

EDUCATOR GUIDE

EDGE IMMERSIVE EXPERIENCE: REACH FOR THE SKY VIRTUAL REALITY

LEARNING OBJECTIVES

Students will:

- understand the geographical location of Edge by observing the view from the observation deck and operating a virtual drone
- recognize patterns in weather data over time
- understand some of the factors contributing to Edge's development through the discovery of informational hotspots

OVERVIEW

Immerse your students in the thrill of Edge at Hudson Yards in New York City through a virtual reality (VR) experience that gives students the opportunity to step into personalized learning. Through this immersive experience, students have the option to experience this adventure through a browser or a virtual reality (VR) headset, if available, or through a computer browser. The view from Edge evokes curiosity, awe, and wonder in learners of all ages. The location and architecture of Edge is ideal for observation of the city and the weather. Edge is the highest outdoor observation deck in the Western Hemisphere—its one-of-a-kind design, suspended in mid-air, gives visitors a 360-degree view that is not achieved anywhere else in New York City! Transport your students to the destination of a lifetime and guide them on an interactive learning experience like no other.

The benefits of immersive learning are that it provides all learners with an environment that is highly interactive, it gives the student agency, and it replicates real-world experiences. This helps to provide a context for learning, building experiential background, and allows for teaching specific techniques or skills to the students more quickly and with real-world meaning. The purpose of this experience is to create immersive moments that make students more receptive to learning, and to open doors to an educational experience beyond the walls of the classroom.

Through this immersive experience, students will have the opportunity to engage in an optional learning activity that uses data to show patterns in weather conditions. Students can apply what they learn to make predictions about weather patterns. Students will make observations and collect data through a live weather feed. This immersive experience is intended to give students the opportunity to feel the thrill of Edge, within the classroom setting.

Grade Range: 3–12

Duration: One class session, 45–60 minutes

NATIONAL STANDARDS

ISTE STANDARDS

1.3. Knowledge Constructor

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

1.6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

National Science Standards

3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.

RELATED COMMON CORE STATE STANDARDS

ELA/Literacy

W.3.7 Conduct short research projects that build knowledge about a topic. (3-ESS3-1)

W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. (3-ESS2-2)

RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. (HS-ESS3-5)

SL.11-12.5, Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. (HS-ESS2-4)

MATERIALS

- Computer access, one per student (computers should be fully charged)
- Headphones (optional)
- VR Goggles, one per student (optional)

REACH FOR THE SKY

BEFORE YOUR REACH FOR THE SKY VR TRIP TO EDGE

VR has many advantages, giving students the opportunity to visit places they might not get to visit in real life. VR brings real-world learning experiences to the classroom and unleashes students' learning potential in new ways. As with any learning experience, it is essential to make sure that students are safe throughout their learning journey. Establish some expectations for the immersive experience and provide a safe learning environment.

Positive outcomes of using VR in the classroom:

- adds new learning possibilities by bringing outside experiences into the classroom
- offers new ways to connect with the learning material through a multi-sensory experience
- allows students to view or experience something otherwise inaccessible
- offers personalized learning opportunities
- provides experiences and thinking in three dimensions on different sizes and scales
- develops 21st-Century skills
- prepares students for future careers and technologies

Here are some guidelines to safely let your students use VR headsets:

- If using a VR headset in the classroom, read the safety and regulatory guidelines provided by the headset's manufacturer.
- Guide your students through their first VR experiences. Help them put the headset on (if using a headset), tell them what they should be seeing, talk to them during the experience, and generally make them feel comfortable and supported.
- If a student experiences dizziness while using a VR headset, let them explore with another view mode on a laptop, Chromebook, or desktop computer browser.
- Make sure that your students do not move around with the VR headset on as they could hit others or objects. It is recommended that you have your students sit down to look around in VR.

When students participate in Edge's immersive experience, they will have the opportunity to view a live weather feed of New York City. Discuss how you can watch for weather systems and patterns and predict what it might be like to be in a building with unobstructed views of the sky allowing for observation of weather.

REACH FOR THE SKY

NAVIGATING THE IMMERSIVE EXPERIENCE

To access the immersive experience, it is recommended students navigate using a browser on a desktop, Chromebook, or laptop, or with a virtual reality headset. Internet access is required. Students will be able to toggle using arrow keys or WASD:

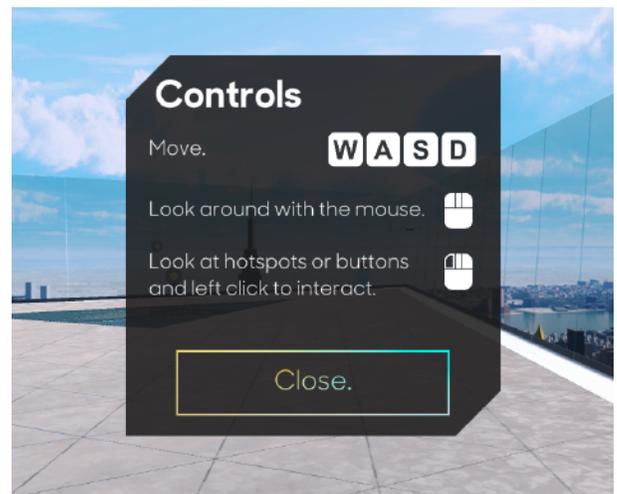
W = Up

A = Left

S = Backwards

D = Right

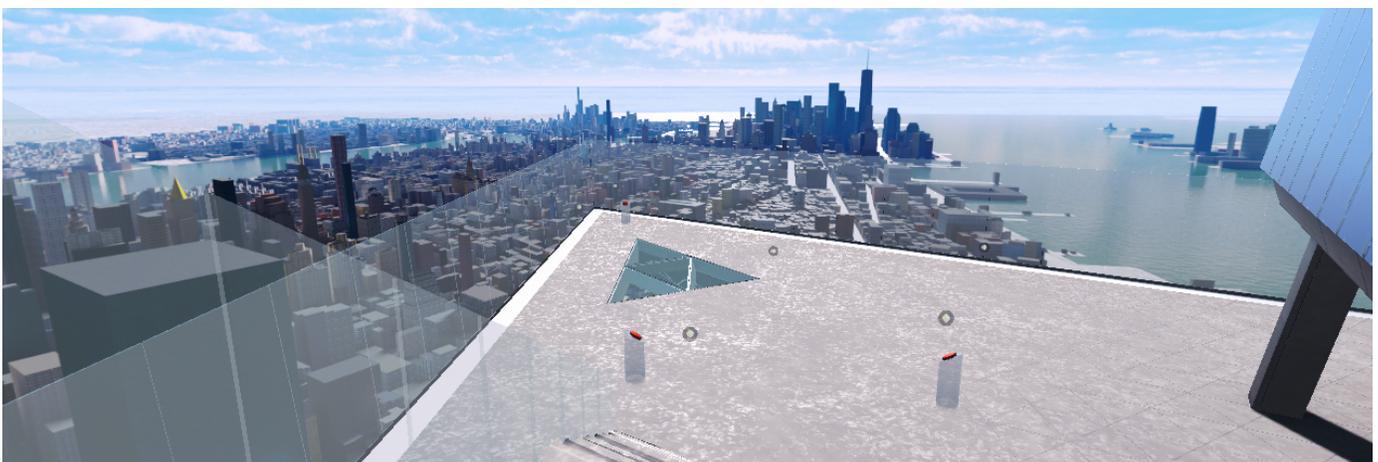
Students can also use the computer mouse to look around and view the immersive experience. Upon entering the Reach For the Sky Virtual Reality experience, students will be prompted on how to navigate.



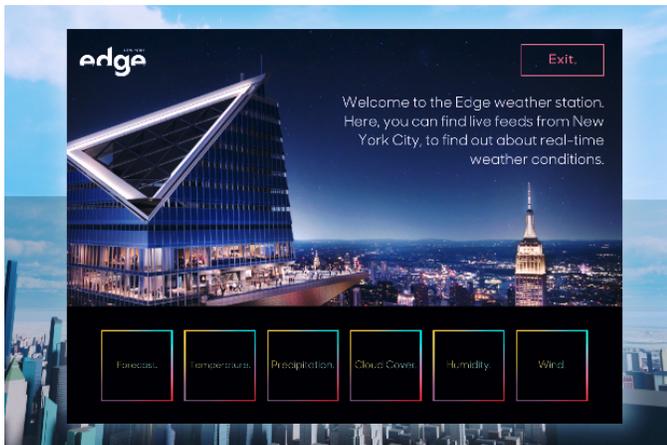
THE IMMERSIVE EXPERIENCE

Allow students time to explore the scene on their own first. Be sure to restate the safety guidelines provided above. Students should be seated for their safety during the VR experience with a VR headset to prevent dizziness or falling into other objects. After a minute or so of independent exploration, ask students to look away from their screens and bring them back together. Collect student ideas about points of note, then dive back in, making sure you draw attention to the following:

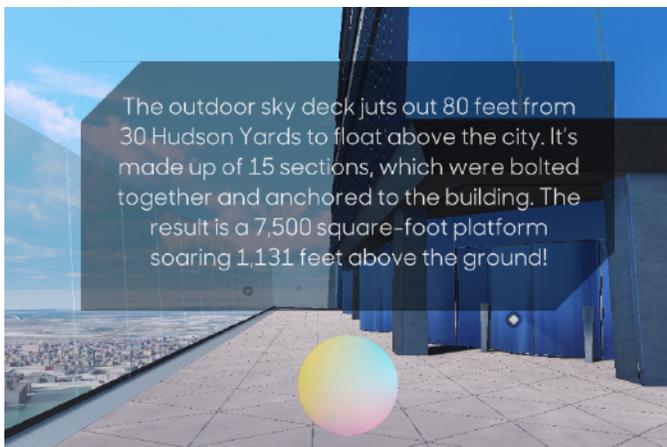
- **The Observation Deck** is where students begin their experience and will be invited to explore and discover. Visiting the outside deck is where actual guests who are at Edge begin their real-life experience. Students will be able to experience the thrilling views on Edge from the observation deck!



REACH FOR THE SKY

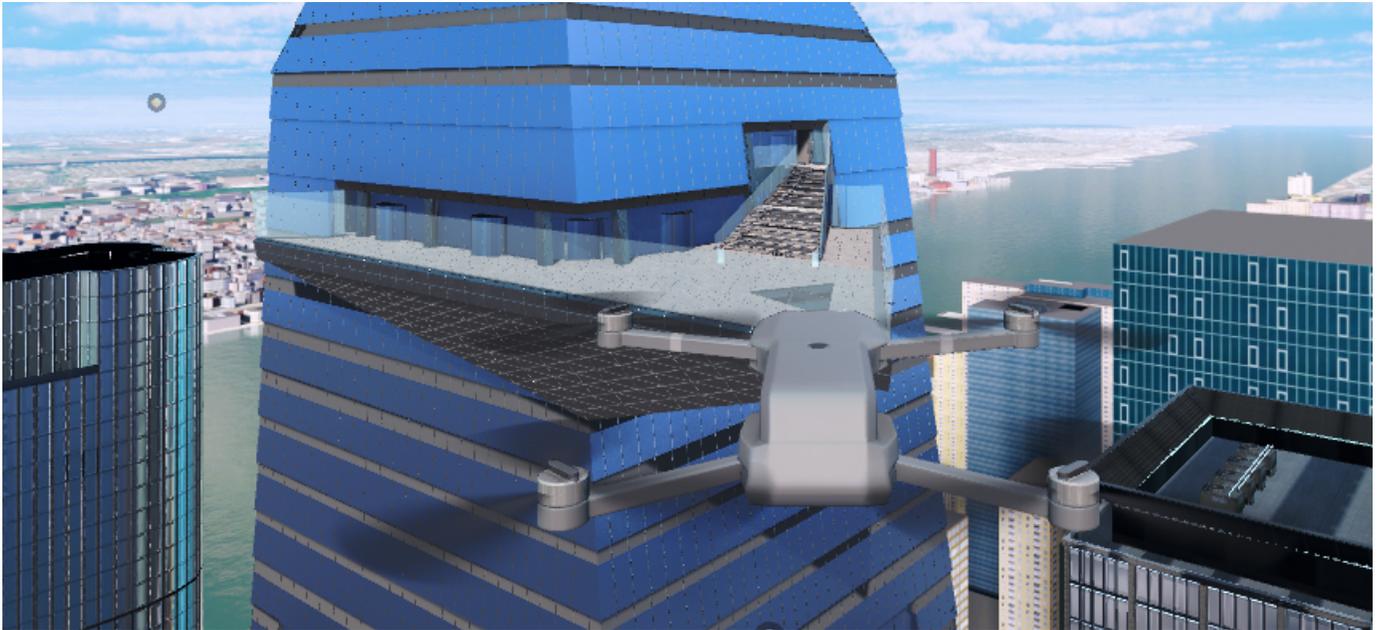


- **The Weather Station** will allow students to view, collect, and analyze a live data feed of New York City weather. While visiting the Weather Station, students will be able to analyze data and make predictions about the forecast, temperature, precipitation, cloud cover, humidity, and wind. Students will be prompted with questions and facts throughout their weather station experience.



- **Hotspots** will appear and allow students to learn fun facts about Edge and the surrounding area! Invite your students to explore freely and discover on their own.
- **Cinema Mode** will give students the opportunity to view **The Future is Now** Virtual Field Trip and discover how Edge came to be the architectural marvel that it is today!

REACH FOR THE SKY



- **The Edge Drone Experience** will allow students to explore further and take their learning to new heights! This is an experience that people in real life do not have the opportunity to take part in. Students will find the drone hovering at the corner of the observation deck and will need to launch the drone to take flight! During the drone experience, students can view three different hotspots to discover more about Edge!



TEACHER VR SAFETY SCRIPT

We are going to talk about using virtual reality in the classroom. Teacher Note: Some of these items are only vital if students are using VR headsets. Here are some things you need to know:

- Some people experience motion sickness when using VR headsets, just like when people get sick on buses or planes.
- If you begin to feel sick or queasy, take the headset off and take a break.
- If using a headset, please remain seated or in one spot when using it. The headset blocks out the classroom and your surroundings. When you are wearing the headset, you can only experience Edge at Hudson Yards.
- Remember, you have the option to use the browser version instead of the headset.

INQUIRY QUESTIONS ABOUT EDGE'S IMMERSIVE EXPERIENCE:

Throughout the immersive experience, you want students to be driven by their own curiosity and wonder. This will cause them to ask their own questions and begin their path to inquiry. After the experience, you may want to have students join small groups to compare their personal experiences. Consider using the questions below as a guide to begin a student conversation. If time permits, allow students to conduct research or ask any questions they have remaining.

- Was there anything unexpected?
- What was most exciting for you during the experience?
- What did you see? How could you share what you saw and learned with other students?
- How does weather in New York City compare to ours? What influences the temperature there vs. where we live?
- What questions do you have about Edge at Hudson Yards?

EXTEND LEARNING AFTER THE IMMERSIVE EXPERIENCE

Connect the immersive experience to classroom content by giving students the opportunity to share what they learned! Consider using the **Edge Project Choice Board** and have students create a project of their choice to show what they learned about Edge. Below is a choice board of possible options that students can choose from. Please note that the list is not all-inclusive, and students may have creative ideas they would prefer to any of the choices listed. Feel free to use the choices below or create your own menu of projects with the assistance of your students.

IMMERSIVE EXPERIENCE PROJECT CHOICE BOARD

Create a digital comic	Create an infographic	Create your own virtual tour of Edge	Compose a song, poem, or rap
Create a story	Create a PSA	Create a multimedia project	Create a digital scrapbook
Create a podcast	Interview a classmate about the experience	Make a 3D model	Create a skit or play
Create a video	Create a digital book	Make an interactive map	Create a digital collage