

wings for Girl Scout BROWNIES

**It's up, up and
away! Brownies
explore the
wonders of
flight, fun, and
teamwork at
day camp.**



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To earn their Girl Scout Day Camp Wings, girls do all four of the following:

- 1** Send things flying through the air while they practice the skills they'll need to plan, carry out, and reflect on their day camp adventures (see Wings #1).
- 2** Tap into their artistic side to create a "pilots-eye" view of nature (see Wings #2).
- 3** Put their teamwork skills to the test as they learn what pilots and air traffic controllers do (see Wings #3).
- 4** Explore where flight—and their creative sides—might take them! Girls wrap up their wings by imagining different endings to one astronaut's story (See Wings #4).

Check out the last page for Wings awards you can print out!



Brownie Wings #1

Ring Gliders

Time: 30 minutes

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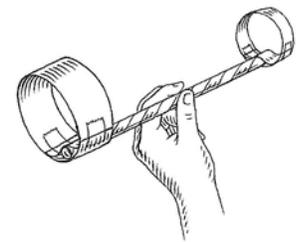
Supplies:

- Paper strips: approx. 1" x 7" (2-3 per girl)
- Paper strips: approx. 1/2" x 5" (2-3 per girl)
- Non-bending straws (2-3 per girl)
- Clear tape (one roll for every 2-3 girls)
- Extra straws (of all different sizes)
- Extra blank paper (like plain 8 1/2" x 11")
- Scissors
- Markers/crayons/pens/pencils

Before Girls Arrive: Copy and cut out the paper strips (see template on the next page). Set out supplies for each girl to make one glider to start with. Lay out the rest of the supplies (more strips, paper, straws, scissors) on something like a box lid/tray so you can quickly set them out on tables later.

#1: Spark!

- Tell girls that this week, they'll be taking to the skies as they get a taste of all the different kinds of activities day camp can offer. Today, they'll get to put their curiosity and team-planning skills to work as they learn as much as they can about "ring gliders."
- Make sure each girl has one long paper strip, one small paper strip, one non-bendy straw, and easy access to a roll of tape.
- Demonstrate how to make a basic ring glider. Have them follow along.
 - Tape one large strip of paper into a ring. Repeat this with a small strip of paper.
 - Tape one ring onto each end of the straw
 - Hold the glider like a dart, with the small ring in front
 - Toss it into the air and see what happens!
- Give girls enough time to make their first ring glider and launch it a few times.



#2: Plan "What" and "How!"

- Have girls get into pairs.
- Tell girls that they'll work together to try changing something about their ring gliders:
 - First, they need to decide together what they want to try changing about their ring glider. Maybe it's the size of the rings, number of rings, the straw, or shape of paper.
 - Then, they'll decide what they'll each do to their own ring glider. If a team picked "ring size" to change, then one girl might make another glider with bigger rings, and the other with smaller.
- Give girls 3-5 minutes to plan. Once they know what they want to do, they can come up to you, tell you their plan, and then you can help them get supplies!

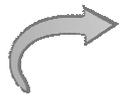
Turn the page for the rest of this activity!





Brownie Wings #1

Ring Gliders



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#3: Do It!

- Once girls have a plan and have gotten their supplies, let them work. If they need help, try asking:
 - What have you tried so far?
 - What else could you try?
 - What happened when you _____?
 - How might someone else try this?
- After they start working, put the rest of the supplies (except the pens/crayons/pencils) onto the tables so the girls can get to them easier.
- Have them finish working when you have 10 minutes left.

#4: Reflect!

- Regroup. Have each pair join up with another pair.
- Ask each pair to share the following with the other pair:
 - What they changed about their gliders, and how they changed them
 - What happened after they changed their glider
- (Tip: if you're doing these activities later in the week, skip this next part and give them another 5 minutes to work on their gliders instead.) Get their attention as a big group again. Have someone else put the pens/pencils/crayons on the tables before (or as) you talk.
 - Ask them to think about the next few days of day camp. What is one thing they're excited about? It could be an activity, meeting other people, etc.
 - Have them write this down on their ring glider.
 - Gather them together in a circle with their ring gliders.
 - Have each girl say what she's looking forward to as she launches her ring glider. (If you're pressed for time, have everyone launch it at once and shout out what they're looking forward to. Much hilarity will ensue!)





Girl Scouts

We build girls of courage, confidence, and character



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Brownie Wings #2

Wings Over Nature

Time: 30 minutes

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Supplies:

- Blank paper for girls to draw on
- Pens/pencils/crayons to draw with
- A table
- Big sheets of paper to draw/write on in front of the whole group
- Easel markers (or other big marker)
- Random objects to put on the table

Before Girls Arrive: Set out the paper and pens somewhere nearby so you can quickly put them on tables when it's time. Put up a couple big sheets of paper somewhere so that all the girls can see it. Arrange a few random objects, like a water bottle, piece of paper, and box of crayons on the table where girls will be able to gather around and look at them. (Think simple shapes; it's even better if the objects look really different when viewed from the top and from the side.)

#1: Spark!

- Say: "Last time, we learned as much as we could about how some aircraft, like our ring gliders, fly. Today we're going to explore one of the amazing things about flight: how it lets you see things like you've never seen them before. Scientists sometimes use airplanes to do research, because things like trees, mountains, and rivers look really different from up in the air."
- Have girls crowd around the table with the objects on it, and then sit/kneel so the objects are at eye level.
- Say: "This is how we normally see things as we walk around: from the side." Have girls say what kind of shapes they see. A book might look like a wide, thin rectangle; a water bottle might look like a tall rectangle; a piece of paper might just look like a thin line. If they're having trouble, have them close one eye and try again.
- Say: "When we're in an airplane, though, things look totally different! Let's pretend we were flying over this table right now. What shapes would you see now?" Have girls stand up on their tiptoes and call out the shapes they see now. For example, a water bottle might look like a circle when viewed from above.

#2: Plan "What" and "How!"

- Tell them that now they're going to put their nature observation skills to work in a "flight" over your area (places they can get to and you can still see them).
- Explain that they and a buddy will first decide what "thing" in your immediate area- bush, big rock, small tree, etc.—they want to "fly over."

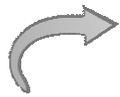
Turn the page for the rest of this activity!



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Brownie Wings #2

Wings Over Nature



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#2: Plan “What” and “How!” - continued

- Next, they and their buddy will “walk up” to their object and sketch it from the side.
- Finally, they’ll “fly over” it—sketch exactly what it looks like from the top.
- Turn teams loose to choose an object to sketch. Hint: younger girls may do better with smaller objects that they can truly see the top of. Older girls may like the challenge of imagining what something bigger—like a tree, picnic shelter, or creek—looks like from above.

#3: Do It!

- Encourage girls as they work; you’ll probably have about 15 minutes to let them sketch. Halfway through your sketching time, encourage them to switch to sketching the pilot’s-eye view, if they haven’t already. It can help to have them label their drawings, like “side view” and “pilots view.”
- Often, girls may need coaching to see smaller details and include them in their drawing. If they’re getting stuck or missing lots of detail, try saying...
 - Tell me about your drawing. What does (point to a part of their drawing) represent?
 - Compare drawings with your buddy. Are there things one of you drew that the other didn't?
 - How could you capture (point to a part of the object—like leaves, a bump in the rock, etc.) this in your drawing?
 - Try closing one eye. What do you see now?
- Have the pairs come back and rejoin you 5 minutes before the end of your time together.

#4: Reflect!

- Gather everyone together. Time to have an art gallery of your nature sketches!
 - Have half the girls stay where they are and hold up their drawing.
 - Have the other half go find someone and say: “Tell me about your drawing!” (Hint: it’s best if they are asking someone who wasn’t their buddy during the drawing time.)
 - Then have them switch. The second group stays where they are, the first group goes and finds someone new, and says “Tell me about your drawing!”
- Congratulate all the girls on taking a mental “flight” over one part of your day camp!





Brownie Wings #3

Team Flight

Time: 30 minutes

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Supplies:

- Cones (or other markers) to be “airports.” For a group of 16 girls, 5-6 cones would be good.
- Jackets, backpacks, etc. that you can scatter amongst the cones as obstacles (7-8 for a group of 16 girls)
- Tape (to tape the paper to the cones)
- Pieces of paper or cardstock (as many pieces of paper as you have cones.) Write the name of a city/airport on each one. Examples: Sea-Tac, Chicago, Honolulu...
- Blindfolds (or you can have girls close their eyes)

Before Girls Arrive: Write a name of a city/airport on each paper. Tape one paper to each cone. Spread the cones out 10-15 feet apart (in a clump, not a line) in a level, obstacle-free area. Scatter the jackets/backpacks/other obstacles in between the cones.

#1: Spark!

- Say: “So far, we’ve explored how planes fly, and seen what things look like from a pilot’s-eye view. Now it’s time to go inside the cockpit and find out how pilots move around in the skies, with help from air traffic control.”
- Explain the following to the girls:
 - When pilots are flying, it can be tough to see what’s far in front of them.
 - That’s part of the reason why we have air traffic control people. Pilots are always in communication with air traffic control. The air traffic controllers can tell where all the planes are, and can help them avoid obstacles and have a safe flight.
 - Sometimes the obstacles are things like thunderstorms. Sometimes the obstacles are other planes—it can get really busy at major airports, and air traffic controllers help all the traffic at the airport flow smoothly.
- Tell girls that today, they’ll get to see what it’s like to be a pilot and an air traffic controller. The two work together to meet a common goal: safe, efficient flight for everyone!

#2: Plan “What” and “How!”

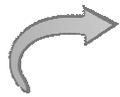
- Have the girls pair up.
- Walk out to the area where you’ve set up the cones and obstacles (if you’re not there already.)
- Point out the cones to the girls. Explain that those are the different airports we’ll be flying between today. Give them the instructions for how they’ll do this:

Turn the page for the rest of this activity!



Brownie Wings #3

Team Flight



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- Tell the girls that, to start with, one girl in the pair will be the pilot, and the other will be the air traffic controller. (They'll get to switch later.)
- The pilot needs to decide which airport she's starting at, and which airport she's flying to. (Hint: have them pick nearby airports—cones that are closer together—to start.)
- The pilot will then stand at the first airport, take a look at the route to the next airport, and then close her eyes. (You can use blindfolds if you think it's appropriate for your group.)
- Once she's closed her eyes, she can start slowly "flying" (walking) to the next airport. The air traffic controller helps by giving instructions, like "stop," "two steps forward," "turn left," etc..
- Once one pilot has successfully made it to the airport, they switch places and try again.
- Give girls a couple minutes to talk in their pairs. They need to decide who's going to be pilot/air traffic control first, and if there are special things they want to say to each other. (like, they could decide to always say each other's name before giving instructions, so they can tell who's talking.)

#3: Do It!

- Time for take-off! Let girls work together to get their flights safely to the next airport.
- If need be, remind them to take turns and switch off who is air traffic control and who is the pilot.
- Let girls work on their own, but remember that you have half your girls walking around with their eyes closed. Keep an eye on the girls and step in if you see an air traffic control person who is not giving instructions to her pilot, or deliberately sending her pilot into trouble. Otherwise, let them work things out on their own.
- End this part of the activity when you have 5-10 minutes left.

#4: Reflect!

- This debrief is best done with a group of 6-8 girls. If need be, split the group up into smaller groups, with different people leading each group in discussion.
- Sit in a circle with the girls. Ask them the se questions. Be sure to wait for their responses.
 - What was it like being the pilot?
 - What was it like being the air traffic controller?
 - What made it easier to work together?
 - What made it harder to work together?
- Finally, say "okay, so it sounds like doing (list their responses here) made it easier to work together. How can we do these things with each other here at day camp?" Let them talk.
- Wrap up the conversation and congratulate them on becoming pilots and air traffic controllers!





Brownie Wings #4

Dreams of Flight

Time: 30 minutes

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Supplies:

- Mae Jemison story (on the back)
- Various objects for props

Before Girls Arrive: Practice reading the Mae Jemison story aloud once or twice. Gather whatever items you have handy that can be used as props.

#1: Spark!

- Say: "So far, you've learned a lot about flight. You've investigated how things like ring gliders fly; you've seen what things can look like from the air; and you've discovered what it's like to be a pilot and air traffic controller. We're going to finish up by exploring all the different ways one woman has flown, and by giving you a chance to think about how you'll fly in your life."
- Read the Dr. Mae Jemison story aloud to the girls.

#2: Plan "What" and "How!"

- Split the girls up into groups of 4. Tell girls that they'll work together to do two things:
 - Make up a story about what they think Mae will do next in her life. She's interested in so many things, that she could do almost anything!
 - Create a quick skit that tells this story.
- Turn the girls loose to work in groups for 10 minutes. If they get stuck, try asking:
 - Mae has a lot of interests: dancing, art, science, medicine, and space. What hasn't she done yet that she might like?
 - What might happen next?
 - What ideas have each of you shared? How could you combine ideas?

#3: Do It!

- After 10 minutes are up, gather the whole group together and have them present their skits!

#4: Reflect!

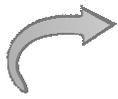
- Gather the whole group together in a circle. Tell the girls that, just like Mae, there are a lot of ways they can fly in their lives. Ask them to think about 1 or 2 ways they want to fly.
- When one girl is ready, have her say how she wants to fly. Go around the circle from there.
- Because they have explored how flight works and what it's like to fly, learned how to work with others here at day camp, and thought of ways they want to fly in the future, you can now award them their wings! Hooray!

Turn the page for the Dr. Mae Jemison story!



Brownie Wings #4

Dreams of Flight



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Dr. Mae Jemison—Woman of Flight

When Mae was a girl, she always assumed she would go into space. She figured that, by the time she was an adult, that people would be going to space just like they went to work.

Mae also loved science as a kid. She studied nature, loved anthropology (studying people) and archaeology (studying people in the past), and thought astronomy was really cool. She first flew through the air as a dancer. She began dancing at age 11 and took ballet, jazz, African dancing, modern, and Japanese dancing. She loved it so much she wanted to be a professional dancer.

When she went to college, she learned about chemical engineering and African studies. She also danced all during college and while she was going to medical school to be a doctor in New York. Once she became a doctor, flights took her to Africa, where she made sure that Americans who were volunteering in Africa (called Peace Corps volunteers) stayed healthy.

Then she applied to be an astronaut. Why? She thought it would be easier to get into space as an astronaut than by just waiting in a cornfield for aliens to pick her up. She applied once and didn't get in, so she kept being a doctor. She got in the second time she applied, and a few years later she was the first African-American woman to fly into space.



Photo: NASA



Photo: NASA

After being an astronaut, she got to fly into space again. This time, it was fictional space: she was an actress for a Star Trek episode. She also loves helping people, so she started developing technologies that help people all around the world. She's taken flights lots of different places to help teachers, and to share ideas with people about how to make our world a better place. Now she's leading a group that wants to fly to the stars in the next 100 years. Where would you fly next if you were Mae?





Wings Awards

Print these on cardstock, cut them out, and laminate. Poke a safety pin through one corner and ta-da! You can now give Brownies their Day Camp Wings.

Day Camp



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