

Have you ever thought about flying? Have you ever dreamed about viewing your town from above or discovering new worlds among the stars? Do you love to design and build? You can use your interests to learn more about aviation. Choose from our many activities to earn your Aviation Patch!

Women have been involved in aviation from the very beginning! They have designed, built, and piloted every kind of aircraft. When they were told that women were not allowed, they found a way to do what they dreamed of. They learned how to fly high!



## Number of activities required to earn the aviation patch:

Daisy (3) • Brownie (4) • Junior (6)

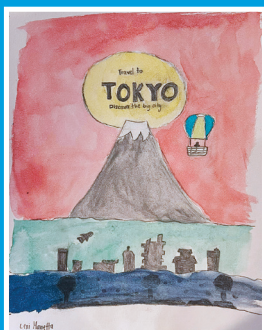
Cadette (8) • Senior (10) • Ambassador (12)

The girls of Troop 19 designed this patch as our Bronze Award in 2024. We had an amazing time - especially on the field trips! We hope you do, too. We made a library of books, games, and costumes at Council for you to use to earn your patch, and a list of resources that we used to book field trips and more.

## Art



We made  
posters,  
bracelets, and  
paper dolls.



## "Don't let anyone rob you of your imagination, your creativity, or your curiosity." - Mae Jemison

1. Look at vintage airline travel posters. Design a similar poster of a location you would like to visit.
2. Watch a movie about women in aviation. What are some of the traits of the main female character?
3. Amelia Earhart had her own clothing line. Look at different fashion periods in aviation. Create a paper doll, poster, google slide, or power point of fashion in at least two eras.
4. Dress like a woman in aviation: pilot, astronaut, flight attendant, engineer. Use costumes from the Council library or create your own.
5. Find 5 logos for airlines. Are there similarities? What makes a logo design effective?
6. Read a book about a female aviator. Use the library at Council. What did you like about her? What would you have done if you faced the same challenges?
7. Make a bracelet inspired by aviation using words or colors that feel uplifting.
8. Make a flip-book of any flying machine or make a digital animation.
9. Find 3 songs about flying. Which is your favorite? Share it with your troop.
10. Make a model of a famous plane. Use any type of materials.
11. The Biscoff cookie is well known for being a favorite treat on airplanes. Try some or make a treat you would like on a flight.
12. Draw a picture of yourself flying.



# History



It's so much fun  
to dress up!



## "The air is the only place free from prejudices." - Bessie Coleman

1. Many women struggled to overcome hardships in their pursuit of flight. All had to deal with discrimination due to being a woman. Some had other difficulties, as well. Write a paragraph about Bessie Coleman, Hazel Ying Lee, or Maggie Gee.
2. Rosie the Riveter is a character created to encourage women to work in aircraft factories during WWII. What is the phrase most commonly related with Rosie? Listen to the song "Rosie the Riveter," by the Four Vagabonds. Read a book about Rosie or dress like her. Try on the costume from our Council Library.
3. Search for a video of Juliette Gordon Low, Girl Scouts' founder, on a plane ride in Mineola. What do you notice about it?
4. Why is Long Island called The Cradle of Aviation?
5. Complete the Aviatrix Matrix page in this packet to learn about famous women in aviation. Imagine yourself as an aviatrix. Write an entry for yourself.
6. What is the 99s? Why was it created? Are they still relevant?
7. What is the Civil Air Patrol? When was it created? Why?
8. What is the Caterpillar Club? Who was the first woman in the club? How have aircraft become safer over time? Are they safer than cars?
9. Who were the Women Air Force Service Pilots (W.A.S.P.)? Where was their base? Were they considered a part of the military?



# STEM



We each chose  
an inspiring  
quote by an  
aviatrix to use  
on our cloud art.



## "We are often more competent than we give ourselves credit for." - Patty Wagstaff

1. Download the Girls in Aviation App. Explore it. Try one of the activities.
2. How does an airplane fly? What are the four forces of flight? How does a propeller differ from a jet engine?
3. Calculate the local time using Zulu time. Why is this used?
4. Complete the Way to Fly, Girl Scout matching game in this packet. Which was the first flying machine successfully used by humans?
5. Who designed aviator sunglasses? Why?
6. What are different kinds of clouds? Make any type of art using a cloud. Why is it important to understand weather patterns?
7. Build a glider or make a paper airplane. Record how far it flew. Make adjustments to your design and fly it again. How has its performance changed? Who is the current world champion paper airplane flyer? Watch a video of their plane.
8. Spell your name using the phonetic alphabet. Why is it used in aviation?
9. Play the Aviatrix '37 Game or another game focused on aviation.
10. Draw a picture of a future flying machine. When do you think it will be invented? Do you want to create it?
11. Make a hot air balloon or sky lantern with your troop. Be sure to have adult supervision!

## Field Trips



**We love field trips most of all! Our favorite was flying the plane with Mid Island Air Service!**



**“I believe that a girl should not do what she thinks she should do, but should find out through experience what she wants to do.” - Amelia Earhart**

There are many ways to gain experiences in aviation here on Long Island.

1. Visit with the Civil Air Patrol chapter near you.
2. Visit an airport to learn about aviation or take a virtual tour.
3. Try a flight simulator - on line, virtual reality, or in person at a flight school.
4. Tour an airplane hangar. Identify the types of aircraft on display.
5. Take a flight in a plane or helicopter. Walk through the pre-flight with the pilot.
6. Visit an aviation museum. Which is your favorite exhibit? Was there anything you would like to see that was not included?
7. Attend an event at a local airport or aerodrome. Talk to the pilots, owners, and ground crew about their work. They love to share!
8. Meet with a local pilot, aircraft engineer, air traffic controller, or other aviation professional to learn about their job. What inspired them? What type of training did they receive?
9. Visit the TWA Hotel at JFK airport. Go through the exhibits.
10. Attend an air show or hot air balloon festival.
11. Contact Women In Aviation International to find a Girls in Aviation conference.
12. Make a 2 minute news report about your experiences or create a passport detailing every place you visited.

## Education and Careers



**We met several women with different jobs in aviation!**



**“The airplane should open a fruitful occupation for women.” - Harriet Quimby**

1. Are there more men or women working in the aviation fields? Why?
2. There are many different ways to work in the field of aviation, from Robotics to Food Service, Aircraft Design, Architecture, and more. Which career in aviation appeals to you the most? Using the Girls in Aviation app, research different possible careers. Name one flying career, one design career, and one management career.
3. Aeronautics is the study of the science of flight and the method of designing an airplane or other flying machine. Find a college that teaches Aeronautics. What related degrees or certifications are offered?
4. Research airlines that fly out of your local airport. Do they have jobs for high school students? What does it mean to marshal an aircraft?
5. What is required to become an astronaut? A flight attendant? Choose one area of interest and look up the education or training necessary for that career.
6. Pilots and crew have to work closely together on a commercial passenger flight to ensure safety and comfort for all. What are the responsibilities of the pilots? Of the flight attendants?
7. There are many organizations that award scholarships for education in aviation. How can you earn a scholarship?
8. Find summer camps in aviation or space. Would you like to learn more?







1 \_\_\_\_



2 \_\_\_\_



3 \_\_\_\_



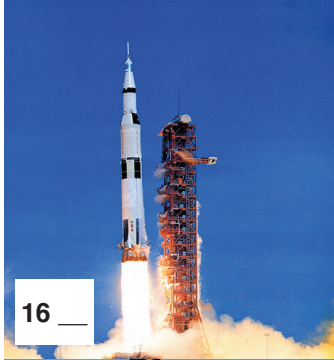
4 \_\_\_\_



18 \_\_\_\_



17 \_\_\_\_



16 \_\_\_\_



15 \_\_\_\_



14 \_\_\_\_



13 \_\_\_\_

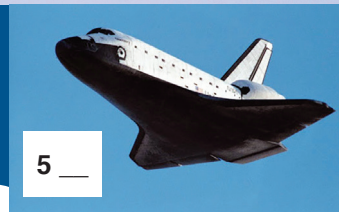


Match the method of flight word to the picture.

Circle any that you would like to try someday.

# Way to Fly, Girl Scout

- |                       |                          |
|-----------------------|--------------------------|
| a. Blimp              | j. Precision Team Flying |
| b. Drone              | k. Remote Control Plane  |
| c. Flight Simulator   | l. Rocket                |
| d. Hang Glider        | m. Sail Plane            |
| e. Helicopter         | n. Seaplane              |
| f. Hot Air Balloon    | o. Sky diving            |
| g. Jet Airplane       | p. Space shuttle         |
| h. Paramotor          | q. Wind tunnel skydiving |
| i. Propeller Airplane | r. Wingsuit              |



5 \_\_\_\_



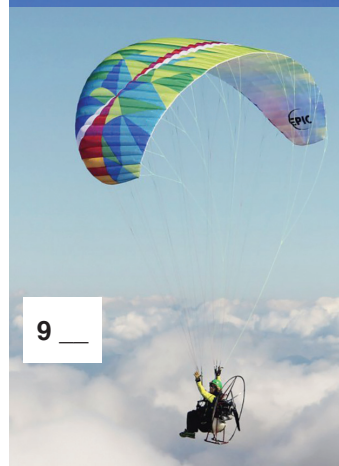
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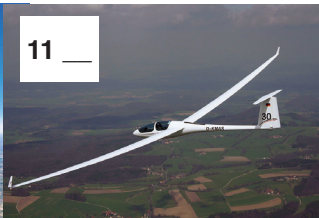
7 \_\_\_\_



8 \_\_\_\_



9 \_\_\_\_



11 \_\_\_\_



12 \_\_\_\_



10 \_\_\_\_

Answer Key: 1 i, 2 d, 3 k, 4 g, 5 p, 6 f, 7 q, 8 e, 9 h, 10 c, 11 m, 12 o, 13 a, 14 r, 15 j, 16 i, 17 b, 18 n

# FLY HIGH

P	B	W	Q	B	T	D	S	P	W	U	R	R	K	D	X	J	L
I	E	A	C	I	H	L	T	A	R	S	P	Q	U	W	R	L	T
L	S	S	D	P	P	W	H	R	O	O	R	F	H	G	C	A	I
O	S	P	G	L	L	B	R	A	C	A	O	B	W	L	C	S	G
T	I	B	T	A	I	A	U	C	K	R	P	S	E	I	N	T	J
K	E	R	L	N	F	L	S	H	E	O	E	O	I	D	D	R	W
A	B	J	D	E	T	L	T	U	T	S	L	E	G	E	N	O	S
G	I	R	L	S	C	O	U	T	S	I	L	D	H	R	R	N	D
I	C	C	F	O	X	O	E	E	N	E	E	G	T	M	J	A	N
S	C	E	N	G	I	N	E	E	R	F	R	N	O	B	E	U	W
P	F	M	A	E	Z	F	L	I	G	H	T	I	R	S	T	T	Z
A	M	E	L	I	A	A	V	I	A	T	R	I	X	W	Y	H	W

Find the following words in the puzzle.

Words are hidden → ↓ and ↘ .

AMELIA  
ASTRONAUT  
AVIATRIX  
BALLOON  
BESSIE  
BIPLANE  
DRAG  
ENGINEER

FLIGHT  
GIRLSCOUTS  
GLIDER  
JET  
LIFT  
PARACHUTE  
PILOT  
PROPELLER







ROCKET  
ROSIE  
SOAR  
THRUST  
WASP  
WEIGHT

















# Aviatrix Matrix

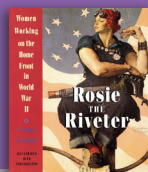
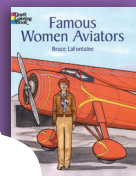
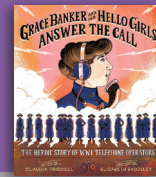
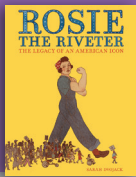
Complete the matrix so each aviatrix has a name, accomplishment, quote, and photo. Put a star next the amazing aviatrix you admire most.

Name	Accomplishment	Quote or interesting fact	Photo
<b>Marie Marvingt</b>		Creator of the air ambulance	
<b>Harriet Quimby</b>		"The airplane should open a fruitful occupation for women."	
<b>Bessie Coleman</b>	Learned French to get her pilot's license in Paris, since it was forbidden in the U.S. She was the first black person in the world to do so.		
<b>Amelia Earhart</b>			
<b>Betty Skelton Frankman</b>	Part of the Civil Air Patrol since it's inception. Flew blimps, jets, helicopters, and gliders. Set records in aerobatics and races in her plane, Little Stinker.		
	First woman to break the sound barrier. Helped form the Women's Air Force Service Pilots (WASP). Twice president of the 99s. Started her own cosmetics line.	"I may have been born in a hovel, but I am determined to travel with the wind and the stars."	



<b>Hazel Ying Lee</b>		<p>I held a moment in my hand, brilliant as a star, fragile as a flower, a tiny sliver of one hour. I dripped it carelessly, Ah! I didn't know, I held opportunity.</p>	
<b>Sally Ride</b> Girl Scout 			
<b>Nicole Mann</b> Girl Scout 	<p>Mann is a Colonel in the Marine Corps and served as a combat fighter pilot. The first Indigenous woman from NASA to go to space.</p>		
<b>Mae Jemison</b> Girl Scout 		<p>"Don't let anyone rob you of your imagination, your creativity, or your curiosity."</p>	
<b>Tammy Duckworth</b> Girl Scout 		<p>"America's daughters are just as capable of defending Liberty as her sons!"</p>	
<b>Michelle Curran</b> Girl Scout 		<p>"There will be days when you feel in over your head; when those days come, I challenge you to adopt this mindset. Start to associate that feeling of vulnerability with one of possibility."</p>	
(Your Name) Girl Scout 			

# Suffolk County Council Library for the Fly High Aviation Badge





# Library Catalog, books

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- Sorell, T. (2019). At the mountain's base. Penguin Random House. [penguinrandomhouse.com/](http://penguinrandomhouse.com/)
- Teitel, A. S. (2021). Fighting For Space : two pilots and their historic battle for female spaceflight. Grand Central Publishing. [hachettebookgroup.com/imprint/grand-central-publishing](http://hachettebookgroup.com/imprint/grand-central-publishing)

# Resource List

## **Mid Island Air Service**

*Aviation Education and Flight School - where we used a professional simulator, explored the mechanics of flight, built gliders, and piloted a plane!*

101 Hering Dr, Ronkonkoma, NY 11779

631-588-5400

<https://www.midislandair.com/>

## **American Airpower Museum**

*Where we dressed as Rosie the Riveter and learned about the WASPs and women in WWII.*

1230 New Hwy, Farmingdale, NY 11735

631-293-6398

<https://www.americanairpowermuseum.com/>

## **Cradle of Aviation Museum**

*Where we explored Long Island's history of aviation, sat in different types of aircraft, and took in a planetarium show.*

Charles Lindbergh Blvd, Garden City, NY 11530

516-572-4111

<https://www.cradleofaviation.org/>

## **Bayport Aerodrome**

*The Aerodrome holds several public events.*

<https://www.facebook.com/p/Bayport-Aerodrome-Society-100068631720906/>

Contact Janie Daly for more information: [Jdaly@midislandair.com](mailto:Jdaly@midislandair.com)

## **South End Aviation**

*Biplane Rides.*

60 Vitamin Drive, Bayport, NY, USA

[SouthEndAviation23N@gmail.com](mailto:SouthEndAviation23N@gmail.com)

631-806-5967

## **Phyllis Adair - Aviation Engineer**

*A Girl Scout Mom who met with us to learn about Aviation Interior Design and Engineering!*

*She would love to meet with your group, too!*

Phyllis Markowski Adair

631-997- 8311

[pmarko62@hotmail.com](mailto:pmarko62@hotmail.com)

## **Women in Aviation**

<https://www.wai.org/>

### **Girls in Aviation Day events**

<https://www.wai.org/giad-2024-events>

### **Girls in Aviation App**

*Amazing App with activities for girls to explore aviation and aerospace!*

<https://www.wai.org/aviation-for-girls-2021-app>

## **iFly Indoor Skydiving - Queens location**

10-20 Borden Ave, Queens, NY 11101

212-977-4359

<https://www.iflyworld.com/queens/>