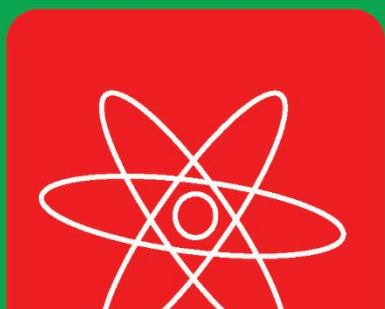
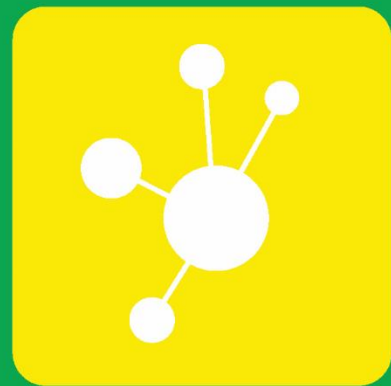
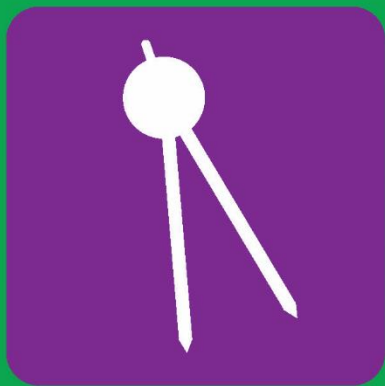


STEMTASTIC

5 DAYS OF THEMED SCHOOL-AGE
SUMMER CAMP LESSONS

**BEST
DAY
EVER!**



Find more at:
BESTDAYEVER.FUN

STEMTASTIC

Children will love experimenting at Camp STEMtastic! They will be so busy building and testing the experiments, they won't even realize that they are learning some amazing facts about Math and Science! This unit has everything from where our traits originate to exciting science reactions, the kids will have loads of fun learning along the way. While the lesson plan incorporates many different Pennsylvania Learning Standards, it focuses on the key learning area of "Approaches to Learning through Play." Specifically, children will learn to engage in learning activities that meet the PA Standard Areas of "Constructing, Organizing, and Applying Knowledge."

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SCHEDULE

DAY 1

ARRIVAL ACTIVITY	20 MINUTES
READY, SET, LEARN	15 MINUTES
HANDS-ON ACTIVITY - DIY ROBOT HAND	20 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - STRADDLEBALL	30 MINUTES
HANDS-ON ACTIVITY - NEWSPAPER FORTS	15 MINUTES
BREAK/LUNCH TIME	15 MINUTES
HANDS-ON ACTIVITY - MAKE A MARBLE RUN	30 MINUTES
SOCIAL-EMOTIONAL LEARNING - GROUP AGREEMENTS	30 MINUTES
HANDS-ON ACTIVITY - BIG WHEELS	30 MINUTES
WRAP UP/GOODBYES	10 MINUTES
LATE PICK-UP	15 MINUTES

DAY 2

ARRIVAL ACTIVITY	20 MINUTES
READY, SET, LEARN	15 MINUTES
HANDS-ON ACTIVITY - WHAT TRAITS DO YOU HAVE?	20 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - SPY TAG	30 MINUTES
HANDS-ON ACTIVITY - MAKE A DNA MODEL	15 MINUTES
BREAK/LUNCH TIME	15 MINUTES
HANDS-ON ACTIVITY - STRAWBERRY DNA EXTRACTION	30 MINUTES
SOCIAL-EMOTIONAL LEARNING - ONE AND ONLY ME!	30 MINUTES
HANDS-ON ACTIVITY - TRAITS BINGO	30 MINUTES
WRAP UP/GOODBYES	10 MINUTES
LATE PICK-UP	15 MINUTES

DAY 3

ARRIVAL ACTIVITY	20 MINUTES
READY, SET, LEARN	15 MINUTES
HANDS-ON ACTIVITY - FALLING UP	20 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - KEEPER OF THE CASTLE	30 MINUTES
HANDS-ON ACTIVITY - MAKE LIGHTNING WITH AN ELECTROPHORUS	15 MINUTES

BREAK/LUNCH TIME	15 MINUTES
HANDS-ON ACTIVITY - ELECTROLYSIS	30 MINUTES
SOCIAL-EMOTIONAL LEARNING - THIS MAY SHOCK YOU	30 MINUTES
HANDS-ON ACTIVITY - IRON FOR BREAKFAST?	30 MINUTES
WRAP UP/GOODBYES	10 MINUTES
LATE PICK-UP	15 MINUTES

DAY 4

ARRIVAL ACTIVITY	20 MINUTES
READY, SET, LEARN	15 MINUTES
HANDS-ON ACTIVITY - CREATE A RAINBOW	20 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - ICE CREAM CONE RELAY	30 MINUTES
HANDS-ON ACTIVITY - BOTTLE ROCKET	15 MINUTES
BREAK/LUNCH TIME	15 MINUTES
HANDS-ON ACTIVITY - ICE CREAM IN A BAG	30 MINUTES
SOCIAL-EMOTIONAL LEARNING - REACTIONS TO STRESS	30 MINUTES
HANDS-ON ACTIVITY - GEOMETRIC BUBBLE SHAPES	30 MINUTES
WRAP UP/GOODBYES	10 MINUTES
LATE PICK-UP	15 MINUTES

DAY 5

ARRIVAL ACTIVITY	20 MINUTES
READY, SET, LEARN	15 MINUTES
HANDS-ON ACTIVITY - TEST YOUR SUNSCREEN	20 MINUTES
BREAK/SNACK TIME	15 MINUTES
LET'S GET MOVING - BEACHBALL GAMES	30 MINUTES
HANDS-ON ACTIVITY - MAKE A UV DETECTOR	15 MINUTES
BREAK/LUNCH TIME	15 MINUTES
HANDS-ON ACTIVITY - SOLAR UPDRAFT TOWER	30 MINUTES
SOCIAL-EMOTIONAL LEARNING - AFTER EVERY STORM COMES A RAINBOW	30 MINUTES
HANDS-ON ACTIVITY - CLOUD DOUGH	30 MINUTES
WRAP UP/GOODBYES	10 MINUTES
LATE PICK-UP	15 MINUTES

MATERIALS LIST

- Tape
- Scissors
- Pencils
- Stapler
- Markers
- Paper
- Paper clip
- Paper plates
- Cardstock
- Colored pencils
- Masking tape
- Standard drinking straws (paper or plastic)
- Jumbo-sized straws (smoothie straws—paper or plastic)
- Yarn or string (5 different colors)
- Playground ball
- Newspaper
- Empty cardboard paper towel and toilet paper rolls
- Empty tissue boxes
- Painter's tape
- Pompoms
- Posterboard or smartboard
- Licorice sticks (2 each)
- Colored marshmallows (9 each of green, pink, yellow, and orange)
- Toothpicks (12 each)
- Paperclips (5 each)
- Ripe strawberries: If you use frozen, make sure they are completely thawed.
- Sealable plastic bags Gallon, Quart
- Dish soap
- Salt
- Rubbing alcohol (instructor's use only)
- Coffee filters
- Clear cups or test tubes (completely clear is best)
- Tweezers
- Syringe, measuring cups, or measuring spoons*
- Paper towels
- Markers, washable
- Balloons
- Thin toilet paper
- Hula hoops
- Treasures (pins, balls, cones, scarves, etc.)
- Foam plate or to-go container
- Aluminum pie tin
- Pencil with a new eraser
- Thumbtack
- Wool sweater, wool sock
- Plastic fork
- Glass
- Battery 9V
- Pencil sharpener
- Index cards
- High-iron breakfast cereal
- Strong magnets
- Cup measure
- 2 small cups
- Play cones or bins
- An empty, rinsed 2-liter soda bottle*
- Baking soda
- Vinegar (large bottle)
- A cork (or substitute something like a pool noodle piece, a cork will give more power to your launch!)
- Half and half (cream and milk)
- Vanilla
- Sugar
- ice
- Rock salt (sometimes sold as ice cream salt)
- Toppings (sprinkles, chocolate sauce, fruit)
- Bowls
- Spoons
- Posterboard
- Light corn syrup
- Cornstarch
- Dish soap
- Chenille stems
- Straws
- Shallow pan
- UV color changing beads

- Sunscreens with 3 different SPF
- Cookie sheet or tray
- Beach balls (at least 3)
- Full or 1/2 pool noodles
- Baskets for goals (2)
- Safety pins or key chain rings (optional)

- Aluminum cans (large, empty, clean with tops and bottoms removed)
- Hair conditioner- any kind
- Craft sticks or spatula
- Gel food colors (optional)
- Beads (optional)
- Glue gun (optional)

SHOPPING LIST

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DAY 1 – SIMPLE MACHINES



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 – SIMPLE MACHINES

Use the following information to guide a group discussion about simple machines. Ask questions to assess the campers' prior knowledge and encourage them to share their knowledge.

WHAT ARE SIMPLE MACHINES?

Simple machines make work easier; they are machines that require very little effort. They have few or no moving parts and they work by changing the direction of a force or the amount of force needed to do something.

TYPES OF SIMPLE MACHINES

The six simple machines are the wedge, screw, lever, pulley, inclined plane, and wheel and axle.

- **Pulley** - A pulley can move things from a low area to a higher one.
 - A pulley has a wheel that allows you to change the direction of a force. As you pull down on the rope, the wheel turns and whatever is attached to the other end goes up.
- **Lever** - A lever helps move heavy objects.
 - When you push down on one side of a lever, the other side goes up. Levers can also be used to lift heavy objects such as rocks or furniture. A seesaw is an example of a lever.
- **Wedge** - A wedge is a simple machine used to split material.
 - By placing the thin end of the wedge onto a log, you can hit it with a hammer. The wedge changes the direction of the force, and it pushes the log apart.
- **Inclined plane** - An inclined plane can help you to move heavy objects.
 - It is easier to move heavy things up a ramp than it is to lift them straight up. A ramp is a common example of an inclined plane. Walking up a ramp takes less effort than climbing stairs.
- **Screw** - A screw is a type of inclined plane wrapped around a center rod. An example of a screw is a spiral staircase or screws that we use to fasten things together.
- **Wheel and axle** - A simple machine used to move objects across a distance using a round part (wheel) and a long part (axle). Cars have wheels and axles, what else has wheels and axles?



DURATION/SCHEDULE

45 minutes – 9 to 9:45 a.m.



MATERIALS

- None