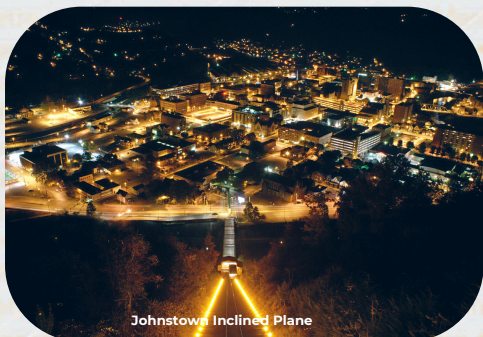




# DESTINATION: GREATER PITTSBURGH



Johnstown Inclined Plane



Big Mac Museum



Flight 93 Memorial

## We are your one-stop shop for memorable group moments in Western PA Sample itinerary: Spring Middle School STEM Squad (2 Day Trip) Focus: 6th-8th Grade

### Day 1: History & Reflection- Johnstown, Pennsylvania

#### Morning: Johnstown Inclined Plane

The Johnstown Inclined Plane is the steepest vehicular inclined plane in the world, designed to transport people and vehicles up the hillside. Originally built in 1891 after the Great Johnstown Flood of 1889, it was engineered as a flood evacuation route and a means to connect the city below with the higher, safer ground.

#### STEM Highlights:

- Engineering & Mechanics – Learn about the physics of incline railways, counterweights, and pulleys.
- Flood Prevention & Safety – Discover how this engineering marvel was created to help protect Johnstown from future floods.
- Historic Transportation – Explore the role of inclined planes in early industrial America.

Students will ride the incline to experience firsthand how this unique transportation system operates and provides a real-world example of physics and engineering in action!

#### Mid-Morning: Johnstown Flood National Memorial

The Johnstown Flood National Memorial tells the story of one of America's deadliest disasters, the Great Flood of 1889, which claimed over 2,200 lives. The flood was caused by the failure of the South Fork Dam, releasing a massive wall of water that devastated the city.

#### STEM Highlights:

- Hydrology & Dam Engineering – Investigate the science behind dam failures, water pressure, and the forces of moving water.
- Environmental Impact – Learn how the flood reshaped the landscape and how modern engineering aims to prevent similar disasters.
- Early Warning Systems – Explore how the lack of modern weather forecasting and communication contributed to the disaster.

Students will explore museum exhibits, view the remains of the dam, and watch an engaging documentary that details the event and its aftermath.

#### Lunch at the Big Mac Museum

A fun and quirky stop, the Big Mac Museum celebrates the history of one of McDonald's most famous creations, which was invented in Western Pennsylvania! Located inside a McDonald's restaurant, the museum features a giant Big Mac statue, memorabilia, and exhibits detailing the history of the sandwich.

#### Afternoon: Flight 93 National Memorial in the Laurel Highlands

The Flight 93 National Memorial honors the passengers and crew of United Flight 93, who bravely fought back against hijackers on September 11, 2001, preventing an attack on the U.S. Capitol. Located in Shanksville, PA, the memorial features a Visitor Center, Wall of Names, and the Tower of Voices, a 93-foot-tall wind chime structure symbolizing the voices of those lost.

#### STEM Highlights:

- Aerospace & Flight Engineering – Learn about the physics of flight, airplane structures, and aviation safety measures.
- Emergency Response Technology – Explore how 911 calls, black box recordings, and communication systems played a role in the event.
- Memorial Architecture & Acoustics – Discover the engineering behind the Tower of Voices, which uses wind energy to create sound.

Students will reflect on the courage and resilience of those aboard Flight 93 while learning about aviation science, technology, and emergency preparedness.

#### Check-in at Sheraton Pittsburgh Station Square

After an exciting day in Johnstown, students will head to Sheraton Pittsburgh Station Square to relax for the evening. The hotel, located along the Monongahela River, offers easy access to downtown Pittsburgh and many local attractions. Students can enjoy its spacious rooms, modern amenities, and a comfortable atmosphere before another fun-filled day!



## Day 2: Exploring Pittsburgh's STEM and Nature

### Morning: Duquesne Incline

After breakfast at the hotel head just down the street to the Duquesne Incline. Built in 1877, the incline is a working example of late 19th-century cable railway technology. The incline played a key role in the development of Pittsburgh's neighborhoods, particularly in helping workers commute from Mount Washington to the steel mills below. See history in motion from the panoramic views of Pittsburgh, perfect for discussions about geography, urban planning, and environmental science.

#### STEM Highlights:

- Mathematics Applications - Slope and Geometry: Real-world application of calculating grade and slope.
- Friction and Forces: Concepts like normal force, tension, and kinetic friction can be illustrated through the moving incline cars.
- Environmental & Urban Planning - Sustainable Transport: Discuss how inclines reduce car usage and pollution in steep urban areas.
- Geological Context: Mount Washington's rock formations and how topography influenced city design.

Students can tour the machine room at the upper station, where they can observe the massive winding drums and cables in operation—ideal for hands-on learners.

### Mid-Morning: Gateway Clipper Sightseeing Tour

Gateway Clipper sightseeing tour along Pittsburgh's scenic Three Rivers—the Allegheny, Monongahela, and Ohio Rivers. The tour offers a unique way to explore Pittsburgh's history, riverfront development, and iconic landmarks

STEM Highlights:

- River Ecology & Hydrology – Learn about the river systems, water quality, and environmental efforts to protect the rivers.
- Engineering & Architecture – Discover how bridges and riverfront infrastructure were designed and built in Pittsburgh's challenging landscape.
- Geography – Discuss the role of rivers in the region's development and how water impacts urban growth.

This boat tour provides a relaxing yet informative way to start the day, giving students a fresh perspective of Pittsburgh's engineering marvels and natural resources.

### Lunch: North Shore Tavern

After an exciting morning, enjoy lunch at North Shore Tavern, located near PNC Park, home of the Pittsburgh Pirates. The restaurant offers delicious American fare, including the famous Steak on a Stone.

### Afternoon: The National Aviary

The National Aviary, home to more than 500 birds from around the world. This indoor facility provides an up-close look at both exotic and local bird species in naturalistic habitats.

#### STEM Highlights:

- Ecology & Biodiversity – Learn about the global bird species and their habitats, as well as conservation efforts to protect endangered species.
- Animal Biology – Study avian anatomy, behavior, and the biology of flight.
- Environmental Science – Explore the ecosystem services birds provide and how environmental changes impact wildlife.

Students will have the opportunity to observe and interact with a variety of species, deepening their understanding of environmental science and biodiversity.

### Dinner: Shorty's Pins and Pints

Shorty's Pins and Pints offers a fun, social environment where students can relax and bond over games like bowling, pinball, and bocce after a day of learning. With a diverse, casual menu and group-friendly atmosphere, it's an ideal spot for unwinding and building team spirit.

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