

Weekly Theme: The Science of Flight

Marketing Description: A large variety of wildlife use their wings to take to the skies...but, how do they do it?! Learn how birds, bats, and bugs use their special skills and senses to navigate the unique challenges of flight. Engineer your own flying toys and rocket into space. Don't let gravity drag you down! Take off with us for a soaring week of high-flying fun!

Weekly Offerings:

Big Idea	Activity Name	Activity Description	Length of Activity	Outside ?	Caregiver Needed?
Birds and the Forces of Flight	Science Journal	Campers will make a science journal to record their notes throughout the week.	15 minutes	N	N
Birds and the Forces of Flight	Bird Watching Hike	Campers will go on a hike to look for different birds and observe how they fly.	30 minutes	Y	Y
Birds and the Forces of Flight	Building Anemometers	Campers will build a simple anemometer to measure wind speed.	20 minutes	Y	N
Birds and the Forces of Flight	Seed Helicopters	Campers will build seed helicopters to demonstrate how gravity pulls everything towards the Earth's surface.	20 minutes	Y	N
Birds and the Forces of Flight	Compass Ball	Campers will practice knowing their cardinal and ordinal directions by playing this game.	20 minutes	Y	Y
Engineering	Balloon Rockets	Campers will model air pressure as a source of thrust by making a balloon rocket.	30 minutes	N	Y/N
Engineering	Parachutes	Campers will build a parachute to learn about the force of drag.	20 minutes	N	N
Engineering	Build a Boomerang	Using a cereal box, campers will build a boomerang to practice throwing.	30 minutes	N	N
Engineering	Animal Engineer Hike	Campers will go for a hike to look for examples of animal engineers.	30 minutes	Y	Y
Bats	Bat Wing Skeleton	Campers will make a model of a bat wing skeletal structure using craft supplies.	20 minutes	N	N
Bats	Bat Moth	Campers will learn how bats use echolocation to find their food.	20 minutes	Y	Y

Bats	Make a Mammal	Using collage pictures, drawing, or other crafting materials, campers will create a field guide entry on a fake mammal that could fly.	20 minutes	N	N
Bats	DIY Bat House	Campers will learn the important features of a bat habitat and home.	30 minutes	N	N
Outer Space	Alka-Seltzer Rockets	Campers will experiment making a rocket launch using a chemical reaction.	20 minutes	Y	Y
Outer Space	Artemis Mission Project	Campers will brainstorm ideas for the first words astronauts will say when landing on the moon for the first time in over 50 years for the Artemis Mission in 2024.	20 minutes	N	N
Outer Space	Train Like an Astronaut Relay	Campers will model exercises that astronauts might use to train to go into space.	20 minutes	Y	N
Outer Space	Galactic Goo	Campers will make slime that sparkles like our galaxy for a fun craft.	20 minutes	N	Y
Bugs	Flying Insect Hike	Campers will look for common flying insects while on a hike outdoors.	30 minutes	Y	Y
Bugs	Bug Habitat	Campers will make a habitat suitable for an insect.	30 minutes	Y	N
Bugs	Make a Map	Campers will make observations of a space and make a map of it, similar to how birds, insects, and other animals make mental maps of areas to navigate.	20 minutes	Y/N	N
Bugs	Migration Activity	Campers will learn about the challenges of migration and create something to help birds or insects along their journey.	20 minutes	Y/N	Y

Material List:

- **From Weekly Kit**

- String
- 5 Paperclips
- Helicopter template (printed)
- Bat wing template (printed)
- Flying Insect Hike Guide (printed)
- Animal Engineer Hike Guide (printed)
- 3 Balloons
- 8 regular straws
- (6) 3-oz paper cup ("Dixie" cup)
- 2 sealed sandwich bags
- 1 Large coffee filter or 3-4 small filters
- 10 craft sticks
- Paper (construction/white, include 2 sheets of black/brown)
- 12 Pipe cleaners
- 2 Film cannisters with lids
- 2 packets Alka-Seltzer tablets
- 2 Push pins
- 1 Hole punch
- Glitter
- 2 tsp Borax
- Zinnia flower seeds
- Small terracotta pot
- Soil
- Liquid Glue

- **Needed but not provided**

- Bucket or large hoop (hula hoop)
- 2 bowls (disposable preferred)
- 1 piece (10x10-ish) Wax Paper
- Rubber spatula (optional, but helpful!)
- Spoon
- Pencil with eraser
- Small ball, beanbag, or tossing item.
- Tennis ball or other bouncy ball
- Old cereal or cracker box
- Collection of small weighted items (washers, paperclips, dimes)
- Stapler with staples
- 2 Shakers or small musical instruments/noise makers
- Blindfold
- Various magazines
- Old shoe box or small cardboard box
- Measuring cups/spoons (1 cup, ½ cup, 1 tsp)
- Jar or container
- Towel
- Red and blue food coloring
- Sunglasses (optional)
- Pinecone (optional)
- Peanut (or non-nut) butter (optional)
- Birdseeds (optional)

- **From Art Starter Kit**

- Scissors
- Tape
- Crayons/colored pencils
- Clear Liquid Glue
- Glue stick
- Protractor
- Ruler

- **From Science Starter Kit**
 - Binoculars (optional, but helpful!)
 - Ruler
 - Stop watch/timer
 - Compass (optional, but helpful!)
 - Safety Goggles

Notes:

- All hikes were listed with caregiver assistance, though it is up to the caregiver if the camper takes a true “hike” or just explores their own nearby outdoor space.
- Balloon Rockets, Alka-Seltzer Rockets, Galactic Goo, and Migration activity may need supervision from a caregiver or other adult.
- Bat Moth and CompassBall are games best played with another person, though this person does not need to be another adult.
- Given the theme of this week of camp, a number of the activities include creating flying objects. We’ll, of course, encourage campers to be safe when throwing their creations, but a camper’s definition of safe may be different than yours.