

MARBLE ROLLER COASTER

INVESTIGATION

ANALYSIS QUESTIONS:

Which height gave the marble the most energy?

Which height worked best?

What patterns did you notice?

How does the starting height affect the marble's motion?

MARBLE ROLLER COASTER INVESTIGATION

How does the starting height affect the marble's motion?

Prediction

I think the marble will move fastest when _____

because _____.

TEST RESULTS

<u>STARTING HEIGHT</u>	<u>WHAT HAPPENED?</u>
LOW	
MEDIUM	
HIGH	

What Did You Observe?

Which starting height worked best?

Did the marble move faster from a higher starting point?

What Did You Learn?

Draw or write one thing you learned about energy.

Want more energy investigations?

Explore hands-on STEM challenges, including catapults, balloon rockets, marble momentum, bouncing balls, and more in our Potential and Kinetic Energy Lab Pack.

MARBLE ROLLER COASTER

ENERGY CHALLENGE

Can you build a roller coaster that keeps a marble moving from start to finish?

CHALLENGE:

Build a marble roller coaster with:

- A starting hill
- At least one dip
- A finish line

Test your design and make improvements until the marble reaches the end of the track.

THINK LIKE AN ENGINEER

Ask yourself:

What happens when the starting hill is higher?

What happens when the starting hill is lower?

Does the marble move faster or slower?

How can you improve your design?

Draw your roller coaster below.

Materials

**Foam pipe insulation split
in half**

Painter's tape

Marble

Books, boxes, or chairs



SCIENCE INVESTIGATION PLANNER

PLAN YOUR EXPERIMENT LIKE A SUPER SCIENTIST

INVESTIGATION TITLE

QUESTIONS

MATERIALS

PREDICTIONS

SCIENCE INVESTIGATION PLANNER

PLAN YOUR EXPERIMENT LIKE A SUPER SCIENTIST

OBSERVATIONS

RESULTS

WHAT I LEARNED

NEXT STEPS **LITTLE BINS[™] LITTLE HANDS**

IF YOU LIKED THIS ACTIVITY, TRY THESE PROJECTS:



- FORCE AND MOTION LABS
- SCIENCE SNACK LABS
- SIMPLE MACHINES LABS



**READY FOR MORE
ENERGY INVESTIGATIONS?**

ENERGY LAB PACK



**EVERY PACK
EVERY PRINTABLE**
Get the ALL
ACCESS PASS!



ALL-ACCESS science & Art Pass

FOUNDATIONS OF SCIENCE: MONTH 2

Theme: Exploring Fall Science From Weather to Wildlife

Audience: Grades 4-6 Science Teachers or Classroom Teachers

Purpose: This month we'll explore how the changing seasons affect weather, plants, animals, and even the ground beneath our feet.

WEEK 1: Weather & Seasons

Theme: How does weather change, and why do we see seasons?

WEEK 2: Plants in Fall

Theme: What happens to plants as seasons change?

WEEK 3: Animals in Fall

Theme: How do animals prepare for winter?

WEEK 4: Earth & Rocks

Theme: What's under our feet? Exploring soil and rocks.

FOUNDATIONS OF ART: MONTH 2

Theme: Imagines the 7 elements of art with various art styles and process-based projects.

Audience: Grades 4-6 Art Teachers or Classroom Teachers

Purpose: Essential color concepts, texture, basic materials, basic drawing habits.

WEEK 1: Color & Space - "Pointillism Fall Trees"

Artist: Georges Seurat

WEEK 2: Shape & Value - "Castle and Sun Collage"

Artist: Paul Klee

WEEK 3: Repetition & Form - "Polka Dot Pumpkins"

Artist: Yayoi Kusama

WEEK 4: Storytelling & Texture - "Story Quills"

Artist: Faith Ringgold

- ✓ Never Expires!
- ✓ Monthly Science & Art Lessons!
- ✓ All Our Packs & Printables!



LITTLE BINS[™] LITTLE HANDS

Little Bins for Little Hands helps make hands-on learning easy for families and educators by providing simple, engaging science experiments, STEM activities, art projects, and printable resources that encourage curiosity, creativity, and learning through play.