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WHY ARE LETTERS (AND NUMBERS) SO IMPORTANT WHEN FLYING AIRPLANES?

Pilots communicate with lots of people on the ground and with other pilots over the radio. This helps ensure that they are always in the right position and are never too close to another airplane or terrain.

LETTERS ARE USED TO COMMUNICATE:

- Which gate to park at—e.g., D-34
- Which runway to use for takeoff or landing-e.g., 10-R
- Which taxiways to use to get to the runway for takeoff—e.g., right turn on D, left turn on C-3, hold short P
- Ways to define a pilot's flight path:
 - Highways in the sky-e.g., join V-204
 - Five-letter points mapped by GPS—e.g., JETSA
 - Three-letter points over radio navigation stations-e.g., SEA

Pilots must be able to correctly understand what's being communicated and be understood by others quickly. A small error, like confusing "C" for "Z," could mean that an airplane is not where it is supposed to be or that it is too close to another airplane or terrain.

In addition, pilots are sometimes asked to deviate from their flight plan due to unforeseen events such as a thunderstorm blocking the original route. Being able to clearly and quickly understand this new position is essential for the safety and security of the passengers, crew, and aircraft.

WHY DO PILOTS USE WORDS TO CLEARLY EXPRESS LETTERS?

Some letters sound similar to others and can be confused easily. For example, you are much less likely to confuse "Charlie" for "Zulu" than "C" for "Z."

ACTIVITIES

Activity 1: Review the Aviation Alphabet Aloud with the Class

Associate each word with something the students can relate to.

- Alpha, like number one.
- Bravo, like great job!
- Charlie, like Charlie and the Chocolate Factory.



Activity 2: Spell Your Neighbor's Name

- Start by stating your name and spelling it out with normal letters
- Repeat your name with the aviation alphabet and have the students write it down
- Write your name on the board and see who spelled it correctly
- Ask a student to tell you their name, and spell it out with the alphabet
- Have the students partner up and spell out each other's names with the alphabet

Activity 3: Spell Your Favorite Color

- Spell out your favorite color to the class and have them write it down
- Have the students partner up and spell out each other's favorite colors without saying the color

Activity 4: Spell Out a Secret Word

- A thunderstorm just popped up ahead, and air traffic control needs to send you on a new route
- You don't know the name of this new route, so they spell it out for you
 - "Flight 243, for weather ahead turn right direct SODAA."
- Ask the class to write down your new flight route and see who got it right
- Point out that anyone who didn't copy SODAA down correctly may be going to the wrong place or straight into another thunderstorm!
- Have each student think of a secret word in their mind without telling anybody
- Spell out that word to their partner and have them write it down

Activity 5: Make Your Flight Plan

- Put some very similar fixes on the board like EMPRE, MPIRE, MMPIR, EMPRR, EMPPR
- State your flight plan using the alphabet to the students, "Flight 243 is direct EMPRE, direct MPIRE, direct MMPIR, direct EMPRR, direct EMPPR"
- Air traffic control says your flight plan needs to be revised, so have the students pick a new route using these fixes in a different order
- Have the students relay their new routes to their partners

Activity 6: Design an Airport

- > Your local city has a problem—they built a new airport like the one attached, but the airplanes can't use it because none of the gates, taxiways, or runways have names
- No one knows where to go, or how to get there
- Let's name them all so we can fly
- The city also built parallel runways without naming them properly—let's fix that!
- Draw the airport on the board or pass out the attached airport, and have the students help you name everything







Activity 7: Taxi for Departure

- Now that you have properly named your city's airport, let's taxi for takeoff
- Give the students an example of taxi instructions from the gate to the runway
- Have students partner up and instruct each other to the runway
- Remember, airplanes can't back up. If you make a wrong turn, you'll have to take the long way around and may even have to close a runway temporarily!

Activity 8: Taxi for Arrival

- We've just landed at our home airport, but we still need to taxi to the gate
- Again, give the students an example of taxi instructions from the runway to the gate
- Have students partner up and instruct each other to the gate
- Remember, airplanes can't back up. If you make a wrong turn, you'll have to take the long way around and may even have to close a runway temporarily!

Activity 9: Let's Improve Our Airport

- Pilots from all over the world will use our airport, but is it easy to use?
- Could we rename some of our facilities so that it is less confusing or clearer?
- Are there certain parts of the airport pilots struggle with or that are trouble spots?

