



Pilot/Teacher Handbook Adopt-A-Pilot®



Name: _____

Southwest® 



THE ADOPT-A-PILOT VALUES



FEARLESSNESS: Being brave enough to go for it even when you are scared! Be courageous and take action even if you feel anxious or nervous. Success is found on the other side of fear!



LEADERSHIP: Being someone people can count on to get things done! Making decisions based on what is right and ethical, not necessarily what is popular with others. Great leaders are successful because they lead by example.



IMAGINATION: Being creative! Your imagination allows you to dream really big dreams! It will help you find solutions for obstacles that stand in your way. Using your imagination to 'see' yourself succeeding is an essential part of success.



GRATITUDE: Being thankful! An attitude of gratitude will allow you to appreciate hard times because they make you grow and become stronger. Gratitude will bring great happiness to all areas of your life.



HONESTY: Being truthful in what you say and do! Do not gossip, bully or spread rumors about others. When you are honest people respect you. People who respect you will help further your success.



TENACITY: Being someone who never ever gives up! Work hard and keep trying, even if you have a set-back. Tenacity is the key! If you always stick with your dreams, no matter what, you will have an amazingly successful life!

Hello “Adopted” Pilots!!

Thank you for registering for Adopt-A-Pilot!! Since its inception in 1997, the Adopt-A-Pilot (AAP) program has benefited hundreds of thousands of students across the entire United States. As an “adopted” Pilot, YOU now have the opportunity to be a positive role model to the young people in your community. Early preparation is the key to a successful and enjoyable AAP experience (both for your students and for you!). This guide will help you prepare for the (somewhat daunting) experience of standing in front of and teaching a group of children. Additionally, your domicile Adopt-A-Pilot Ambassadors are a great resource available to you, should you need anything. Their contact information, along with the AAP curriculum materials and a library of visual aids can be found in [Comply under Collections> Not Flying> Volunteerism + Adopt-A-Pilot](#). Good luck, have fun and again, thank you for being a part of Adopt-A-Pilot.

1. Pre-Flight

Program Overview

Adopt-A-Pilot is set up with a general footprint of four Pilot-led lessons, each about 60 to 90 minutes long. Traditionally, these lessons cover the following topics:

- Life Values and Career Planning
- Geography
- Scientific Process and Aerodynamics
- Celebration and Fun Wrap-Up

These lessons are discussed in further detail later in this handbook. There are also three ‘While Your Pilot is Away...’ lessons that your teacher can choose to present between your visit. The back of this booklet contains the Adopt-A-Pilot Teacher Handbook where you can view their lessons. It’s very important that you and your teacher are on the same page for your AAP program. As such, you should meet with your teacher as soon as possible to discuss logistics.

A few topics to discuss:

- How many lessons do you plan to do?
- How much time will you have in the classroom for each visit?
- What month would be best to begin your program? Is it better to visit once a week, once a month, etc.?
- What audio/visual hookups are available for you to use?
- Does the teacher plan to do their lessons? Should you assign homework?
- Would they like you to tailor the program to better match their classroom curriculum?
- Is there anything special that you need to know about the students or classroom policies? (Behavioral issues, food allergies, special needs).

Supplies

AAP supplies arrive in late January. It’s easiest to start your program sometime after that, but if your school needs to start earlier in the year, contact your Adopt-A-Pilot Base Ambassador for help.

The following items will be shipped directly to the school:

- Adopt-A-Pilot Route Map
- Cockpit Poster
- Pilot/Teacher Handbook *
- Student Workbooks *
- City-To-City Mileage Charts* + 3-Letter Airport Code List
- A Letter to Parents *
- A Tie Contest Entry Form *
- One Ping-Pong Ball
- A few balloons
- Completion Certificates for each student
- Fun SWAG for each student

*if requested at Registration

The following items will be shipped directly to Flight Ops at your base. You will receive an email when your supplies have arrived.

- Pilot/Teacher Handbook
- A copy of the Student Workbook
- City-to-city Mileage Chart + 3-Letter Airport Code List
- Teacher Appreciation Certificate
- Your Adopt-A-Pilot Tie

2. In the Classroom

Your Lessons

Now that you have met with your teacher, you can begin building your lessons for the classroom. As a reminder, the four basic lessons that most pilots use when teaching AAP are:

- Life Values and Career Planning
- Geography
- Scientific Process and Aerodynamics
- Celebration and Fun Wrap-up

This *Pilot/Teacher Handbook* has lesson plans for each of these topics. These lessons include in-class activities that will match up with those in the *Student Workbook*.

Remember, these lesson plans are just examples - you can use them exactly as printed, as a launching pad for your own creative ideas. **You don't even have to use these topics!** AAP is completely flexible. Let's say you have a background in meteorology, or you are a military aviation history buff - teach the kids about that! Ultimately, the goal of AAP is to build connections with the students, and to inspire them to work hard and to pursue their dreams. The best way to do that is to ignite their excitement by talking about the things that you know and are passionate about.

Resources

In planning your lessons, you'll definitely want to think about using memorabilia, photos, videos and interesting demonstrations to help keep the kids' attention. Luckily, there are a lot of resources in your EFB to you to help you find and incorporate these elements.

Remember "Show and Tell" from your elementary school days? Now's your chance to do that again. Kids love to be able to touch items, so look through your closet to find memorabilia from the early days of your career such as headsets, helmets, IFR hoods and flight suits. Bring them in and let the kids try them on - you'll get instant engagement.

Photos and videos are another great way to draw in your class' attention. If you purchase an adapter (usually Lightning to VGA or HDMI connection), you can tie into the classroom's projector system with your EFB and use it as a convenient media player. You can download videos and photos from the web, or use your own. Also, Comply has a multitude of videos and photos that you can browse through. You'll find them under Not Flying>Volunteerism & Adopt-A-Pilot>Educational Resources.

Many Pilots use a slideshow app like Keynote or PowerPoint to organize their lessons. It's an easy way to keep your visual aids in order, and to keep yourself on topic if you tend to go off on tangents. Both apps are available for free in the Apple App Store.

Some lessons (especially the one on Aerodynamics) naturally lend themselves to demonstrations in the classroom. For example, if you are teaching about Newton's third law, you could explain it to the kids or diagram it on the chalkboard, but neither will be as effective as inflating a balloon and then releasing it to fly around the room. You can find examples of demonstrations for each of the four forces later in this handbook and in Comply.

Lastly, if you're stuck for ideas, contact your Base Ambassador - they are a ready source of information, and are always happy to help! Current contact information can be found in the AAP section on the EFB.

3. In Between Visits

If you communicate with your class between your visits, you'll build a stronger connection with your students and ultimately enhance the overall AAP experience for both you and the kids. Here are just a few of the ways that Pilots in years past have engaged with their classes from the road:

- Sending emails
- Setting up FaceTime chats
- Taking pictures from the road with a stuffed animal. (Similar to Flat Stanley for those of you who are familiar)
- Having the students write letters to passengers, and getting passengers to write back
- Mailing postcards from places visited
- Where in The World is.... Your Pilot?? (Take pictures of yourself and have the kids figure out where you are)

By throwing one or two of these elements into your program, you'll better connect with the kids... and it's fun too!! Many Pilots report back that this was their favorite part of their AAP program. Additionally, each lesson has a 'Brain Booster.' This activity is meant to be done at home to help the students retain what they learned during your visit.

4. Tickets 4 Time

Once you finish your AAP program, there is one more way that you can benefit your adopted school - you can get them tickets for free flights by logging your volunteer hours in Tickets 4 Time. When 40 hours of volunteer time at a charitable organization is recorded in our system, Southwest will donate one (1) roundtrip domestic e-pass, up to six (6) per calendar year. Your involvement in AAP qualifies for this benefit!! These tickets can be used to award a hard working teacher, for conference travel, or in raffles or auctions to raise money for the school.

To record your hours, go to SWALIFE> Culture> Volunteerism> Launch Volunteer App, and then click on "Record Hours". You can log the time you spent coordinating, planning and teaching each lesson. With a small amount of effort logging your time, you can make a tangible financial impact to benefit your school.

5. Post Flight

Once again, thank you for taking time to give back to your community. We hope that this Pilot's Handbook will give you some clarity and direction on how to proceed with your Adopt-A-Pilot program. We know that signing up for Adopt-A-Pilot is a large commitment, but we're sure that when you finish your program that you'll look back and see that it has been a fun and rewarding experience.

Please, reach out to your Base Ambassador if you have any questions. All of us are here to make sure that your Adopt-A-Pilot program is wildly successful! Have fun!!!!

— The Adopt-A-Pilot Team







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PILOT/TEACHER NOTES



Handwriting practice lines consisting of 20 horizontal lines.

Lesson 1:

Take-Off . . . With Adopt-A-Pilot!

LESSON OBJECTIVE

To introduce Southwest Airlines, the Adopt-A-Pilot program and the Adopt-A-Pilot **F.L.I.G.H.T.** Values and to inspire the students to reach their full potential in both their career and their life.

PRE-FLIGHT CHECKLIST

Materials You Will Need



- **Introduce Yourself**

- Items that help tell your story:
 - Memorabilia
 - Photos
 - Flight gear
 - Things that inspire you

- **Cruise - To A Successful Career** *and*

- **Cruise - Let your dreams take F.L.I.G.H.T.**

- Student Workbooks
- Optional: The Internet

- **Suggested Videos for this Lesson**

- The Making of Florida One, etc.
- A Day at DAL
- NOC 1

Video Note: You can find the suggested videos at: [Comply365>Not Flying>Volunteerism & Adopt-A-Pilot>Educational Resources>Classroom Videos](#). Check with the teacher to see what A/V adapter is required.



TAKE-OFF

Lesson Guide for Your Classroom Visit



1. Introduce Yourself

- Tell the students about yourself - favorite hobbies, family, pets, children, sports you play/played, teams you root for, etc.
- Discuss the life of a Pilot: How many days do you work? What are your hours? What do you get to see and do on your overnights? What do you enjoy most about the job? Do you have a favorite place to fly? A favorite time?
- Take time to answer questions and connect with the students.

2. Introduce Adopt-A-Pilot

- Using aviation-related activities, you will bring a 'real-world' perspective to what is being taught in the classroom. During Adopt-A-Pilot students will:
 - Dream about their future and start planning for a successful career!
 - Be introduced to the importance of having a set of values that they can use everyday.
 - Learn about time zones and how to calculate time changes.
 - Conduct hands-on experiments learning about the Scientific Process and exploring the science of flight.
- Teachers & Students will follow along (in between your visits) on your flights to learn about geography and core curriculum math using your flight 'data'.
- Explain the significance of your Adopt-A-Pilot tie. Who designed it? Where do they live? Do all Southwest Pilot wear this tie? If the class is participating, explain the Tie Contest.
- You can find photos of previous Adopt-A-Pilot Ties in the AAP Educational Resources > Lesson 1 folder in Comply365.

3. Introduce Southwest Airlines

- A few fun ways to do this:
 - Tell interesting stories about what makes Southwest special. A few ideas:
 - The simulator rubber chickens
 - Malice in Dallas
 - Special Liveries
 - Share some trivia about Southwest. Fun facts and ideas can be found in the AAP Educational Resources > Lesson 1 folder in Comply365.



4. Share Your Career Path

Objective: To use your successful career path (with all its twist and turns) to show the students that anything is possible. It took hard work: you made a plan, set goals, got an education and did not give up on your dreams!

- Did you always want to be a Pilot? Did you have a different career before you started flying? What was your career path? Did you have any setbacks along the way? How did you stay motivated?
- Being a Pilot requires a specific set of skills and subject knowledge. Were you always good at these skills? Did you like all of your school subjects? Discuss what education and training you completed. When did you start planning for your career as a Pilot?
- Emphasize it took hard work; you made a plan, set goals, got an education and did not give up on your dreams!

IN-CLASS STUDENT ACTIVITY 1: CRUISE - TO A SUCCESSFUL CAREER

Note: Having a few examples of careers, skills, and subjects will help guide this activity.

- Work as a class by asking individual students to share what they want to be when they grow up or what careers sound interesting. If they can't decide what they want to be, ask what activities interest them? Is there a career that uses those activities? (i.e. biology = doctor)
- Through this activity, emphasize classes that they can take in middle school and high school that could help them reach these career dreams.

Other Possible In-Class Activities:

- Goals are achieved by having a vision and taking small steps. Have students pick a short-term goal for themselves, and then list 3 steps to help them achieve it before Adopt-A-Pilot ends. Pick one for yourself too!
- Show videos about different careers. Which of those careers sounds interesting to them? What skills and school subjects are needed for that specific career?

5. Life Values - The Adopt-A-Pilot F.L.I.G.H.T Values

Objective: To show the students how having a strong set of values generate behavior and lead to success in all areas of life

- Values help people decide how to act based on what is good, right, or ethical.
- The foundation of Adopt-A-Pilot is based on the acronym **F.L.I.G.H.T.**, with each letter standing for a different value.
- Each of the Adopt-A-Pilot **F.L.I.G.H.T.** Values are explained in detail on the inside cover of both workbooks.

IN-CLASS STUDENT ACTIVITY 2: LET YOUR DREAMS TAKE F.L.I.G.H.T.

- Divide the class into groups and have them use their imagination to create a list of famous people (past and present) who embody the Adopt-A-Pilot **F.L.I.G.H.T.** Values.



- After a period of time have each group share one person for each **F.L.I.G.H.T.** Value while you create a combined list of ALL the people they brainstormed.
- Why did they select these people?
- Do they exhibit more than one **F.L.I.G.H.T.** Value?
- Do a few people on the list have something in common besides the **F.L.I.G.H.T.** Values? (I.e. Good in school, lots of time spent practicing, etc.)

Other Possible In-Class Activities

- Create a **F.L.I.G.H.T.** Values logbook where students can record how they demonstrated each one of the values.
- Show a video that demonstrates the **F.L.I.G.H.T.** Values being utilized. Have the students identify where they saw each value was embodied.

POST-FLIGHT CHECKLIST

Wrapping up your classroom visit



1. Review

- What did they learn today? What else would they like to learn about the career they chose or heard about today?
- Emphasize the importance of the Adopt-A-Pilot **F.L.I.G.H.T.** Values. Which values did they use today?
- Are there any questions about what you've talked about today?

2. Brain Booster

- Introduce the at home **BRAIN BOOSTER ACTIVITY: 1ST SOLO FLIGHT - WHEN I GROW UP, I WANT TO BE** to be done at home.
- This activity reviews what they did in class today.
- Encourage the students to share this activity with an adult/mentor.

3. Looking Ahead

- Give them a glimpse of the next time you will be in class: geography, time zones, and calculating time changes.
- Discuss where you will be flying between now and your next visit.
- If the teacher is doing the **LESSON 1A: WHILE THE PILOT IS AWAY - THE F.L.I.G.H.T. Values** do they have questions?
- Be prepared to connect with the students between visits:
 - Send emails or postcards.
 - Take photos, videos, or collect souvenirs to share.
 - Arrange a time to call or FaceTime



Lesson 2:

Look Out Below . . . World Geography!

LESSON OBJECTIVES

Explore the six different time zones Southwest operates in and calculate changes in time while encouraging the students to see how understanding Geography connects people on a global level.

PRE-FLIGHT CHECK

Materials You Will Need

- **Review**

- Student Workbooks
- LESSON 1A Review*
 - Student Workbooks

- **Cruise - Through Time**

- Student Workbooks
- 3-Letter Airport Code List (in Addendum)
- Adopt-A-Pilot Classroom Map (in the Teacher's Program Supply Box)

- **Suggested Videos for this Lesson**

- A Day In The Life of the SWA Fleet
- Cargo Ships Crawlfish Across The Country
- Southwest Airlines at BWI, etc.
- Tour of the United States
- Wakko's 50 State Capitals



*If the class is participating

Note: You can find the suggested videos at: [Comply365 >Not Flying >Volunteerism & Adopt-A-Pilot >Educational Resources > Classroom Videos](#). Check with the teacher to see what A/V adapter is required.



TAKE-OFF

Lesson Guide for Your Classroom Visit



1. Reconnect and Review

- Reconnect with the students: Share any pictures, souvenirs you collected or tell them about something you've done since your last visit in order to re-establish a rapport and build connections.
- Review **LESSON 1: TAKE-OFF... WITH ADOPT-A-PILOT!**
- *Note:* Engage reluctant or shy students by asking them a few specific questions and encouraging them as they answer.
 - Do they know someone that has the career they would like to pursue? Why did they choose the career they did?
 - Invite a few students to share their **1ST SOLO FLIGHT - WHEN I GROW UP, I WANT TO BE** activity.
- What does each letter of the **F.L.I.G.H.T.** Values stand for? Ask the students how they demonstrated some of the values while you were away.
- Did the class participate in **LESSON 1A: WHILE THE PILOT IS AWAY...THE F.L.I.G.H.T. VALUES** lesson? Review what they discovered.
- Do the students have any questions about **Lesson 1** before you get started?

2. Explain 3-Letter Airport Codes

- Airports use abbreviations to provide an unambiguous way to identify every airport in the world. They are faster to type and can be easier to say; LAX vs Los Angeles International Airport.
- The current 3 letter combination was started in the 1930's with the growth of civil aviation. In general most 3-Letter Airport Codes are obvious. They use the first 3 letters of the airport name or the city where it is located. (i.e. SAN - San Diego, ATL - Atlanta, BOS - Boston). Because certain letters (like N) are reserved for military airports, some airports are not so obvious. (i.e. EWR - Newark, ORF -Norfolk). In rare cases, the 3-Letter Airport Code makes no sense unless you know the airports history. (i.e. MSY: New Orleans - built on the old Mosiant Stock Yards).
- Information about most 3-Letter Airport Codes Southwest flies to can be found at: <http://airportcod.es/>

3. Introduce Geography from a Pilot's perspective

- **Objective:** To show Geography is more than dots on a map and a list of names on a sheet of paper.
- You have the unique experience of experiencing a lot of geography both in the air and on the ground.
- How do you experience geography first hand?
 - Show pictures (or describe) rivers, lakes, mountains, towns (during the day and night), crop circles, highways, etc. from cruise altitude.
 - How do the regions differ (weather, food, culture, landscape, languages, etc.)?



- Talk about some of the places you've travelled for work and pleasure.
- Another fun idea is to share some geography trivia. Some trivia can be found in the AAP Educational Resources > Lesson 2 folder in Comply365

4. Time Zones and Changes in Time

- **Objective:** To explain why we have *Time Zones*, and how to calculate local time as we travel to varied locations on the planet.
 - *Time Zones: any region that uses the same standard time.*
 - The world's time zones are measured from the Prime Meridian in Greenwich, England
 - Each time zone is defined by how far away it is located from the Prime Meridian
 - Each time zone has its own unique name.
 - Time zones came to be because of the railroads. More information on this can be found in the Student Handbook.

IN-CLASS STUDENT ACTIVITY: CRUISE - TIME TRAVEL

- Calculating time changes is a difficult concept for students to understand.
- There are many ways to calculate time changes - one of the easier ways is by using a map and a clock.

TO CALCULATE TIME CHANGES

- **Step One:** Locate which time zone Location A is in.
- **Step Two:** Locate which time zone Location B is in.
- **Step Three:** Count the number of time zone lines between Location A and Location B .
- **Step Four:** Determine if you traveled from east to west or from west to east.
- **Step Five:** Calculate the time change
 - Traveling from east to west - count 'backwards' (counter clockwise): Starting at the time in Location A count 'backwards' (counter clockwise) the number of time zone lines crossed to determine the time in Location B.
 - Traveling from west to east - count 'forwards' (clockwise): Starting at the time in Location A count 'forwards' (clockwise) the number of time zone lines crossed to determine the time in Location B.

- *Note:* If there isn't an analog clock in the classroom it might be helpful to draw one.
- Work as a class to complete these three activities.
- As you work through these activities emphasize how changing time zones changes what people are doing?

Other Possible In-Class Activities

- Play, 'Where in the World is your Pilot?' Have kids guess the city, based on clues you give them. (Geographical location, landmarks, pictures, history, etc.)
- Play 'Bag Tag Bingo' (see [Comply365>Not Flying>Volunteerism and Adopt-A-Pilot>Lesson 2](#)) for bingo cards.
- Do Teacher LESSON 2A as a class.
- Have students work in groups to label different U.S. States and State Capitals. By the end of class complete the entire map as a class.

POST FLIGHT CHECKLIST



1. Review

- What did they learn today?
- Why is it important to know how to calculate time changes? What are some challenges that come with different time zones?
- Emphasize the importance of the Adopt-A-Pilot **F.L.I.G.H.T.** Values. Which values did they use today?
- Are there any questions about what you've talked about today?

2. Brain Booster

- Introduce the at home **BRAIN BOOSTER ACTIVITY: 2ND SOLO FLIGHT - A JOURNEY THROUGH TIME.**
 - This activity reviews what they did in class today.
 - Encourage the students to share this activity with an adult/mentor.

3. Looking Ahead

- Give them a glimpse of the next time you will be in class - the science of flying and the scientific process.
- Discuss where you will be flying between now and your next visit.
- If the teacher is doing the **LESSON 2A: WHILE THE PILOT IS AWAY... WHERE IN THE WORLD** do they have questions?
- Be prepared to connect with the students between visits:
 - Send emails or postcards.
 - Take photos, videos, or collect souvenirs to share.
 - Arrange a time to call or FaceTime®.

Lesson 3:

What Is Up . . . With Aviation Science?

LESSON OBJECTIVE

Investigate the Four Forces of flight using the scientific process to help ignite students' passion for science

PRE-FLIGHT CHECK

Materials You Will Need



• Review

- Student Workbooks
- LESSON 2A Review*
 - Trip Sheet
 - Adopt-A-Pilot Classroom Map

• Cruise - The Force of Lift

- Student Workbooks
- A ping pong ball (in the Teacher's Program Supply Box)
- A hair dryer or shop vac (from home)
- *Optional:* Toilet Paper Tube (from home)

• Cruise - The Force of Drag

- Student Workbooks
- Copy paper
- Scissors (from the classroom)

• Cruise - The Force of Thrust

- Student Workbooks
- Balloon (in the Teacher's Program Supply Box)
- 15'-20' of string (from home)
- Straw (from home)
- Scissors (from the classroom)

• Cruise - The Force of Weight

- Student Workbooks
- Different size books (from the classroom)

• Suggested Videos for this Lesson

- How An Airplane Takes Off
- How A Jet Engine Works - SWA
- Chuck Yeager Breaks the Sound Barrier
- Wright Brothers First Flight 1903

**If the class is participating*

Note: You can find the suggested videos and photos at: [Comply365>Not Flying>Volunteerism & Adopt-A-Pilot>Educational Resources > Classroom Videos](#). Check with the teacher to see what A/V adapter is required.

TAKE-OFF

Lesson Guide for Your Classroom Visit



1. Reconnect and Review

- Reconnect with the students:
 - Share any pictures, souvenirs you collected or tell them about something you've done since your last visit in order to re-establish a rapport and build connections.
- Review **LESSON 2: Look Out Below...World Geography**
- *Note:* Engage reluctant or shy students by asking them a few specific questions and encouraging them as they answer.
 - What time is it in _____ right now? Have a student share something about a city they've visited. What is unique about that city?
 - Invite a few students to share their **2ND SOLO FLIGHT - A JOURNEY THROUGH TIME** activity.
- What does each letter of the **F.L.I.G.H.T.** Values mean? Ask the students how they demonstrated some of the values while you were away.
- Did the class participate in **LESSON 2A: WHILE THE PILOT IS AWAY... WHERE IN THE WORLD** lesson? Review what they discovered.
- Do the students have any questions about **Lesson 2** before you get started?

2. Discuss the Scientific Process

- The Scientific Process is the most commonly used method to conduct experiments.
 - This method of acquiring knowledge has characterized the development of science since the 17th century.
 - It explores observations, and answers questions.
 - The steps of the Scientific Process are:
 - **Step one:** Create a **HYPOTHESIS** about a question you have or a problem you want to solve.
 - **Step Two:** Conduct an **EXPERIMENT** to test your **HYPOTHESIS**.
 - **Step Three:** Record the **OBSERVATIONS** of your **EXPERIMENT**.
 - **Step Four:** Based on your **OBSERVATIONS**, come to a **CONCLUSION**. Compare your **CONCLUSION** to your **HYPOTHESIS**.
- Did the results support your **HYPOTHESIS**?
- *Hypothesis: An educated guess based on current knowledge. There is no wrong answer!*
 - *Note:* When conducting the following experiments in this lesson, try to emphasize the elements of the Scientific Process as much as possible.



3. Introduce the Four Forces of Flight

- **Objective:** To use the scientific process to discover the four forces of flight
- Draw a simple diagram of an airplane with arrows projecting up and down, left and right.
- Help the kids label each vector. Give a short description, while they label the diagram in their workbook. Just in case it's been a while since your Private Pilot ground school, they are:
 - The four forces on an airplane are what make it fly. During level and unaccelerated flight, the opposing forces (i.e. Lift and Weight, and Thrust and Drag) are equal to each other.
 - Lift - The upward force generated by airflow over the wings.
 - Weight - The downward force created by the mass of the aircraft. Should not be confused with Gravity. Gravity is a constant, while Weight is constantly changing.
 - Thrust - The forward force created by the airplane's engine(s)
 - Drag - The rearward force created because the airplane is moving
- **IN-CLASS STUDENT EXPERIMENT 1: THE FORCE OF LIFT**
 - *Bernoulli's Principle: slower moving fluids (i.e. air) exert more pressure than faster moving fluids.*
 - Lift is mainly created by Bernoulli's Principle - the air flowing over the top of the wing moves faster than the air moving below the wing.
 - Mathematician and Scientist Daniel Bernoulli discovered this principle in 1738.
- **Ping-Pong Ball Lift Experiment**
 - Have the students hypothesize about what they think will happen to a ping-pong ball if it is placed above a running hairdryer.
 1. Turn the hair dryer on maximum cool air flow, and point the nozzle towards the ceiling.
 2. Gently place the ping-pong ball in the air flow about 1" above the nozzle and release.
 3. Observe how the ball floats inside of the column of air.
 4. Tilt the hair dryer left and right. The ball will continue to float, even when not directly above the hairdryer. This is because a low pressure is being created on the top side of the ball due to the rounded shape.
 5. For added fun, place an empty toilet paper tube above the ping-pong ball. Air flowing through the tube will create a low pressure inside, and will shoot the ball towards the ceiling.
 - What did they observe?
 - Explain that the ping-pong ball is a crude representation of the rounded upper surface of our wing. Lift is created when high velocity air flows over the rounded surface, keeping the ball airborne.

- **IN-CLASS STUDENT EXPERIMENT 3: THE FORCE OF DRAG**

- *Form Drag: drag that is created by the displacement of air around an airfoil.*
 - Form drag can be decreased by streamlining a shape

- **Paper Airline Drag Experiment**

- Have the students hypothesize about what they think will happen when you add flaps to a paper airplane.
 1. Make a standard 'dart' design paper airplane. A template can be found and be found in Educational Resources >Lesson 4.
 2. Clear an area, and throw the paper airplane. Place an object where it lands to mark how far it flew.
 3. Now add 'flaps' to the plane by cutting approx 1" slits in the wing and folding the paper down.
 4. Have the students predict how this added design feature will affect the distance the airplane will fly.
 5. Start at the same location, and throw the modified paper airplane.
- What did they observe?
- Explain that the added flaps increased Drag on the paper airplane. This increased Drag shortened the distance that the airplane flew.

- **IN-CLASS STUDENT EXPERIMENT 4: THE FORCE OF THRUST**

- *Newton's Third Law of Motion: for every action there is an equal and opposite reaction.*
- Thrust is created when air is exhausted out the back of the engine, moving the airplane forward in the opposite direction
- Mathematician and Physicist Sir Issac Newton discovered the 3 laws of motion in 1678.

- **Balloon Powered Thrust Experiment**

- Have the students hypothesize about what they think will happen when you release the air out of the balloon.
 1. Blow up the balloon and tie it shut.
 2. Tape a straw to the balloon (you may want to cut the straw or use one with a wide diameter. The goal is to control the path of the balloon, and not hinder its movement.)
 3. Run a string through the straw, and have a student hold each end so that the string is taut.
 4. Have the students predict which direction the balloon will travel.
 5. Place the balloon at one end of the string, and start a launch countdown.
 6. Reaching "One!", cut the end of the balloon off with a pair of scissors.
- What did they observe?
- Explain that the action was air rushing to escape the end of the balloon, resulting in a reaction of motion by the balloon in the opposite direction.

- **IN-CLASS STUDENT EXPERIMENT 2: THE FORCE OF WEIGHT**

- *Weight or Gravity: the predictable force that pulls all objects towards earth. The heavier an object, the more gravity effects it.*
 - Sir Issac Newton discovered gravity in the 1680's



- **Heavy Objects Weight Experiment**
- Have the students hypothesize about what they think will happen when you continue to add books to one outstretched arm but not the other.
 1. Collect several different sized books from the classroom - the heavier the better.
 2. Ask for a student volunteer, and have him or her hold their arms straight out, palms up. Instruct the student to keep both hands at the same height throughout the experiment.
 3. One at a time, place books in one hand, but not the other. Keep adding books until the student is unable to maintain the same height with both hands.
- What did they observe?
- Explain that an airplane is always counteracting the force of gravity. However, the heavier an object is, the more force (Lift) must be created to counteract the downward motion to keep it airborne.
- **OTHER POSSIBLE IN-CLASS ACTIVITIES - FOUR FORCES**
 - Science experiments that explore the other forces of flight:
 - Drag: Drag Tubes, Friction Drag Strips
 - Thrust - Balloon Powered Jet Straws, Baking Soda Rocket
 - Weight - Flour Bag Lifting, Shrink Wrap Student.
 - More information about these activities can be found in the AAP Educational Resources >Lesson 3 folder in Comply365.

POST FLIGHT CHECKLIST

Wrapping Up Your Classroom Visit



1. Review

- What did they learn today?
- Where else could you use the Scientific Process to solve a problem?
- Emphasize the importance of the Adopt-A-Pilot **F.L.I.G.H.T.** Values. Which values did they use today?
- Are there any questions about what you've talked about today?

2. Brain Booster

- Introduce the at home **BRAIN BOOSTER ACTIVITY: 3RD SOLO FLIGHT - UP, UP AND AWAY.**
 - This activity reviews what they did in class today.
 - Encourage the students to share this activity with an adult/mentor.

3. Looking Ahead

- Give them a glimpse of the next time you will be in class - a fun day wrapping up the program.
- Discuss where you will be flying between now and your next visit.
- If the teacher is doing the **LESSON 3A: WHILE THE PILOT IS AWAY - FEEL THE FORCES** do they have questions?
- Be prepared to connect with the students between visits:
 - Send emails or postcards.
 - Take photos, videos, or collect souvenirs to share.
 - Arrange a time to call or FaceTime®.
- Next lesson wraps up all your Adopt-A-Pilot program. A few things to discuss with the teacher:
 - Are they going to participate in the Adopt-A-Pilot Tie Contest? Copy the Tie Contest Entry forms.
 - Are you going to bring a treat (cupcakes, pizza, pretzels, etc.) for the students? Are there any allergy concerns? Do you need to bring plates, napkins, etc.?
 - Student completion certificates are provided in the Teacher's Program Supply Box. There is a space for you and the teacher to sign. It is a good idea to ask the teacher to fill in student names for you to avoid spelling mistakes.

Lesson 4:

Destinations . . . Adopt-A-Pilot Completion Day!

LESSON OBJECTIVE

To wrap up your Adopt-A-Pilot program in a fun, memorable way.

PRE-FLIGHT CHECK

Materials You Will Need



- **Review**
 - Student Workbooks
- **Celebration**
 - Adopt-A-Pilot Completion Certificates (in the Teacher's Program Supply Box)
 - Southwest Goodies (in the Teacher's Program Supply Box)
 - (Optional): Materials for games and fun activities can be found at Educational Resources >AAP Lesson 4 folder.*
- **Suggested Videos for this Lesson**
 - Gary Kelly as George Washington
 - How Our Model Planes Are Made

*To print material go to www.southwest.com/adoptapilot/curriculum

Video Note: You can find the suggested videos and photos at: Comply365>Not Flying>Volunteerism & Adopt-A-Pilot>Educational Resources. Check with the teacher to see what A/V adapter is required.



TAKE-OFF

Lesson Guide for Your Classroom Visit



1. Reconnect and Review

- Reconnect with the students:
 - Share any pictures, souvenirs you collected or tell them about something you've done since your last visit.
- Review **LESSON 3: WHAT IS UP...WITH AVIATION SCIENCE**
 - Note: Engage reluctant students by asking them a few specific questions.
 - Ask a few questions about Lesson 3. Who can list the four steps of the Scientific Process? Who can explain Bernoulli's Principle?
- Invite a few students to share their **3RD SOLO FLIGHT - UP, UP AND AWAY** activity.
- What does each letter of the **F.L.I.G.H.T.** Values mean? Ask the students how they demonstrated some of the values while you were away.
- Did the class participate in **LESSON 2A: WHILE THE PILOT IS AWAY... WHERE IN THE WORLD** lesson? Review what they discovered.

2. Play some Games.

Note: For a complete description of each game, including the rules, questions, paper airplane pattern, bingo cards, materials, etc. They can be found under Educational Resources >Lesson 4.

• GAME 1 - 'DING' YOU ARE NOW FREE TO LEARN!

- Similar to Jeopardy, students work as a team to answer questions about subjects that they have covered during Adopt-A-Pilot. Keep score one team will be the '**DING**' champions.

• GAME 2 - SO YOU THINK YOU CAN FLY?

- This is a paper airplane contest, each student will 'build' their own paper airplane (a pattern is located) to see first-hand the four forces of flight at work.
- Award prizes for longest distance, craziest flight path, etc.

• GAME 3 - 'BINGO' ... THE SOUTHWEST AIRLINES WAY!

- This bingo is different than the 'traditional bingo' you've played. Instead of calling out letters and numbers, you will be calling out 3-Letter City Codes.

3. Adopt-A-Pilot Tie Contest

- If the class will be participating this is a great time to discuss the Adopt-A-Pilot Tie contest. Some things to think about when designing the tie:



- The design that most accurately represents the core principals of the Adopt-A-Pilot program will be selected. What did Adopt A-Pilot mean to you? What did you learn? What did you like best?
- Think of what would look good on a tie - artwork that is neat, clear, vivid and eye-catching!
- Only one entry per student and only one student per entry.
- Will you or the teacher be mailing the entry forms to headquarters?
- Previous tie design winners can be found at Educational Resources >Resource Photos

4. Let's get this party started

Note: Consider taking individual pictures with each student.

- Light the candles, turn on the music, it is time to celebrate!
- Hand out the Adopt-A-Pilot Completion Certificates. This is a great time to have the students practice good hand shakes.
- If you have arranged to hand out goodie bags (or have a snack) now is the time.

POST FLIGHT CHECKLIST

Wrapping Up Adopt-A-Pilot



1. Review

- Thank the teacher and the students for joining you on this journey.
- Ask a few students to share their favorite Adopt-A-Pilot experience.
- Encourage them to remember the Adopt-A-Pilot **F.L.I.G.H.T.** Values as they travel through life.
- Thank them and wish them all well as they continue to expand their horizons. They can do/be anything they want!
- If you want, and as school policy allows, invite them to keep in touch over the coming years so you can cheer them on as they pursue their dreams.

2. Looking Ahead

- Check in one final time with the teacher to see if they have any suggestions for the years ahead.

It is Pilots like you that make this program a huge success, thank you from the bottom of our hearts!

— The Adopt-A-Pilot Team



TEACHER LESSONS

Getting Started With Adopt-A-Pilot



Hello “Adopted” Teachers!!

Hello from the Adopt-A-Pilot team! Thank you for allowing us the opportunity to participate in your classroom activities. Every year hundreds of Southwest Airlines Pilots from all across the country volunteer to spend a few of their days off in schools doing Adopt-A-Pilot. All of them are there because they want to do something to benefit the students - the next generation of American leaders.

The front of this booklet contains the Adopt-A-Pilot Pilot’s Handbook. In it, you can preview the basic lesson plans that most Pilots follow for their visits. However, flexibility and creativity are highly encouraged. Be sure to discuss with your Pilot what material the two of you want to present to your students.)

If you decide that your Pilot visits are sufficient for your classroom’s program, we are confident that you’ll be very happy with the amount of educational material presented. However, many teachers report back that they prefer to supplement the Pilot’s classroom visits with additional lessons. If you decide to go this route, we have developed three ‘While Your Pilot is Away.....’ lessons to assist you. You’ll find them on the following pages.

Should you need anything, please don’t hesitate to reach out to the Adopt-A-Pilot leadership team at adoptapilot@wnco.com. And again, thank you for allowing us the privilege of being a part of your school year.

- The Adopt-A-Pilot Team

PILOT/TEACHER NOTES



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Lesson 1A:

While The Pilot Is Away . . . The F.L.I.G.H.T. Values

LESSON OBJECTIVE

To review the **F.L.I.G.H.T.** Values introduced by your adopted Pilot and to help the students find ways to apply them to their own lives.

PRE-FLIGHT CHECKLIST

Materials You Will Need

- **Cruise - The Adopt-A-Pilot F.L.I.G.H.T. Values**

- Student Workbooks
- Dictionaries (enough for each group of students)
- Thesauri (enough for each group of students)



TAKE-OFF

Lesson Guide To Follow-Up After Your Pilot's Visit

1. Applying the F.L.I.G.H.T. Values

Note: Each of the Adopt-A-Pilot **F.L.I.G.H.T.** Values are explained in detail on the inside cover of both workbooks.

- **Objective:** To help the students define the **F.L.I.G.H.T.** Values in a way that makes sense to them while building their vocabulary.
- Your Pilot introduced you to the **F.L.I.G.H.T.** Values this week. These values have been identified as some of the most important in determining a child's success as they go forward through life.
- By encouraging students to develop their own definition for each value they are more likely to remember them and be able to apply them in their own life.



STUDENT ACTIVITY: CRUISE - LOOKING AT THE VALUES

- This activity can be done individually or by dividing the class into groups of 3 to 5 students. As you work through this activity emphasize that it's important for the students to develop an understanding of each **F.L.I.G.H.T.** Values as it relates to their own life. Answers the questions in the Student Workbook will vary slightly
 - **FEARLESSNESS:**
 - My Definition:
 - Synonyms: Bravery Courage Heart
 - **LEADERSHIP**
 - My Definition:
 - Synonyms: Influence Authority Direction
 - **IMAGINATION**
 - My Definition:
 - Synonyms: Creativity Vision Insight
 - **GRATITUDE**
 - My Definition:
 - Synonyms: Thankfulness Appreciativeness Gratefulness
 - **HONESTY**
 - My Definition:
 - Synonyms: Integrity Trustworthiness Honor
 - **TENACITY**
 - My Definition:
 - Synonyms: Perseverance Determination Persistence
- *Note:* There are definite correct answers for each definition and synonyms, but what is more important is for the students to develop a meaning they can relate to.



POST-FLIGHT CHECKLIST

Wrapping up While the Pilot is Away



1. Review

- What did they learn today?
 - Can they give an example of where they have used one of the **F.L.I.G.H.T.** Values in school this year?
 - How did using the **F.L.I.G.H.T.** Values lead to a positive outcome?
 - What could they do to help remember what the **F.L.I.G.H.T.** Values are (i.e. make a collage, place them on their bathroom mirror, etc.)

2. Looking Ahead

- The upcoming lesson is all about Geography, time zones and calculating time changes. To prepare:
 - What do they already know about time zones?
 - Gather some information about different 3-Letter Airport Codes on the Internet
 - Write down any questions they want to ask their Pilot.
 - Complete their **BRAIN BOOSTER ACTIVITY: 1ST SOLO FLIGHT - WHEN I GROW UP, I WANT TO BE.**
 - Be ready to share some of the activities they completed while their Pilot was away.

PILOT/TEACHER NOTES



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Lesson 2A:

While The Pilot Is Away... Where in the World?

LESSON OBJECTIVE

Keep your class connect to their 'adopted' Pilot in between their visits while giving a real-world perspective on Geography and uses for basic math.

PRE-FLIGHT CHECK

Materials You Will Need

- **Cruise - Tracking Your Pilot's Journey**
- Student Workbooks
- Adopt-A-Pilot Classroom Map (in the Teacher's Program Supply Box)
- The 3-Letter Airport Code Chart and City to City Mileage Chart (in the Addendum)
- Pilot's Trip Sheet (given to you by the Pilot)
- The Capital and Postal Code List (inside back cover - both workbooks)
- Colored pencils or markers
- The Internet or Atlas



TAKE-OFF

Lesson Guide for While Your Pilot Is Away

Geography and Math

- **Objective:** To study the physical location of states/countries/territories and their capitals and then complete some 'real-world' math problems from your Pilot's data.
 - As a general rule Pilots fly from one airport to another in a straight line. As your students fly from city to city emphasize some of the geographical features their Pilot might be flying over: (Grand Canyon, Mississippi River, Rocky Mountains, etc.)
 - Relate current events to where your Pilot is flying. Is there a major weather system in the area, a national convention, a world leader visiting.



- Help students relate to different cultures based on where their Pilot travels.
 - Do they eat different cuisine?
 - Use different words for the same thing (pop vs. soda, etc.)
 - Does their geography effect how they live (winter in New York vs Arizona)
- You can track your Pilot's flight(s) on the computer by visiting [help://flightaware.com](http://flightaware.com). This can be done in real time or after the flight has been completed.
- Use Google Earth® look at the airport, or explore the sights where your Pilot is flying.
- Share any emails, postcards, photos, or videos that your Pilot has sent.
- **STUDENT ACTIVITY 1: CRUISE - TRACKING YOUR PILOT'S FLIGHTS**
 - To complete this activity you will use Your Pilot's Trip Sheet.
 - The Trip Sheet is their actual schedule.
 - The times listed will be based on a 24-hour clock.
 - The times are not used in any of the lessons but this can be a great conversation starter about why some industries use military time.
 - The schedule may be printed in 'Herb Time' instead of local city time. Ask your Pilot about 'Herb Time' if you want some interesting Southwest history.
 - An explanation on how to read your Pilot's Trip Sheet can be found in the Student Workbook on page 32.
 - Each departure airport and arrival airport is listed by their corresponding 3-Letter Airport Code. A list of all the cities Southwest serves and their corresponding 3-Letter Airport Codes are located in the Addendum.
 - Answers to the questions in the Student Workbook.
- **STUDENT ACTIVITY 2: CRUISE - LOOKING AT THE DATA**
 - Have the students work through the three math exercises using your Pilots trip sheet.
 - One: Calculate how far your Pilot flies during a trip
 - Two: Calculate the mean and median
 - Three: Calculate fractions and/or percentages
 - Answers to the questions in the Student Workbook will vary.

POST FLIGHT CHECKLIST

Wrapping Up Your While The Pilot is Away Lesson



1. Review

- What did they learn today?
- Has anyone been to one of the cities that their Pilot flew to?
- Are they surprised at how many miles their Pilot flies in a day or a week?
- Where would your Pilot be if they had left the students' home town and traveled the same number of miles non-stop? London, Lima? Use <http://www.timeanddate.com/worldclock/distances.html> to find out.
- What do the students find most interesting about their Pilot's schedule?
- Is it more interesting to do math calculation using real world' data?

2. Looking Ahead

- The upcoming lesson is all about the Scientific Process and the science of flight.
- What do they already know about the Scientific Process?
- Do students know what makes an airplane fly?
- Write down any questions they want to ask their Pilot.
- Complete their **BRAIN BOOSTER ACTIVITY: 2ND SOLO FLIGHT - A JOURNEY THROUGH TIME!** - Be ready to share some of the activities they completed while their Pilot was away.

PILOT/TEACHER NOTES



Lined area for notes, consisting of 20 horizontal lines.

Lesson 3A:

While Your Pilot Is Away ... The Four Forces of Flight!

LESSON OBJECTIVE

To review the Four Forces of Flight, and to have the students recognize how they apply in non-aviation related settings..

PRE-FLIGHT CHECK.....

Materials You Will Need:

- Student Workbook



TAKE-OFF.....

Lesson Guide for While Your Pilot Is Away

Applications of the four forces

- **Objective:** To review what your students learned during their Pilot's last visit and then see how those forces are experienced in other areas. As a reminder the Four Forces are:
 - Lift - The upward force.
 - Weight - The downward force
 - Thrust - The forward force
 - Drag - The rearward force
 - **STUDENT ACTIVITY: CRUISE - FEEL THE FORCE**
 - Have the students work individually, then discuss their answers as a class.
 - Answers to the questions in the Student Workbook.
1. Your Pilot told you that these forces were equal in level and unaccelerated flight. What do you think they meant by "level" and "unaccelerated"? Neither gaining nor losing altitude, and not getting faster or slower. This occurs when Lift is equal to Weight, and Thrust is equal to Drag.



2. You're helping to carry in the groceries. One bag has two gallons of milk, and the other has two boxes of cereal. You choose to carry the bag with the cereal because you know it'll be easier to carry. **Weight**
3. A rocket launches into space by igniting flammable gasses and pointing them at the ground. **Thrust**
4. Race cars have a spoiler on the back that looks like a wing. The faster the car goes, the more it pushes the back tires down to improve traction. **Lift (upside down!)**
5. Olympic swimmers wear racing caps and streamlined bathing suits to help them swim faster. **Drag**
6. In a BINGO machine, a fan moves air quickly through a tube. A door is opened, and the low pressure inside draws a ping pong ball into the tube. **Lift (due to Bernoulli)**
7. In drag racing, the driver will deploy a parachute to help slow the car after crossing the finish line. **Drag**
8. You're using a garden hose with a spray nozzle, when you hear the ice cream man driving down the road. In your excitement, you accidentally drop the hose, which whips around crazily and sprays water everywhere. **Thrust**
9. Your oh-so-nice-and-kind teacher tells your class that homework has been cancelled for the rest of the month. You take your huge math book out of your backpack, making it way easier to carry. **Weight**

Note: There are definite correct answers for each question, but the forces do interact in interesting ways, especially Lift with Thrust, and Weight with Drag.

POST FLIGHT CHECKLIST

Wrapping Up Your While the Pilot is Away Lesson



1. Review

- What did they learn today?
- Can they think of other examples where you experience the four forces?

2. Looking Ahead

- Encourage the students to come to class and be ready to celebrate!
- This is the perfect opportunity to exhibit all of their **F.L.I.G.H.T.** Values.
- Complete their **BRAIN BOOSTER ACTIVITY: 3RD SOLO FLIGHT - UP, UP AND AWAY.**
- Be ready to share some of the activities they completed while their Pilot was away.

We know how valuable classroom time is. We are sincerely grateful for allowing us to share part of the year with you!
— The Adopt-A-Pilot Team



ABOVE AND BEYOND

PILOT/TEACHER NOTES



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Above and Beyond

Some Additional LUV For You!

LESSON OBJECTIVE

Optional activities for the students to see more about a Pilot's life at work.

PRE-FLIGHT CHECK

Materials You Will Need:

- Student Workbook

TAKE-OFF

Lesson Guide for Your Classroom Visit

1. COMMUNICATION ACTIVITY 1: CRUISE - WITH HAND SIGNALS

- There are many different ways to communicate; different languages (including sign language), facial expressions, gestures, etc.
- These hand signals are how Pilots communicate with Ramp Agents.
- Emphasize the importance of being accurate and standardized when communicating in this 'language'.
- Have the students practice guiding an airplane into the gate using these signals.

2. COMMUNICATION ACTIVITY 2: CRUISE - WITH THE PHONETIC ALPHABET

- The first internationally recognized phonetic alphabet was adopted in 1927. It is used to avoid confusion when spelling out loud. It is kind of like talking in code.
- Being clear and accurate when you communicate is important - it's essential to safety, it avoids mishaps, and prevents misunderstandings.



- Make sure the students understand that this is 'official' - they can not make up their own words for each letter.
- Have the students practice spelling different words using the phonetic alphabet. The **F.L.I.G.H.T.** Values are a great set of words to start with.

POST FLIGHT CHECKLIST

Wrapping Up These Lessons

- Discuss with the teacher how they could continue to use these *optional* activities in the classroom

Some ideas:

- The phonetic alphabet to practice weekly spelling assignments.
- Hand signals to 'control' the noise in the classroom.



CAPITALS AND POSTAL CODES LIST

US STATE	CAPITAL	POSTAL
Alabama	Montgomery	AL
Alaska	Juneau	AK
Arizona	Phoenix	AZ
Arkansas	Little Rock	AR
California	Sacramento	CA
Colorado	Denver	CO
Connecticut	Hartford	CT
Delaware	Dover	DE
Florida	Tallahassee	FL
Georgia	Atlanta	GA
Hawaii	Honolulu	HI
Idaho	Boise	ID
Illinois	Springfield	IL
Indiana	Indianapolis	IN
Iowa	Des Moines	IA
Kansas	Topeka	KS
Kentucky	Frankfort	KY

US STATE	CAPITAL	POSTAL
Louisiana	Baton Rouge	LA
Maine	Augusta	ME
Maryland	Annapolis	MD
Massachusetts	Boston	MA
Michigan	Lansing	MI
Minnesota	St. Paul	MN
Mississippi	Jackson	MS
Missouri	Jefferson City	MO
Montana	Helena	MT
Nebraska	Lincoln	NE
Nevada	Carson City	NV
New Hampshire	Concord	NH
New Jersey	Trenton	NJ
New Mexico	Santa Fe	NM
New York	Albany	NY
North Carolina	Raleigh	NC
North Dakota	Bismark	ND

US STATE	CAPITAL	POSTAL
Ohio	Columbus	OH
Oklahoma	Oklahoma	OK
Oregon	Salem	OR
Pennsylvania	Harrisburg	PA
Rhode Island	Providence	RI
South Carolina	Columbia	SC
South Dakota	Pierre	SD
Tennessee	Nashville	TN
Texas	Austin	TX
Utah	Salt Lake City	UT
Vermont	Montpelier	VT
Virginia	Richmond	VA
Washington	Olympia	WA
West Virginia	Charleston	WV
Wisconsin	Madison	WI
Wyoming	Cheyenne	WY

COUNTRY/TERRITORY	CAPITAL	POSTAL
Aruba	Oranjestad	AW
Bahamas	Nassau	BS
Belize	Belmopan	BZ
Costa Rica	San José	CR
Cuba	Havana	CU
Dominican Republic	Santo Domingo	DO
Grand Cayman	George Town	CI
Jamaica	Kingston	JM
Mexico	Mexico City	MX
Puerto Rico	San Jaun	PR
Turks & Caicos	Cockburn	TC
United States	Washington, D.C.	USA

