

PLAY WITH PARACHUTES

Grades K-3: Plan 5

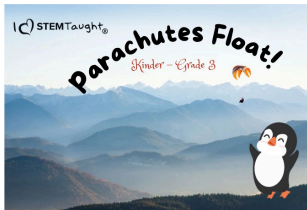
LEARN ABOUT PARACHUTES

WELCOME

(5 min)

STORY TIME

(10-15 min)



Welcome your students to camp. Be friendly.

Read and discuss:

Read the STEMTot story 'Parachutes Float'. Go over key vocabulary words and talk to students about the pictures.



STEM CRAFT

(30 - 40 min)

Materials:

- Yarn
- Glue
- Paper
- Coloring utensils
(Crayons, Markers, or paint)



MAKE A COLORFUL PARACHUTE PATTERN

Prepare beforehand: Gather yarn scraps or cut yarn of different colors, around 6-12 inches in length. Mix liquid glue with water and set up stations with the glue mixture in paper plates to dip in. Say: **Many parachutes have bright, beautiful patterns. Today, you can make your own parachute pattern using yarn glue, then when it dries you can color it!**

What you'll do:

1. Each student gets a sheet of paper.
2. Students cut some pieces of yarn.
3. Students apply glue lines to their paper to make a parachute design.
4. Students apply yarn to their glue lines.
5. Let the art pieces dry. Have students paint their yarn creation after the glue dries later in the day.



STEM MEDIA

(10-15 min)



STEM TIME

(60 min)

Materials:

- Parachutes
- Paper (to make targets or islands for parachutes to land on)
- Coloring utensils
- String or tape (for experimenting with tying additional objects to the parachute.)



WATCH A PARACHUTE SHOW

Watch these videos of parachute air shows. Talk to students about the control the parachutists have, and the colors of the parachutes.

Golden Knights Parachute Team California Capital Airshow 2016:

<https://www.youtube.com/watch?v=TdpQ58XEXe0>

Ask: **What did you notice** about parachute flight from watching the video?

Ask: **What do you wonder** about parachutes?

Example: **How does the smoke trail come out? How do they change direction so fast? How do they steer? How can they be so brave to deploy the secondary chute? Isn't that scary?**

PARACHUTE LANDING TARGET

Say: **"Today, you get to play with a parachute to see how close you can land to a target just like the parachute team in the video! We can set up islands or targets for your parachutes to land on. If you land close enough that you can touch the target and the parachute, that's amazing! If any part of your parachute touches the target after landing, that's even more amazing!"**

What you'll do:

1. First, students construct targets or islands for their parachutes to land on. Students can use paper and coloring utensils make their landing targets or other materials to mark the targets.
2. Take students outside to throw their parachutes to try to hit the landing targets. Guide your students while experimenting:
 - **Throwing Distance** (15 min): Start throwing close to the target as a class, then move farther away. Ask: **How far can you throw from and still land near the target?**
 - **Throwing Height** (15 Min): Start with low throws as a class, then throw higher and higher. Ask: **How high can you throw it and still hit the target?**
 - **Air Show** (20 Min): Gather all your students into a large circle and ask your students to arrange all their targets in the middle of the circle. Count down so students can throw all their parachutes at the same time.

Extension: Allow students to tie additional objects such as toys, erasers, buttons, or pebbles to their parachutes to make them heavier to see how weight effects the parachutes flight.



STEM MEDIA + DISCUSSION

(10-15 min)



PARACHUTE PIC

(30 min)

Materials:

- Chalk or dry erase markers

MINI-FLYER PLAY!

(40 min)

Materials:

- Mini-Flier
- String
- Paperclips
- Small candy



WATCH PEPPA PIG

Students watch this fun cartoon about a parachute.

Peppa Pig Full Episodes | Parachute Jump | Kids Video

<https://www.youtube.com/watch?v=IxB5RTIkHpQ>

Ask: How did Mummy Pig save Daddy Pig? Example: **She had a parachute and caught him.** Ask: How do parachutes help people jumping out of airplanes? Example: **They can float down to the ground. Without a parachute, they would fall too fast!** Ask: What did Mummy Pig have to do to the parachute? Example: **She had to open it and then it slowed her fall.**

Say: "Let's draw a giant parachute on the board and take your picture attached to the strings. Pose any way you like! Grab some chalk or a dry erase marker and help create our backdrop!"



PLAY DRONE DELIVERY

Prepare beforehand: Tie a piece of string 6-12 inches in length to the bottom of the mini flier. Tie a paper clip to the end of the string. You can now paper clip small candies to the mini-flier just like you would put a paper clip on a piece of paper.

Take the mini flier outside to a clear grassy area and have students take turns throwing the drone to deliver small candies to other students.

Say: **Parachutes and drones can be used to air drop, or deliver, food and supplies to hard to reach areas. Today you can use the mini-flier to deliver candy.**

What you'll do:

1. Tie a piece of string 6-12 inches to the mini-flier and tie the other end to a paperclip
2. Attach the paperclip to a piece of candy.
3. Have all the students spread out in a grassy area getting ready to catch the mini flier.
4. A student releases the mini flier carrying the candy into the air. They throw it as high as they can so it can parachute down to deliver the candy.



STEM CRAFT

(30 - 40 min)

Materials:

- Coloring utensils
(Crayons, Markers, or paint)

GAME

(15 min)

DRONE DELIVERY(CONTINUED)

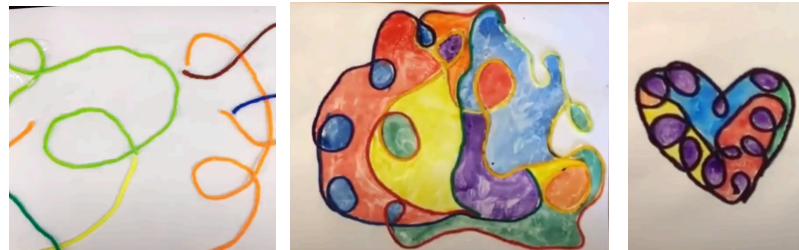
5. When a student catches the candy, they bring the mini flier back to you to attach another piece of candy. Then that student throws the mini-flier and sits in the grass.
6. Make sure every student has a chance to catch the mini-flier and get a piece of candy. Students who have had a turn should be sitting or playing to the side of the catch area.

COLOR YOUR PARACHUTE PATTERN

Now that your glue and yarn designs are dry, you can color your parachute design.

What you'll do:

1. Each student colors or paints inside their glue lines to make their colorful parachute design.



PLAY 'WOULD YOU RATHER' RUNNING EDITION

Say: **Exploring all these parachutes is fun, but it takes a lot of thinking and planning to jump out of the sky! Now, let's play a fun game of 'Would You Rather'?**

The STEM Coach reads out the prompt, pointing to either side of the room or field for each choice. Students run to the side they choose.

Here are some fun questions to get started!

Ask: **Would you rather..**

- ... parachute from a plane or slide down a rainbow?
- ... have a parachute that's rainbow-colored or glow-in-the-dark?
- ... drift down super slow or spin like a helicopter?
- ... invent a parachute that sings or one that sparkles?
- ... land in a giant cake or a bubble bath?
- ... float with your best friend or with a superhero?
- ... land on the moon or in the ocean?
- ... float down during the day with the sun or at night with the stars?



STEM STORY



STEM CRAFT

STEM MEDIA + GAME

LANDING TARGET



WOULD YOU RATHER...

MINI-FLYER PLAY!



METRIC

Language Development Foundation 3.3 Understanding Stories

Use pictures or other supports (such as objects or gestures) to understand major characters and details in an English-language story.

Foundation 3.4 Understanding Informational Text

Demonstrate understanding of a few major details about an English-language informational text, including details that are conveyed only through the words of the text, after experiencing it for the first time

Visual Arts Foundation 1.3 Drawing or Painting Lines and Curves

Use straight and curved marks and lines, circles, and other shapes with increased precision and detail to create drawings or paintings of people, animals, or other objects that are mostly recognizable.

Social Science Foundation 1.1 Making Observations and Asking Questions

Notice, make observations, and ask adults and peers questions about the social world (people, places, institutions).

Science Foundation 1.6 Planning and Carrying Out Investigations

Carry out more complex experiments or investigations, on their own or in collaboration with peers and adults, with greater persistence. Use observations and results of prior explorations to generate new questions and test their hypotheses.

Foundation 1.10 Formulating and Communicating Explanations and Solutions

Formulate and communicate simple explanations and solutions during play and collaborative investigations.

Physical Development Foundation 1.4 Running

Run with a short stride length and feet off the ground for a short period of time. May have difficulty stopping on time. Show inconsistent swinging of the opposite arm and leg together while running.

Science Foundation 5.1 Engineering Design Process

Engage collaboratively with peers and adults in engineering design by identifying problems in play and everyday activities, planning and creating more detailed solutions to the problems they identify, and testing and refining their solutions with less adult support and over longer periods of time.

