

STEAM-TASTIC

5 DAYS OF THEMED SCHOOL-AGE
SUMMER CAMP LESSONS

**BEST
DAY
EVER!**

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STEAMTASTIC

Students will explore Science, Technology, Engineering, Art, and Math in different ways! Learning concepts will be fun and exciting as discoveries are made and games are played! While the lesson plan incorporates many different Pennsylvania Learning Standards, it focuses on the key learning areas of "Scientific Thinking and Technology". Specifically, students will learn to engage in activities that meet the PA Standard Areas of Physical Sciences, Language and Literacy, and Mathematical Thinking.

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SCHEDULE

DAY 1

ARRIVAL ACTIVITY	
READY, SET, LEARN	45 MINUTES
HANDS-ON ACTIVITY - WATERCOLOR RACE	45 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - CAN YOU RACE GRAVITY?	30 MINUTES
HANDS-ON ACTIVITY - EXPERIMENT WITH GRAVITY	45 MINUTES
BREAK/LUNCH TIME	45 MINUTES
HANDS-ON ACTIVITY - CAN CRUSHER	45 MINUTES
SOCIAL-EMOTIONAL LEARNING - CRITIQUE AND PRAISE	45 MINUTES
HANDS-ON ACTIVITY - DOCKING THE SPACE SHUTTLE	45 MINUTES
WRAP UP/GOODBYES	15 MINUTES
LATE PICK-UP	

DAY 2

ARRIVAL ACTIVITY	
READY, SET, LEARN	45 MINUTES
HANDS-ON ACTIVITY - WRITING A SECRET MESSAGE WITH INVISIBLE INK	30 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - PUZZLE PATTERNS	45 MINUTES
HANDS-ON ACTIVITY - STORY TIME	30 MINUTES
BREAK/ LUNCH TIME	45 MINUTES
HANDS-ON ACTIVITY - TURNING PENNIES INTO A BATTERY	45 MINUTES
SOCIAL-EMOTIONAL LEARNING - RECHARGE	45 MINUTES
HANDS-ON ACTIVITY - TECHNOLOGY AND CARS	45 MINUTES
WRAP UP/GOODBYES	15 MINUTES
LATE PICK-UP	

DAY 3

ARRIVAL ACTIVITY	
READY, SET, LEARN	45 MINUTES
HANDS-ON ACTIVITY - PAPER LAUNCHERS	30 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - ENGINEER STORY TIME AND GAME!	45 MINUTES
HANDS-ON ACTIVITY - PLANE FOLDS	30 MINUTES
BREAK/LUNCH TIME	45 MINUTES



HANDS-ON ACTIVITY - ENGINEER DESIGNS	45 MINUTES
SOCIAL-EMOTIONAL LEARNING - ENGINEERING CREATIVITY	45 MINUTES
HANDS-ON ACTIVITY - AIRPLANE LAUNCHERS	45 MINUTES
WRAP UP/GOODBYES	15 MINUTES
LATE PICK-UP	

DAY 4

ARRIVAL ACTIVITY	
READY SET LEARN	45 MINUTES
HANDS-ON ACTIVITY - HIEROGLYPHS	30 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - ACTING SPORTS	45 MINUTES
HANDS-ON ACTIVITY - STORY TIME	30 MINUTES
BREAK/LUNCH TIME	45 MINUTES
HANDS-ON ACTIVITY - PENDULUM PAINTING	45 MINUTES
SOCIAL-EMOTIONAL LEARNING - STRING CREATION	45 MINUTES
HANDS-ON ACTIVITY - TISSUE PAPER FAN	45 MINUTES
WRAP UP/GOODBYES	15 MINUTES
LATE PICK-UP	

DAY 5

ARRIVAL ACTIVITY	
READY SET LEARN	45 MINUTES
HANDS-ON ACTIVITY - DESIGN A VACATION	30 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - BEAN BAG GAME	45 MINUTES
HANDS-ON ACTIVITY - STORY	30 MINUTES
BREAK/LUNCH TIME	15 MINUTES
HANDS-ON ACTIVITY - MATH BASKETS	45 MINUTES
SOCIAL-EMOTIONAL LEARNING - THE TRUTH SUMMED UP	45 MINUTES
HANDS-ON ACTIVITY - STRAWS	45 MINUTES
WRAP UP/GOODBYES	15 MINUTES
LATE PICK-UP	

MATERIALS LIST

- Yarn
- Salt
- Paper
- Pencils
- Yarn
- Trays
- Bowl
- Tongs
- Rulers
- Clay
- Buttons
- Erasers
- Bucket
- Scissors
- Crayons
- Dish soap
- Yard sticks
- Cardstock (white)
- Craft sticks
- Tarp (inside activity)
- Latex-free gloves
- Clear empty plastic bottles
- Balloons inflated
- Plastic cups (clear)
- Empty soda can
- Oven mitts
- Microwave safe cup
- Baking soda
- Paintbrushes
- Grape juice
- Pre-determined map
- *Basher Science: Technology: A Byte-sized World!* by Simon Basher and Dan Green
- Pennies
- Nickels
- White vinegar
- Paper towels
- Coffee filters
- Multi-meter (voltage tester as available for adult use only)
- Empty cardboard rolls
- Dial rods (cut to 5 inches)
- Construction paper strips (1 inch)
- Tape or glue sticks
- Construction paper (white, multi-color)
- Copier paper
- Dial rods (4 inches tall)
- Rubber bands
- Construction paper
- Colored pencils
- Paper airplane launchers
- Prizes and prize box
- Paper clips
- Sticky note
- Cards with sports on them (multiple sets)
- Duct tape
- Tissue paper
- Green wire (12 inches)
- Stapler with staples
- Fast food menus (with prices)
- Index cards
- Scrap paper
- Calculators
- Bean bags (in 2 colors)
- Flash cards (addition, multiplication, and division)
- Laundry baskets or round containers or hula hoops
- Thick-tip marker (black)
- Straws (multiple colors)
- Optional: plastic bags

SHOPPING LIST

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DAY 1 – SCIENCE



ACTIVITY/CONCENTRATION

EARLY DROP OFF – ARRIVAL ACTIVITY

During this free time, students will select and use toys or games associated with the daily theme.



DURATION/SCHEDULE

180 minutes – 6 to 9 a.m.



ACTIVITY/CONCENTRATION

READY, SET, LEARN

Discussion: Ask; “Does anybody know what STEAM is?” Start the week off by giving an overview of activities we will be doing throughout the week. Tell students, “Today, we will be focusing on science!” Ask the students; “Who can remind you what S stands for in STEAM? There are so many areas of science to explore such as Earth and Space sciences, Life sciences, or Physical sciences. We are going to learn about each of these sciences.”

Fun Facts:

- Earth and Space science is self-explanatory right? Are you sure? What types of subjects do you think would fall under the study of Earth and Space sciences? Think about the subject of gravity. You need to know what gravity is when you are building a rocket to get to outer space, right? Gravity is the earth’s force that is being created by the mass or weight of the earth, and the spin of the earth. When you travel farther away from the earth, gravity has less impact than when you are standing on the earth’s surface.

Discuss: “How many of you have been swimming during the summer? Do you feel lighter in water than you do standing outside of the pool? Different matter/materials on earth change and alter the feeling of gravity.

How many of you have been on a roller coaster? Did you ever have that moment where you felt lifted from the seat and weightless for a brief second? For a moment, you defied gravity and went zero-g meaning you were not being affected by gravity.”

What about Life sciences? What do you think you learn in school that would fall under Life sciences? We can look at geology, the study of rocks or biology (the study of living organisms). Zoology is the scientific study of animals.

- Finally, we have Physical sciences. What subjects do you think would fall under this category? What about Chemistry? How many of you have learned about Chemistry in school? Chemistry is the study of different elements and how they interact with each other, which we will get to play with later today!

Some examples of chemistry are items most people use daily. Washing our hands is a chemical reaction between soap and the germs the soap kills on your hands. Did you know that the lead in your pencil isn’t lead? It is a type of carbon, the same type of carbon used to create diamonds when exposed to pressure and heat. So, your pencil under the right conditions could be turned into a diamond!



DURATION/SCHEDULE

30 minutes – 9 to 9:30 a.m.

