



Engagement Elevated:

How Immersive Technology Transforms Student Learning

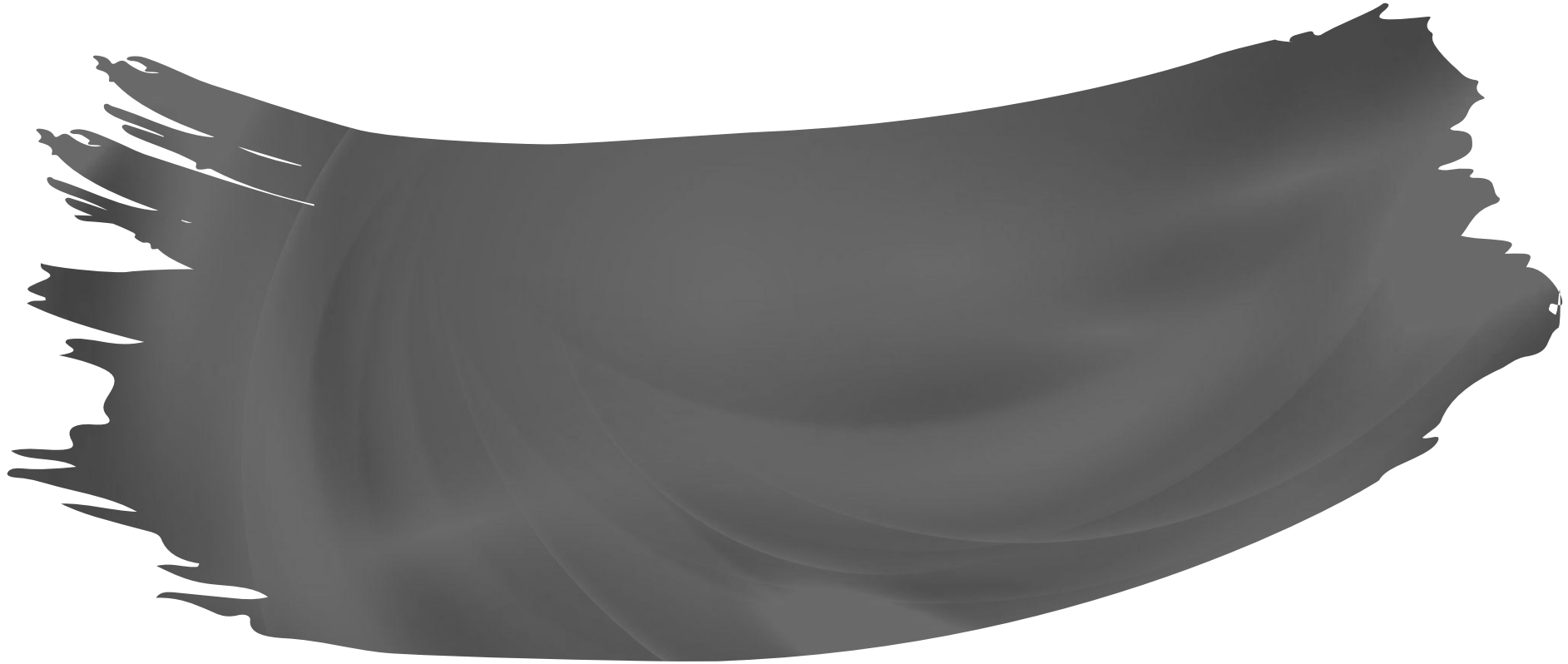
**Dr. Patrick Schuermann | CAO & VP for Strategic Partnerships
&**

**Dr. Dan Sturdevant | Founding Principal & VP for Chanel Partners
&**

**James Pope | CRO for Technology Labs
&**

Brian Haden | Sales Director at Technology Labs

Why Engagement Matters



What is Your Gift?

Engagement Matters Because it...

1. Drives Academic Achievement

- Behavioral, Emotional & Cognitive Development -> Achievement

2. Predicts Long-Term Outcomes

- College Success, Career Readiness, and Life Outcomes

3. Supports Emotional and Social Development

- Fosters feelings of connection & motivation, reducing depression & anxiety

4. Reduces Risk Behaviors and Absenteeism

- School connectedness is a protective factor, reducing substance abuse, violence, and an array of behaviors linked to poor mental health

5. Fuels Intrinsic Motivation and Lifelong Learning

- Cultivates curiosity, perseverance, and experiences of mastery & purpose



Principles of Socially Immersive XR Learning Anchored in Research

- **Cognitive Science Research on How People Learn**
 - Drawing from the National Academy of Sciences *How People Learn* framework
 - Aligned with Problem-based / Challenge-based learning
- **Dimensions of impactful learning experiences (highly effective professional development)**
 - The 8 elements of professional learning experiences that are most highly correlated with growth and improvement in learner effectiveness
- **Tenets of Systems Thinking**
 - All knowledge, skills, and processes operate within nested, multi-faceted systems
- **Psychological and Meta-cognitive research on Experiential Learning**
 - Informed by Dewey, Kolb, James, Lewin, Rogers & Freire's work on constructivism & learning cycles



The How People Learn (HPL) Framework

- The most impactful learning experiences include all 4 elements of the Framework.
- Socially immersive learning experiences provide innovative ways for students to experience them.





8 Dimensions of Impactful Learning / PD

1. Includes Subject Matter Content
2. Job Embedded
3. Provides Support for Learners
4. Incorporates Authentic, Active Learning
5. Involves Collaboration with Colleagues & Experts
6. Ongoing & Sustained
7. Linked to Key Learning Outcomes
8. Provides Opportunities for Reflection

Optima's socially immersive learning platform provides opportunities for teachers to incorporate all the elements of "impactful learning" linked to improved learner outcomes

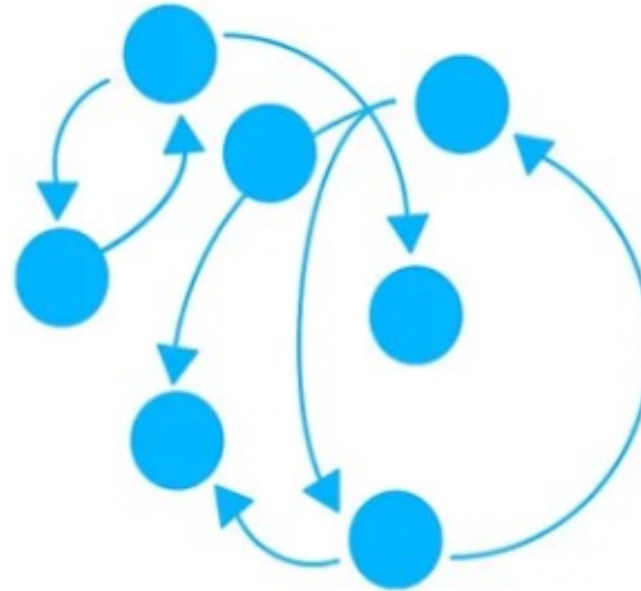


Systems Thinking

Traditional thinking



Systems thinking

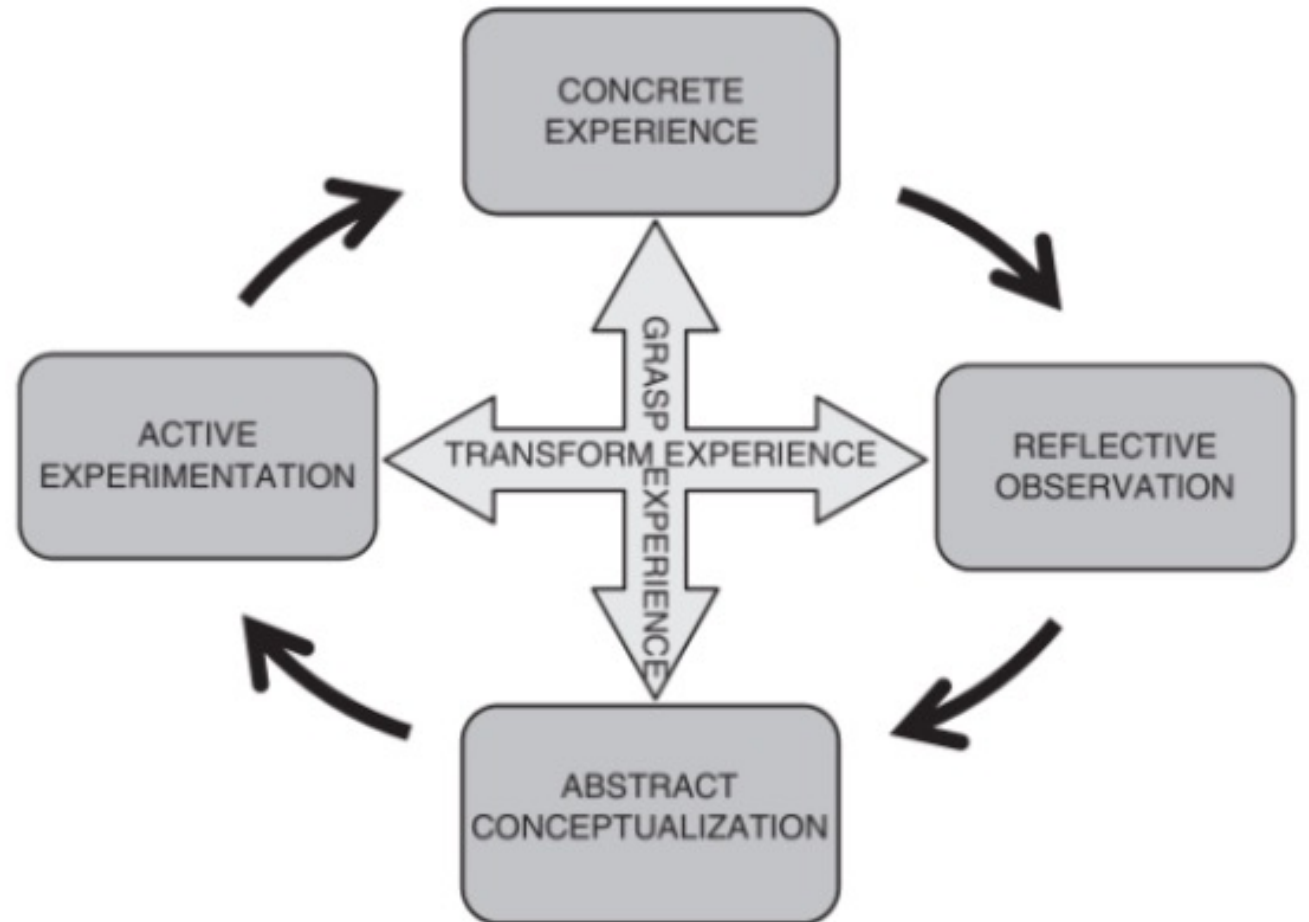


- The application of learning takes place within interconnected ecosystems of knowledge and practice.
- Optima's socially immersive learning platform provides opportunities for teachers to engage students in learning experiences illustrative of the cognitive and social complexity within which concepts can be understood and applied.



The Experiential Learning Cycle

- Humans don't develop capacity by thinking....but by doing.
- Socially immersive XR experiences provide teachers with a tool to foster the movement from abstract conceptualization to active experimentation, concrete experience, and reflective observation.



Students Remember....



Research on VR Learning



People who are taught using virtual reality are **3.75 times more emotionally connected** to the content, **4 times more focused** than their e-learning peers, and **275% more confident** about applying the skills they learn.”

- PwC



“Research shows we **remember 90% of what we do. VR yields the latter scenario impeccably.**”

- New York University

Research on VR Learning



“VR learners were **150% less distracted and 40% more confident** in applying what they were taught compared to their counterparts in traditional classrooms.”

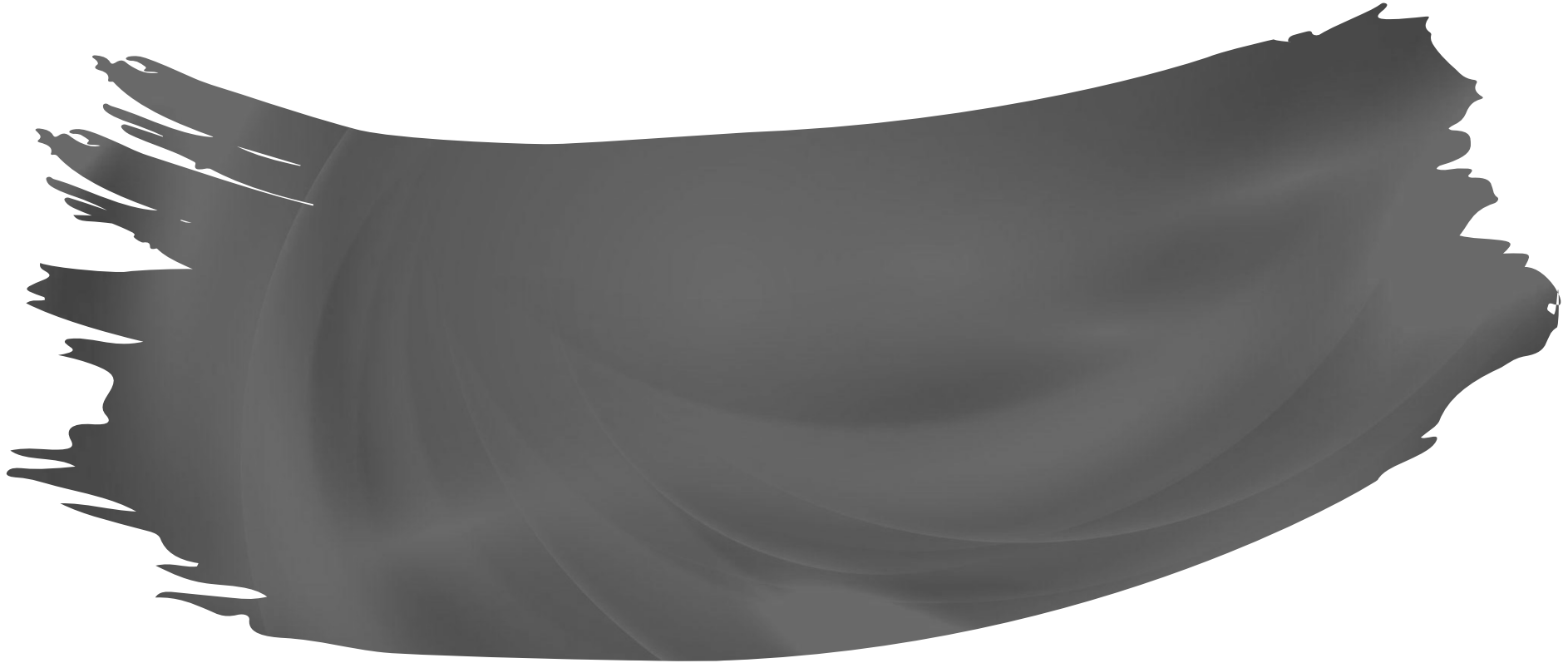
- PwC



“Virtual Reality (VR) can cause students to become **more interested in course material, leading to higher levels of engagement and better performance** on long-term assessments.”

- Educational Psychology Review

What is the Biggest Challenge You Currently Face...
Elevating the Engagement of Your Students?



OVERVIEW

Who We Are

Optima is a virtual content provider which has created the largest library of educational VR assets in the world and makes it available to schools and districts via subscription. Our accredited K-12 curriculum has been proven effective through the world's first VR school, Optima Academy Online, as well as with 100+ school and district partnerships.

Our Vision

Our vision is to transform education through immersive technology, making learning engaging and accessible to all.

Our Mission

Our mission is to create a world where students can explore, interact, and learn in immersive environments that foster deep understanding and curiosity.



Core Offerings

Content Library



Optima owns the **largest library of educational VR assets** in the world and makes it available to districts and schools via subscription.

Coursework



Optima's **VR-based coursework** powers the world's first and only accredited K-12 Virtual Reality school, Optima Academy Online

Management



Optima offers **hardware management solutions** that help schools provide safety and security for faculty, students, and personal data.

Training



Optima's internationally recognized **professional development** equips teachers and other trainers to use VR effectively and efficiently.

The Experience

Optima's Approach to Learning

“

Science is my favorite subject because I love learning about space and the solar system. Using Virtual Reality, we got to go to the Apollo 1 site in Cape Canaveral and do a live class!

- *High School Student*

Other Online Learning



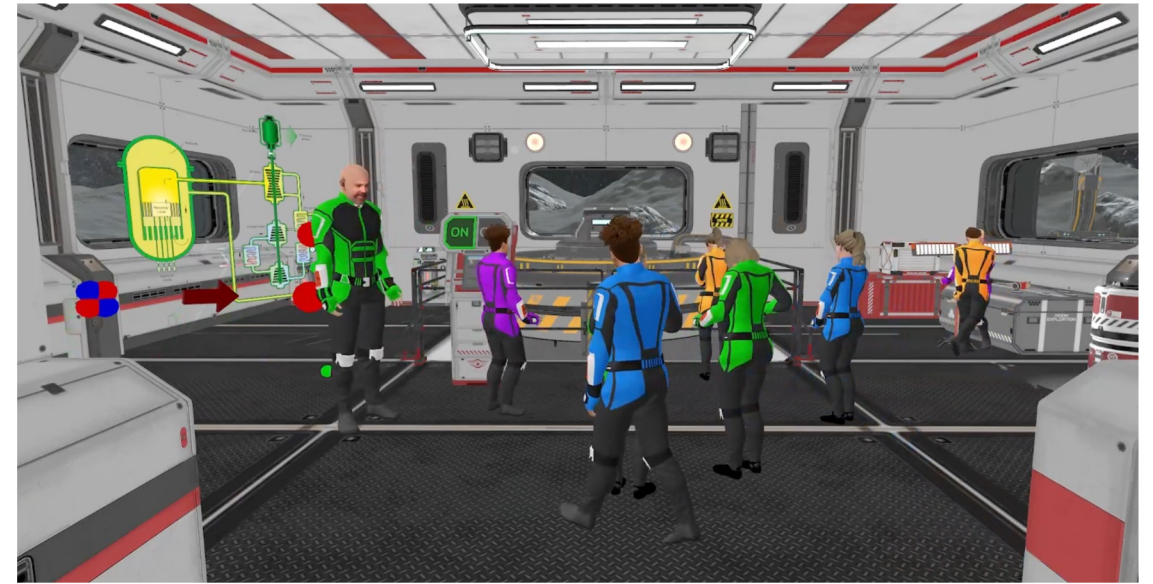
PRODUCTS & SERVICES

Optima's Online Learning



PRODUCTS & SERVICES

Optima in the Classroom



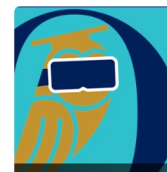
Optima Content Library

- 250+ immersive locations
- 40+ field trips
- 7000+ IFX (3D Objects)
- 30+ historical AI characters
- Host up to 70 students at any one time



PRODUCTS & SERVICES

Engaging Relevant Coursework



7th Grade History

P01 8:25 AM T/TH - 7th Grade United States History 702

[Modules](#) [Home](#) [Schedule](#) [Grades](#) [Resources](#)

Lesson 3.03 - Reading Quiz	Oct 8, 2023 5 pts			
Lesson 3.03 - Source Report	10 pts			
Lesson 3.03 - VR Lesson Resources-2				
Lesson 3.04 - Articles of Confederation and the Constitutional Convention				
Lesson 3.04 - Reading Quiz	Oct 8, 2023 5 pts			
Lesson 3.04 - Source Report	10 pts			
Lesson 3.04 - VR Lesson Resources-2				

Engaging Relevant Coursework



Reading

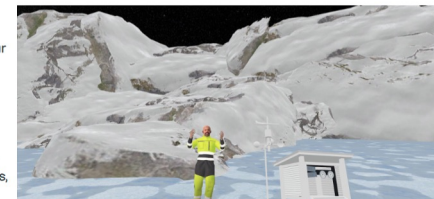
Welcome to a unique place called the Khumbu Icefall. This is on Mount Everest, not too far from Base Camp. Climbing to Everest's top is dangerous, and this is one of the riskiest spots. Here, how air and water move impacts our local weather.

The Khumbu Glacier is fascinating. It moves down Everest about 3 to 4 feet each day. Think about a chunk of ice that takes around 4.3 years to get from the top to the bottom of the icefall. During this time, it gets reshaped and broken apart, leading to deep cracks called crevasses.

Climbers have to be very careful here. The glacier is always moving, and huge blocks of ice can fall without warning. Even with the help of ropes and ladders, crossing the Khumbu Icefall has been fatal for many climbers. However, no deaths have been recorded here from 2017 to 2021.

Let's delve into the fascinating world of weather, a term that encompasses the various phenomena we observe in the sky, whether it's hot or cold, wet or dry. These phenomena primarily occur in the troposphere, the lowest layer of Earth's atmosphere and the one we interact with daily.

Human civilization has always been intricately linked with the weather. Our ancestors, dependent on hunting and gathering, needed to understand seasonal changes to survive. Today, farmers rely on accurate weather forecasts to plan their agricultural activities, such as sowing seeds or harvesting crops. Additionally, weather



Vocabulary

1. **Khumbu Icefall:** A risky spot on Mount Everest where ice often falls.
2. **Crevasses:** Deep cracks, especially in a glacier.
3. **Troposphere:** The part of the atmosphere where weather happens.
4. **Barometer:** A tool that measures air pressure to help predict the weather.
5. **Weather vane:** A simple tool that shows the wind's direction.
6. **Satellite:** A device sent into space to observe Earth.
7. **Barometric pressure:** The pressure in the atmosphere at a specific place and time.
8. **Cold front:** A boundary where cold air is replacing warm air, often leading to cooler weather.
9. **Warm front:** A boundary where warm air is replacing cold air, often leading to warmer weather.
10. **Air quality:** A measure of how clean or polluted the air is.

VR Experience

Cross the Khumbu Icefall, carrying weather equipment to camp one in order to repair the weather station destroyed by an avalanche. This is an incredibly dangerous undertaking. Navigate the treacherous terrain with care and precision. The weather station provides critical data on temperature, wind speed and direction, humidity, and other atmospheric conditions, which are essential for predicting weather patterns and preparing for the climb ahead.



Optima
ACADEMY ONLINE

BRINGING SYSTEMS ONLINE: **ARTEMIS III**



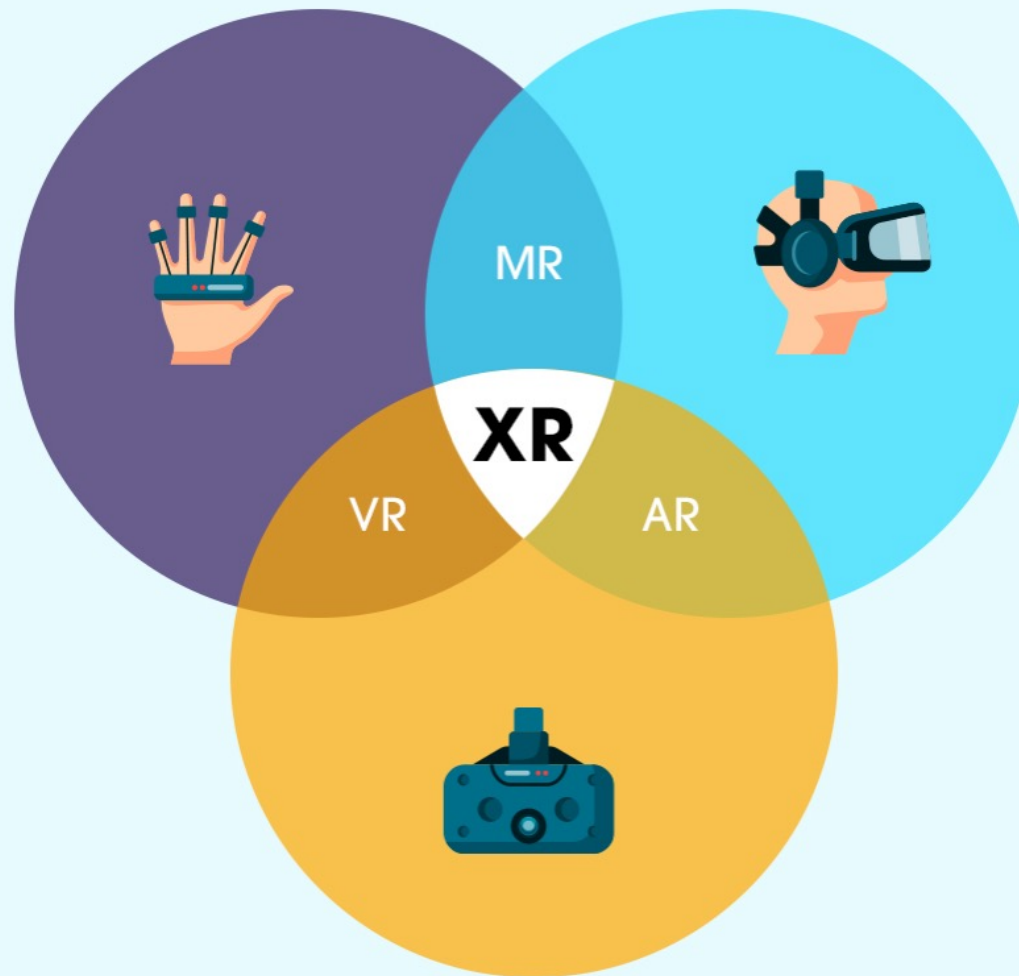


AN INTERVIEW WITH

ROSA PARKS

AI-GENERATED AVATAR

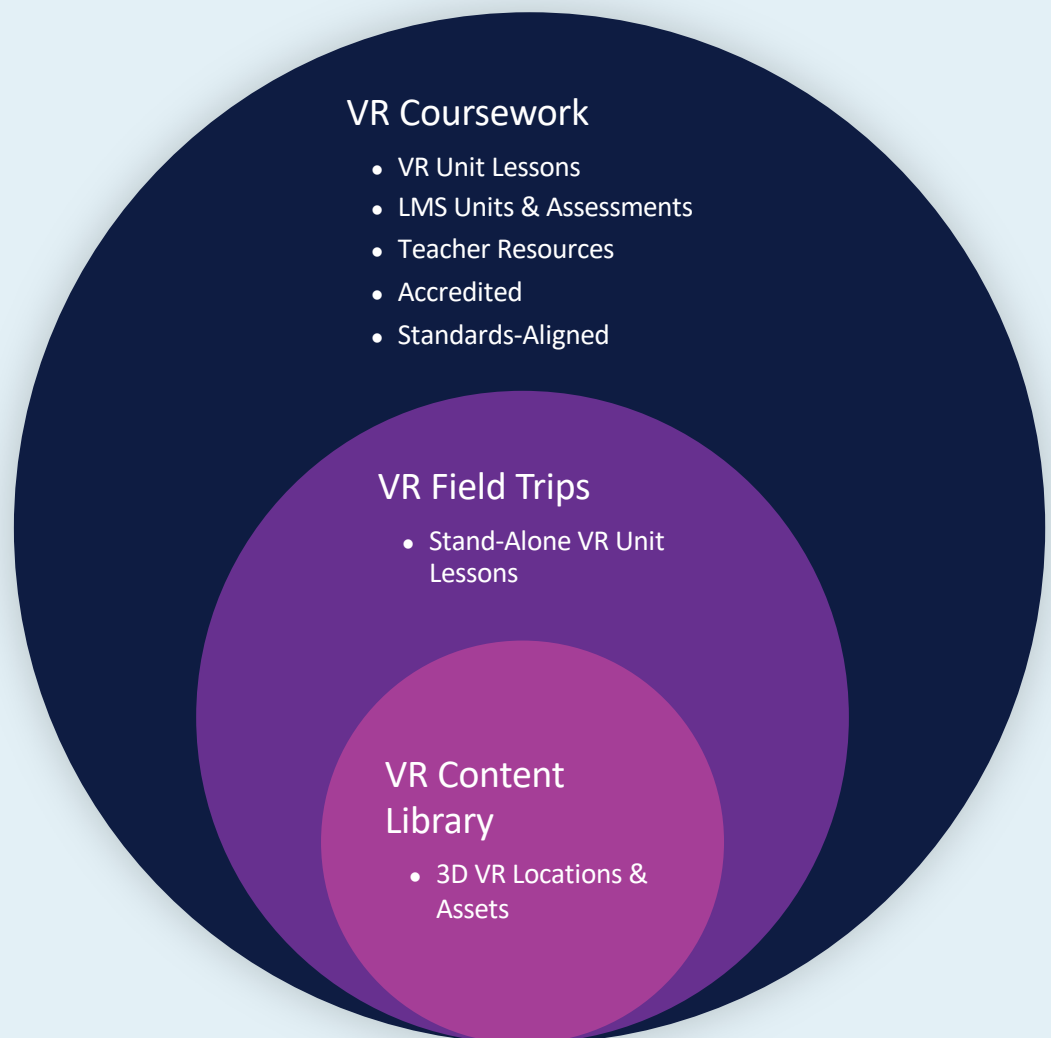




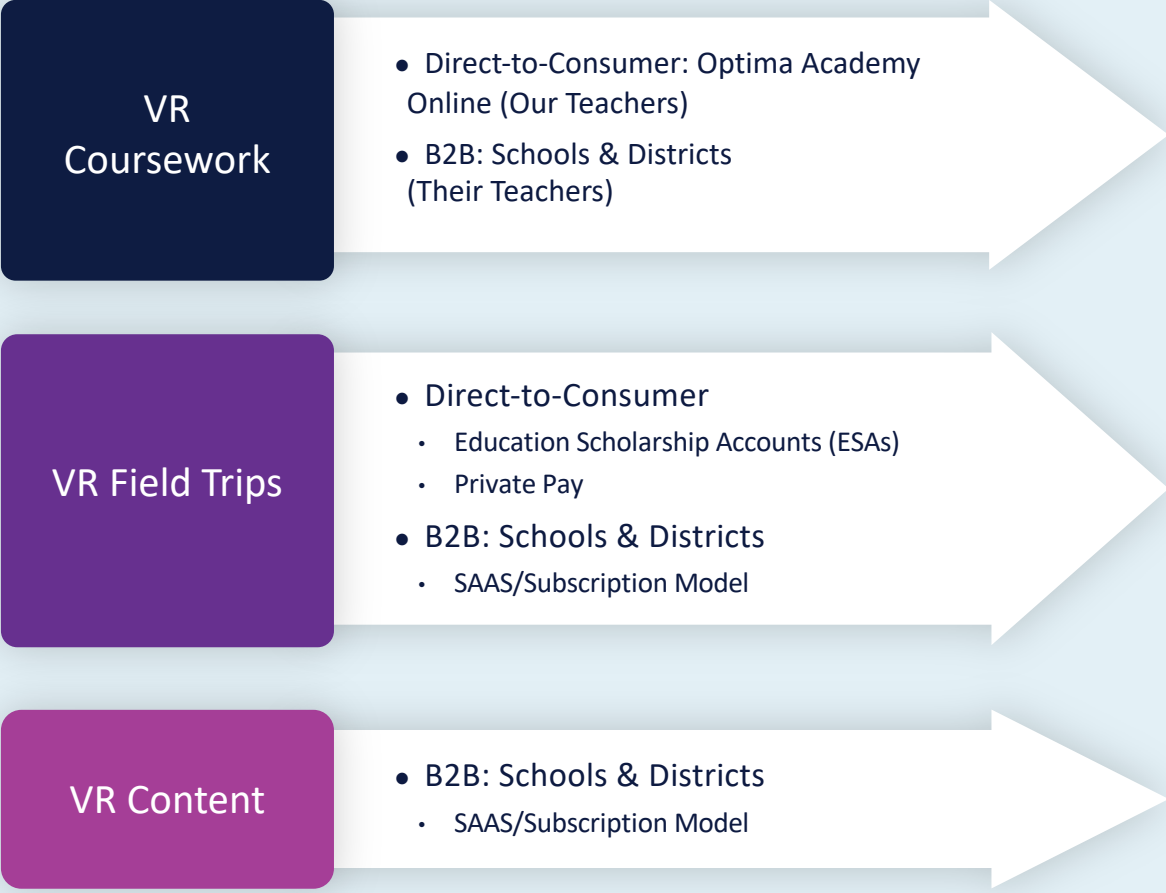


Demo time!

Products



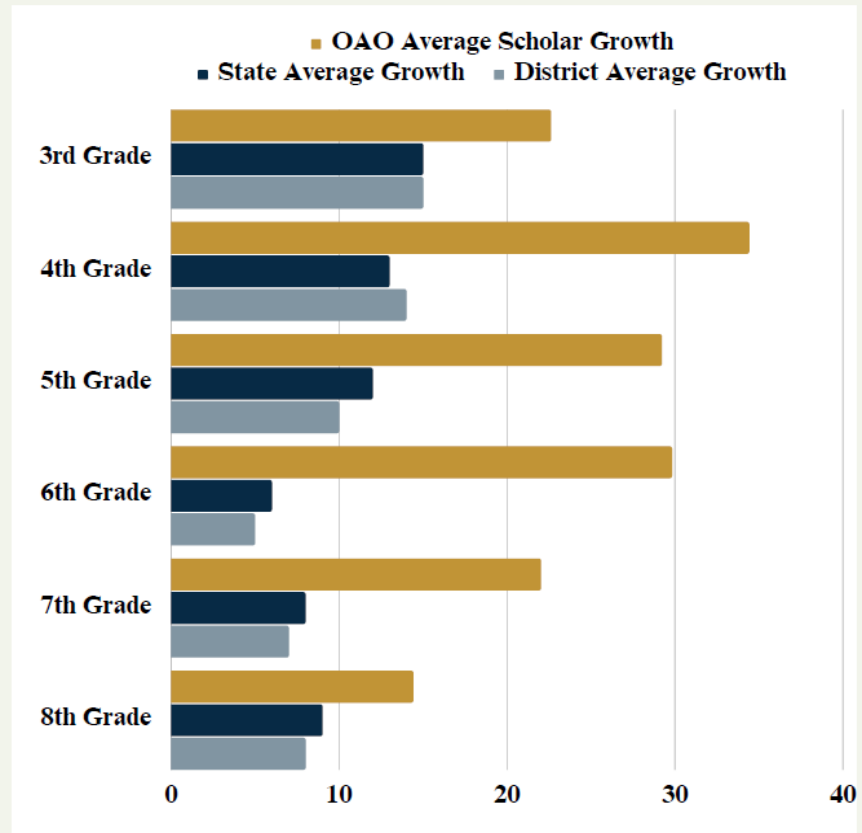
Distribution Channels



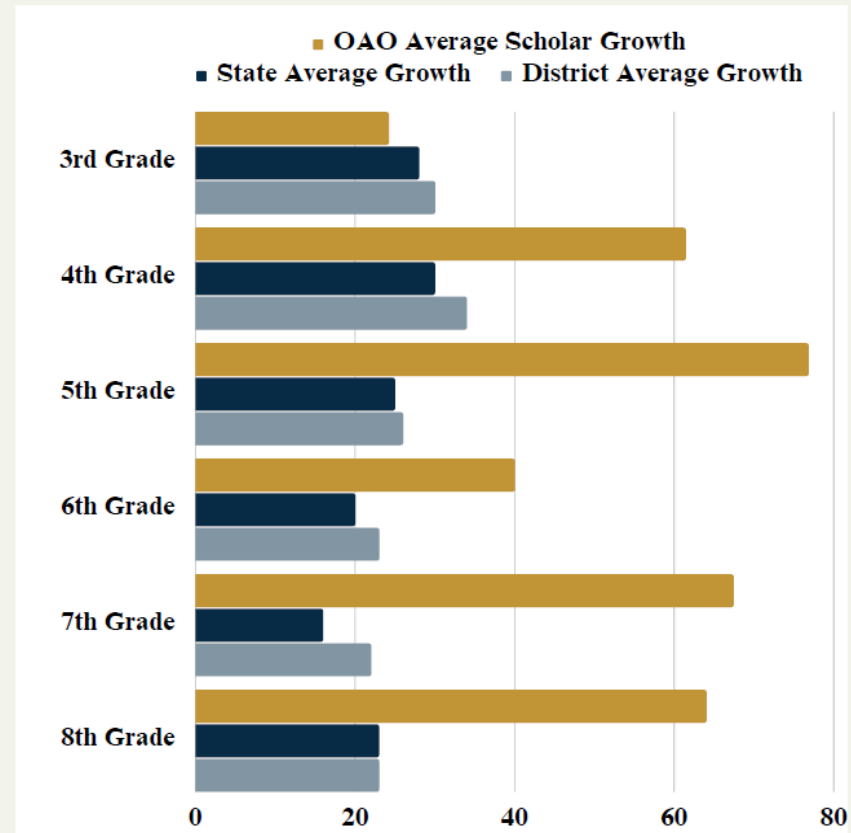
OUTSTANDING ACADEMIC GROWTH



FAST ELA

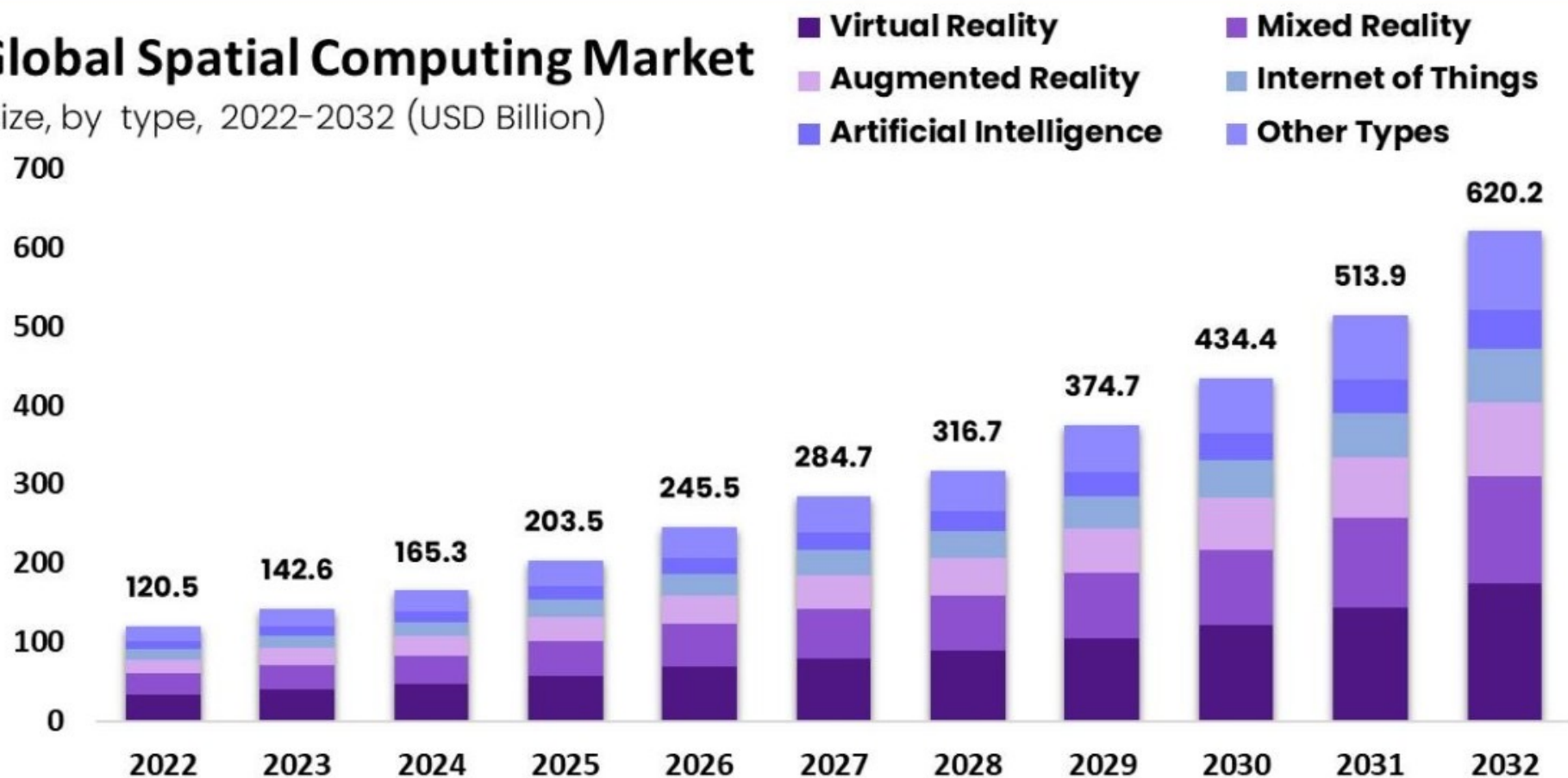


FAST MATH



Global Spatial Computing Market

Size, by type, 2022-2032 (USD Billion)



The Market will Grow
At the CAGR of:

18.3%

The forecasted market
size for 2032 in USD:

\$620.2Bn



market.us
ONE STOP SHOP FOR THE REPORTS



Is the internet moving into 3 dimensions?

Quickly gather into groups of 2 or 3 and discuss.

Consider the evolution of the internet from basic web pages to today's complex applications.

How do you think this evolution in immersive computing and AI will impact the classroom in the next decade?"

CONCLUSION

Summary



Ongoing research illustrates VR learning significantly enhances traditional learning methods



Optima is the premier VR education resource provider in the world



Optima's extensive content library, field trips, courses, and professional development provide a full spectrum of VR solutions



Optima's commitment to ongoing support and customer service helps ensure the success of your implementation





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