

# SEM AND PROJECT-BASED LEARNING

Learn to Think! Think to Learn!

**M**PE students are highly engaged in hands-on, project-based learning during our daily 50-minute Enrichment Block. Students learn science and social studies concepts through our Schoolwide Enrichment Model (SEM) in TAG and general education classes daily.

The Schoolwide Enrichment Model was developed by renowned educational psychologist Dr. Joseph Renzulli (University of Connecticut). The SEM model infuses higher level thinking activi-

ties and more opportunities for creativity into every classroom. Project-Based Learning (PBL) is a highly engaging and motivating approach that draws student involvement, interest, and investment in learning. By combining the project-based approach and SEM strategies, student engagement and learning soar!

YOUR generous donations, through the MPE PTA, fund the hands-on activities students enjoy daily.



## What opportunities does the Schoolwide Enrichment Model provide for students?

All grades enjoy a visit from the SCIENCE Machine during the first week of school to kick off our Enrichment Block with amazing and entertaining science experiments! Here are some highlights of what students get to do at each grade level:

### KINDERGARTEN:

- Silly Story Ladies – monthly visits from costumed story tellers who bring literature to life
- Community Building – planning and building a whole community from found and gathered materials
- Becoming a Scientist – hands-on experiments
- Veteran's Day Celebration/Interview with real veterans
- Thanksgiving Friendship Feast
- Truck Ramp Experiments
- Designing a Roller Coaster
- 100th Day of School Celebration
- Dr. Seuss Week
- High Touch High Tech - Rock and Roll On-site Field Trip
- Nature Walk – Hike to Leita Thompson
- Party Animals – hands-on experience “nose-to-nose with exotic animals from the farthest reaches of the world”

### FIRST GRADE:

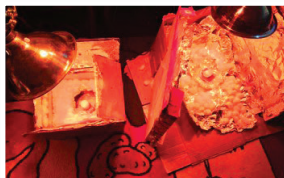
- Lewis and Clark Adventure - Students “pack their own suitcases” with items needed to survive a journey across America.
- Ruby Bridges Teaching Museum field trip
- Creating 3D maps and globes
- Rain Cloud in a Jar (precipitation)
- Flashlight experiments to explore light & shadow
- Solid, Liquid, Gas Root Beer Floats
- High Touch High Tech – on-site hands-on Weather field trip
- Literacy Gardens - Students design a garden around a book and raise plants
- Sound experiments with tuning forks and boomwhackers
- Magnet experiments
- Me and my Shadow – High Touch High Tech onsite field trip

### SECOND GRADE:

- American Indians Taste test
- American Indian Museums
- Growing Butterflies
- Hatching Chicks
- High Touch/ High Tech on-site field trip -Life Cycles
- Treasure Hunt - following map
- Market Day- create business plan, write a loan, develop logo & slogan, record commercials
- Making Oobleck
- Chain Reaction project- Rube Goldberg inspired
- Build a snowman- how does it change over the course of a day
- Creating Space Suits with found materials
- Create Sundials
- Design Thinking

### THIRD GRADE:

- Diamond Del - mining
- Lemonade War -economics simulation for the whole school
- Potlatch (trade between Native Americans and Early Explorers)
- Soil Water Retention Lab
- Pollution Solution Design Challenge - How might we reduce the amount of pollution entering the river?
- Building Solar Ovens
- Design Thinking
- Penguin Habitats (controlling heat loss using insulators)
- Thermos Design
- Creating your own colony



3rd Grade Solar Ovens

### FOURTH GRADE:

- Pioneer Day Simulation
- Build Terrariums
- Create a Relative Distance Model of the Planets from the Sun
- Pond Ecosystem Model
- Building Weather Stations with instruments
- Sherman's March to the Sea simulation
- Force and Motion Kickball
- Star Lab onsite field trip
- Creating Musical Instruments to explore sound
- Articles of Confederation Debate
- Dissecting Owl Pellets

### FIFTH GRADE:

- Sandy Beaches & Rain Away (Constructive & Destructive Forces)
- Constructing Continents
- Make an Electromagnet
- Sparky's Light Kit – creating electricity
- Stock Market Crash Simulation
- Building Hoovervilles
- Science Survivor
- Chemical Café Lab
- Mixed Reactions Lab
- Building Lava Lamps
- WWI Trench Warfare Simulation
- Ellis Island Simulation
- Communism vs Capitalism Hershey Kiss Simulation
- Civil Rights Museum
- Mustang Market Economics Simulation



4th Grade Pioneer Day

TAG Students participate in some additional corresponding activities:

#### 1<sup>st</sup> Grade –

- Planting their very own edible garden
- Learning to create their own PowerPoint presentations
- Create and perform their own shadow puppet show
- Extreme Weather Fashion Show

#### 2<sup>nd</sup> Grade –

- Space Play
- Cupcake Economics/ market day
- American Indian museum
- Butterfly journal
- Create Rube Goldbergs
- Create a blueprint of their classroom
- MOON crater experiment

#### 3<sup>rd</sup> Grade –

- Fossils Encounter Presentations
- Skype Lesson w/ Fossil Butte Park Ranger (Rocks, Soils, & Fossils)
- Solutions for Vanishing Deer in Lake Lanier (problem-solving)
- Write and perform poems and songs about insulators
- Create a Colonial Diorama
- Design a Penguin Habitat and a Solar Oven
- Triorama of your Ga region habitat
- Potato spice experiment

#### 4<sup>th</sup> Grade –

- American Revolution Idol
- Creating and Marketing inventions
- Lincoln/ Obama Encounter
- Bill of Rights Debate
- Articles of Confederation Simulation
- Space SCAMPER

#### 5<sup>th</sup> Grade –

- Edible Cells Presentation
- Skype Lesson with GA Aquarium
- Chemical Change Experiments
- Stock Market Simulation
- Research and compare/contrast on a Cold War Leader
- INVENTORS decision making