VR experience, to ensure participants are maximizing their learning and unlocking new perspectives.

CONTACTS

Once you've chosen your content, it's a good idea to go back through all the connections you made from the Open House and send follow up invites for the new event. The goal is to foster deeper relationships and many will be excited that you're asking them back.

Target Student Groups
Student groups, especially those involved in game development, are ideal targets. These members may already be thinking about virtual reality but may lack the resources to purchase and deploy high-end VR hardware as part of their regular meetings. Inviting them to a closed demonstration could help gather student support while understanding new perspectives.

Academic Departments

The magic of VR in education is that it can be applied to every department and field of study. Not only can you provide an impressive first experience with this event but you can also discuss the specific, long-term impact of these tools on their respective disciplines.

Donors, Outreach, and Tours

Donors, tour groups, and outreach/field-trip programs will help spread the word of your installation far beyond the walls (and checkbooks) of internal users. These groups are unlikely to have encountered virtual reality before so the "wow" factor will be strong. A faculty member or donor who witnessed the reaction of a young student entering virtual reality for the first time will likely grasp the potential implications. These are key allies in building your case for VR at your institution.

Event

- » Discuss event

- » What is the purpose of this event?

- » How should the event go?

- » How should the event end?

- » What is the most important thing intended to come out of this event?

- » How does this event move you closer to course integration?

Continue to the next page for a feature showcase.

FEATURE SHOWCASE: EXPERIENCE LAUNCHER

To help enable students and staff members manage their own experiences using SpringboardVR's intuitive and user-friendly content Launcher.
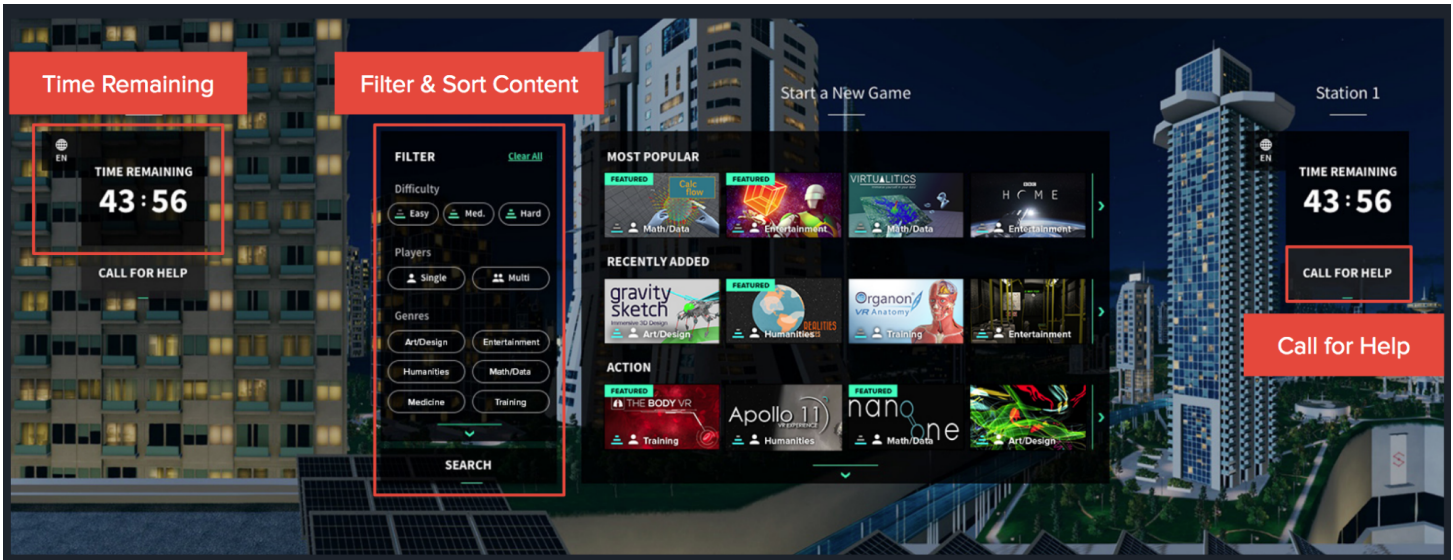
The Launcher lets guests switch between individual content without leaving the headset. Users can also call for help, sort content by age, academic field, or difficulty level. SpringboardVR empowers the user while cutting down on the need for extra support staff.

Once you've completed this section you're ready to move to the next section where **Week 3: Integrating VR into Curriculum and Instruction** begins.

Integrating VR into Curriculum and Instruction

You have gathered support and vital allies. As you begin to grasp some of the main ways VR can be used to help engage students and nurture creativity the biggest challenge remaining is: "How do we take these tools and implement them into your existing curriculum and instruction?"

By leveraging the unique benefits of these emerging tools, you can increase student self-efficacy and potentially boost learning outcomes that before would have required a visit to a laboratory, a studio, or even a foreign country. Engaging users in VR can be awe-inspiring and magical if you follow specific guidelines and principles. The potential of virtual reality lies in designing unique learning experiences that can't be replicated by a video or textbook. Thus, when incorporating VR experiences into your curriculum and instruction, you should ask yourself the following questions;

1. Can I use VR to provide my students with unique experiences that might otherwise be unsafe or dangerous in the real world? For example, exposure to animals, chemical reactions, flight simulators, height situations, and underwater adventures.

2. Can I expose students to experiences that would be almost impossible in the real world? For example, being face-to-face with a molecule or visiting a historical site.

3. Can I allow students to create and explore whereby the environment can be reset without consequence? For example, designing Rube Goldberg machines that didn't have to be cleaned up or teachers didn't have to spend hours gathering materials. Or, allow students to engage in puzzles and problem solving that only required virtual objects and large doses of creativity.

As instructional designers, teachers need to use the right tool for the right job. When designing educational experiences, you will need to make sure that you have crafted the learning experience in VR with purpose in mind.

With a sense of purpose, your next consideration is, "How do I design experiences in VR that enable users to feel successful?" When a student enters a VR application, they will require a sense of direction. VR lesson guides provide a map or framework for introspection and give participants a provocative reason to enter a VR application. These guides aim to enhance our relationship with the VR application to expand a user's world view through contextual/ conceptual thinking and self-reflection. Careful insights regarding what the user considers before, during, and after the VR experience, ensures participants are maximizing their learning and unlocking new perspectives.

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WHAT TO DO IN VR –– QUALITY VR CONTENT GUIDES

Teaching and learning in the 21st century has seen a shift away from content learning to more conceptual and contextual based learning. Thanks to the internet, we can "google-search" many essential facts. Students still need to be able to think "big" and make conceptual connections to terms like systems, development, change, and identity. Excelling at problem-solving, analyzing and philosophizing is taking a front seat to memorization and VR is just the tool to facilitate this transformation.

Additionally, students learn more if their experience is grounded in an important "why" which we call contextual learning. Providing real-life connections are paramount to ensuring students engage and connect with a lesson. With these principles in mind, it is crucial to design VR lesson guides based on these important underpinnings. Here is an example of a lesson guide that provides an engaging VR experience that focuses on conceptual and contextual learning:

The emphasis in this, and any VR content guide, is on deep thinking, creation of knowledge and understanding, which VR is terrific at facilitating. SpringboardVR has a variety of educational applications with VR content guides in a plethora of subjects and disciplines to help you get started.

If you have a request or a suggestion for a new lesson guide, feel free to contact us at edu@springboardvr.com.

Lesson Guide: Form and Function in Virtual Reality
Fantastic Contraption
Designed by Craig Frehlich B.Ed., M.Ed.

Beginner Content-Note this guide is intended for players new to this application. Additional guides will be available for intermediate and advanced levels

Target Age:	Target Subject/Field:	Essential Idea:
10-Adult, Grade 5 and up	Science, Engineering/Physics	Machines can be adapted to improve mobility and stability and function to meet human needs.

Goal of the Learning Application:
Players must build a device or "contraption" that is both mobile and capable of transporting a jelly ball object from point A to B. The mobile contraption will optimally operate like a tank, rolling over obstacles and knocking down blockades. Players can choose from 5 different objects when building their contraption. There are 3 wheels: one that spins clockwise, one that spins counter clockwise, and one that will not rotate until pushed or moved by momentum. There are also two connectors: a solid stick and a water stick. The water stick can pass through walls and wheels, but not everything. Players have free reign when designing their contraption, so trial and error plays a major role in this learning experience. But what makes a structure strong, stable and rigid in order for it to complete its task?

Possible Learning Objectives:	Key Concepts & Vocabulary:
- Students will be able to infer how the stability of a model structure will be affected by changes in the distribution of mass within the structure and by changes in the design of its foundation and parts. - Students will be able to create novel solutions to complex problems. - Students will be able to identify points in a structure where flexible or fixed joints are required, and	- Adaptation - Form - Function - Stability - Moveable Joint - Rigid Joint

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DON'T JUMP IN RIGHT AWAY

It's essential to let the students familiarize themselves with the equipment before engaging them in content related VR lesson guides. Consider dedicating a class to allow students to play with the hardware first. Encourage students to come in throughout the week and practice getting comfortable taking the headset on/off and navigating menus and controls. Using fun and practical VR applications like "TheBlu," "Beat Saber," or "Richie's Plank Experience" will give first-time users a sense of how it looks and feels to be in VR. This will help get students comfortable with the new tool and expedite the onboarding/offboarding process. A suggested progression might be:

1) Demonstration

For any planned course integration, you want to dedicate class time to orientation, hands-on practice, and actual assignment completion. Remember, many users will be experiencing VR for the first time, so a *demonstration* - broadcast to a classroom project - is a great way to show basic headset operations and application controls.

2) Experimentation

Next, students and faculty can engage in a pressure-free experimentation phase, where they can navigate a new tool without being expected to produce anything for credit. You can practice getting students in and out of VR as well as getting them comfortable with their new equipment.

3) Implementation

When you feel the students are comfortable and ready to do actual work inside the VR headset, it's time to introduce students to a VR learning experience dictated by a well crafted VR lesson guide.

With the tips and tricks provided in this section, I know VR implementation into your curriculum and instruction will be smooth.

Continue to the next page for recommended content.

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RECOMMENDED CONTENT

There is a plethora of VR applications in the marketplace, so where should you start?
Here are a few recommended titles to beginning your VR journey:

Science/STEM	Narratives	Mindfulness	Music	Creating
Fantastic Contraption

Awaken | Firebird La Peri

The Great C | Nature Treks

Where Thoughts Go | Lyra

Beat Saber | MasterpieceVR

Modbox |
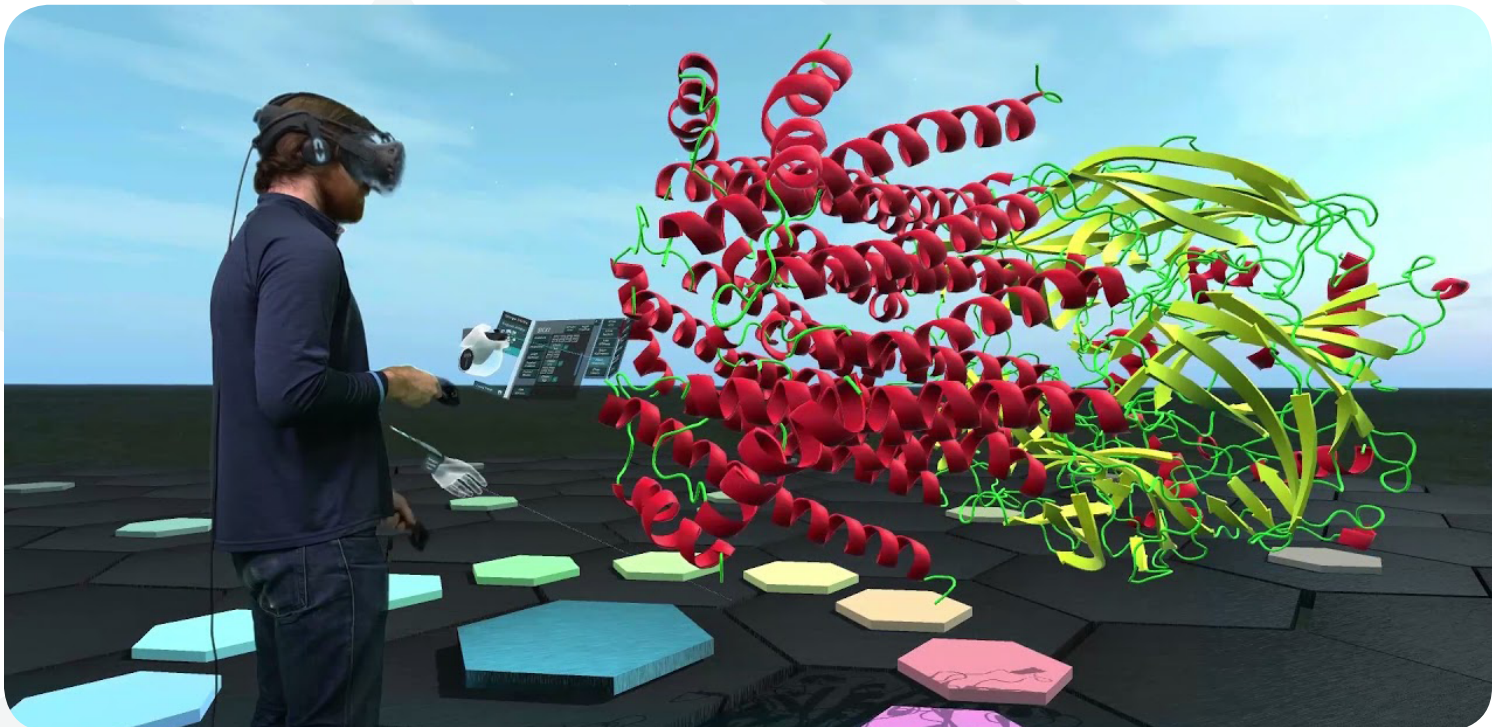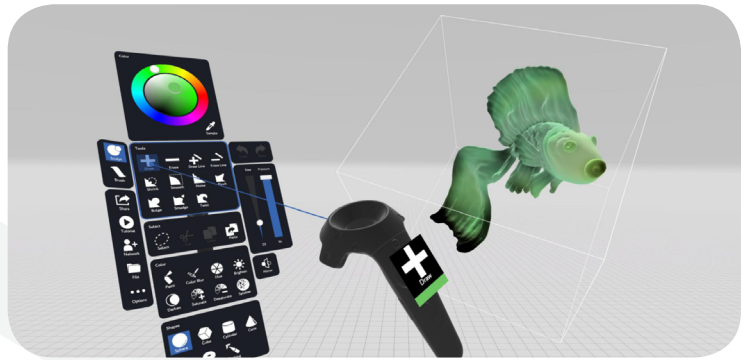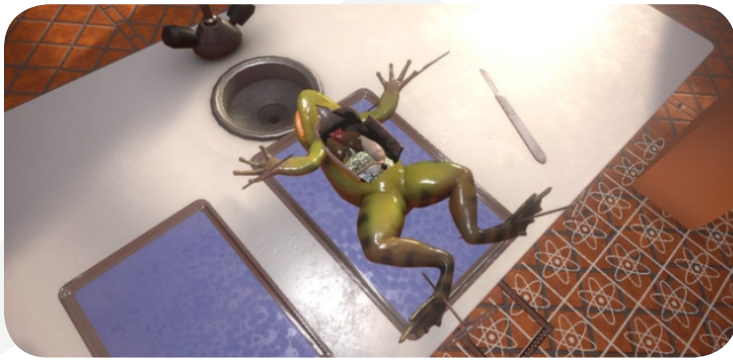
Making Your Case to Decision-Makers

You've reached the final steps. You've gathered allies, learned how to share VR with others and combined content with curriculum. In this stage, you'll present your mission to decision-makers to move forward in funding VR as a teaching tool.

While student and stakeholder excitement may be high, without demonstrated results, presenting your reasons and getting official buy-in can be difficult. Other schools have shown success at this stage by presenting a case that meets the concerns of decision-makers while showing the upside of the technology. In this section, we'll address those concerns and how to overcome them by displaying what you've learned.

Challenge

Some of the biggest challenges in convincing decision-makers to adopt VR comes down to timing, cost, and potential impact. Even with affordable headsets, excellent educational VR content and the ability to scale labs with management software it may not be a perfect time for your institution. Some educators have to lobby for space, funding or simply get buy-in.

Overcoming Challenges

From talking with educators we've heard that most decision-makers want to invest in technologies that impact learning in some measurable way. In addition, they want to know your proposal will require minimal maintenance and oversight. Furthermore, they want to know that it will prepare students for the job market and attract future students. Most importantly, they want to know that the tool will increase student engagement while enhancing and improving overall learning.

Allies

Educators who were successful in implementing VR said their efforts may have failed if they didn't have champions/early adopters on their side. Hopefully using the Open House and Invitation Only event you were able to get high-level decision-makers and influencers to try the headset for themselves. It often comes down to their belief that this will change the world and has the potential to change how students learn. Be able to tell a good story.

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Statistics

Decision-makers across institutions rely on usage statistics to determine the value of tools and services. Fortunately, SpringboardVR has you covered on stats. The built-in Analytics engine will help you craft a story showing that students used the equipment, enjoyed their experience and that replicating that success will be simple. You can track how many minutes the equipment was used, which stations were utilized and which content was the most popular.

Proving the impact of VR by quantitative metrics is key to getting adoption and expanding your initiatives. As low-cost headset hardware continues to evolve, and more and more students are able to acquire (or are assigned) VR hardware of their own, your efforts will be rewarded 10-fold.

Conclusion

It's because of the efforts of educators like you that students become motivated and inspired to achieve greatness. With so many students finding it difficult to rid themselves from distractions and struggling to focus in class, we need courageous visionary teachers willing to use transformative tools like VR.

VR has the capability to aid teachers in breaking through boundaries to reach young minds. As you've worked through this guide you've learned how to set up and promote a VR Lab, implement content lessons and make your case to decision-makers. It's through your drive, and the pursuit of others like you, that breakthroughs in education are made.

While VR promises to improve the way people learn, perceive and engage with educational content, without you, your students wouldn't have the opportunity to experiment with this life-changing, awe-inspiring technology. By completing this guide you've shown your willingness to stand at the edge to make an impact in your students' lives.

We hope the strategies of this guide employed by other schools, universities, and libraries have helped you on your journey to be that teacher students remember.

Thank you for taking the time to work through this and implement VR at your institution. If you've found this guide to be helpful please share it with someone interested in using VR as a teaching tool. In addition, we'd love to hear any feedback on this process. What worked? What didn't? Email us your opinion at edu@springboardvr.com.