



Carried Away by Carriers

By Joy Schneider



Check out this aircraft CARRIER. It has a full-length FLIGHT deck that measures 4.5 acres! This flight deck acts as a runway which allows military aircraft to be deployed in areas all across the world where there are no static (fixed) MILITARY bases on land. This is made possible because an aircraft carrier serves as a military airbase right on the sea!

Spell: FLIGHT MILITARY CARRIER

An ____ is a warship that serves as a military airbase. AIRCRAFT CARRIER
Military aircraft can be deployed all across the ____ from a carrier. WORLD
The carrier's flight ____ allows the aircraft to be deployed. DECK
What size is the flight deck? 4.5 ACRES

Question Type Key

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN – VAKT



Give me an antonym for static. MOVING, CHANGING

What does the flight deck allow the carrier to do? DEPLOY AIRCRAFT IN AREAS WHERE THERE ARE NO STATIC BASES

Do you know the name of the air force base in Maryland? JOINT ANDREWS

VAKT Trace your finger along the planes on the flight deck

This amazing craft is a symbol of strength among the world's most powerful militaries and it's no wonder, these nuclear-powered supercarriers are capable of carrying between 5 to 6 thousand sailors and "air wing" (command staff) PERSONNEL as well as approximately 90 aircraft. A "city at sea" as they are often called is an accurate description. With this many people on board all working, eating, sleeping, or using the "ready rooms" to relax, watch a movie or discuss business it *is* like a small city. Yet these carriers are notably different than any city on dry land.

Spell PERSONNEL NOTABLY

An aircraft carrier is a symbol of _____. STRENGTH

What type of power do these supercarriers run on? NUCLEAR

How many aircraft can one carrier hold? 90

How many sailors and air wing personnel are on a carrier? 5-6 thousand

How is a carrier often described? CITY AT SEA

What type of personnel are air wing? COMMAND STAFF

What is a ready room? WHERE PEOPLE ON THE SHIP CAN RELAX, WATCH A MOVIE OR DISCUSS BUSINESS.

Tell me two things that you might find people on board doing? WORKING, EATING, SLEEPING, RELAXING, WATCHING A MOVIE

If you were going to spend 48 hours on an aircraft carrier what might we find you doing? Why?

So you might be wondering what life in a floating city is like. Well conditions are shall we say... a little cramped. Sixty people can be found sleeping in each BERTHING compartment (sleeping quarter) in single size bunks called racks. These racks are stacked three beds high. If you need to pass someone else in the corridor or hallway you often have to turn sideways to squeeze past and the

Question Type Key

2

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN - VAKT



stairwells are built at a nearly vertical angle to save space. Each person does have their own locker and a stowage bin for personal items but the bathrooms and common areas are shared. Not much privacy here.



Spell CRAMPED BERTHING COMMON

What are the sleeping quarters called? Berthing compartments

Each person has their own locker and ____ bin. Storage

What did I say that you won't find much of on a carrier. Privacy

What is another word for corridor. Hallway

Racks of bunks are ____ beds high. 3

How many people might you find in the sleeping quarters. 60

Describe what happens if you need to pass someone in the corridor of a carrier.

You have to turn sideways and squeeze past.

Tell me one of the things given to each person on the carrier. A locker, stowage bin

Describe how the stairwells on a carrier are built and why. They are nearly vertical to save space

Tell me one of the areas that are shared on a carrier. Bathrooms, common areas, sleeping quarters/berthing compartments

Besides an aircraft carrier, name another place where the sleeping quarters and bathrooms are very tight.

Each DEPLOYMENT (movement of troops or equipment to a place or position for military action) for an aircraft carrier is between 6-9 months annually but those other months do not become vacation days for the crew. Time off the ship is

Question Type Key

3

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN – VAKT



dedicated to training and preparation for the next deployment. For the flight deck crew work days can last 12 to 22 hours - six days a week. This job demands complete devotion.

Spell DEPLOYMENT DEVOTION

What word means a movement of troops or equipment for military action?

Deployment

What does this flight deck job demand? Devotion

Time off the ship does not become ____ days. Vacation

How many months can a deployment last? 6-9 months

How many hours can a work day last for the flight deck crew? 12 to 22 hours

What is time off the ship dedicated to? Training and preparation for the next deployment

One of the reasons this job requires complete devotion is that the flight deck is considered the world's most dangerous working environment. Aircraft take off, land, taxi (move slowly along the ground before takeoff or after landing), refuel and are armed (equipped with or carrying a weapon or weapons) here 24 hours a day on this 330m x 77m space, rain or shine. The actual number of casualties (a person killed or injured in a war or accident) outside of wartime is very low due to extremely strict safety measures and rigorous training. Some work hazards are being sucked into an engine intake, being hit by aircraft or PROPELLERS, fire and explosions that could blow personnel overboard!

Spell PROPELLERS RIGOROUS AIRCRAFT

The flight deck of a carrier is considered the world's most dangerous ____ ____.

Working environment

If something or someone is armed it is carrying a _____. Weapon

The actual number of _____ outside of wartime is very low. Casualties

What are the dimensions of the flight deck? 330m x 77m

What is one of the things an aircraft might be doing on the flight deck? Take off, land, taxi, refuel, get armed

What is one of the reasons that the casualty number is actually low? Extremely strict safety measures, rigorous training.

List two work hazards found on the flight deck. Sucked into an engine intake, hit by aircraft/propeller, fire, explosions blowing personnel overboard.

Question Type Key

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN - VAKT

4



Some careers do require a higher level of personal dedication and devotion than most. What is a career that could require this type of dedication and devotion that you would like to know more about?

So we know that flight decks are a danger zone but never fear, the flight deck personnel are provided with layers of safety measures on top of excellent training. There are safety nets around the edge of the flight deck and all flight deck personnel and pilots stop at the PARALOFT room located one level below the flight deck to pick up float coats, (self-inflating jackets with flashing distress lights activated by contact with water) and heavy-duty helmets called CRANIALS, which protect their head as well as hearing.

Spell DANGER FLIGHT EDGE

Flight deck personnel are provided with ____ of safety measures. Layers

What can be found all around the flight deck. Safety nets

Cranials protect a person's head and _____. Hearing

Where do personnel stop to pick up their safety gear? The paraloft

Tell me the two pieces of safety equipment that can be worn. Float coats, Cranials

Where is the paraloft located? One level below the flight deck

Describe how a float coat works. It self inflates when it comes in contact with water, it has a flashing distress light.

Where else besides a flight deck might someone wear gear to protect their hearing?

Let's look at landing! There is only about 500 feet of flight deck dedicated to runway space. This isn't enough to land these heavy high-speed jets so each plan has a TAILHOOK. The pilot's goal is to snag the tailhook on one of four ARRESTING wires (sturdy cables woven from high-TENSILE steel that are stretched across the deck and attached to HYDRAULIC cylinders below deck). This system can stop a 54,000 pound aircraft traveling 150 mph in two seconds. For a pilot to move up in rank they must be able to catch the third wire consistently. An aircraft that fails to catch an arrestor cable, called a BOLTER, must accelerate at full throttle, become airborne, go around and try again. The British developed the angled flight deck to make the take-off for the reattempt easier.



Spell RUNWAY SNAG HYDRAULIC TENSILE

Each jet has a ____ that acts as a snag. Tailhook

The jet uses its tailhook to snag an _____ wire. Arresting

What is the arresting wire attached to? Hydraulic cylinders

The arresting wires are made from high ____ steel. Tensile

How many feet of flight deck are dedicated to runway space? 500

How fast are the jets traveling when they come in to land? 150 mph

What is a bolter? A jet that fails to catch an arrestor cable

What did the British develop to help the bolters? An angled flight deck

What did I say that a pilot must do in order to move up in the ranks? Consistently catch the third wire

Take a minute to watch this video that shows several jets taking off from and landing on the USS Harry S. Truman during Operation Enduring Freedom.

<https://www.youtube.com/watch?v=lpOBwbwg7-s>

Landing successfully requires the pilot to approach the STERN (rear) of the deck at exactly the correct angle. The Landing Signals Officer's (LSO) job is to guide the aircraft to a successful landing using a radio and a collection of lights on the deck. If the LSO sees that the pilot is off course he/she radios for the lights to be ILLUMINATED to help the pilot correct or to "wave him off" (send him around for another attempt).

Spell EXACTLY CORRECT COLLECTION

What do we call the rear of the ship? Stern

To land a pilot must bring in his aircraft at exactly the correct _____. Angle

What does LSO stand for? Landing Signals Officer

When an LSO sends a pilot around for another attempt to land what phrase is used to describe it. Wave him off

When a pilot is waved off by an LSO what does he need to do? Go around for another attempt

For what reason might an LSO wave off a pilot? They are coming in at the wrong angle

What two things does the LSO use to help the pilot land? Radio, lights

Question Type Key

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN – VAKT

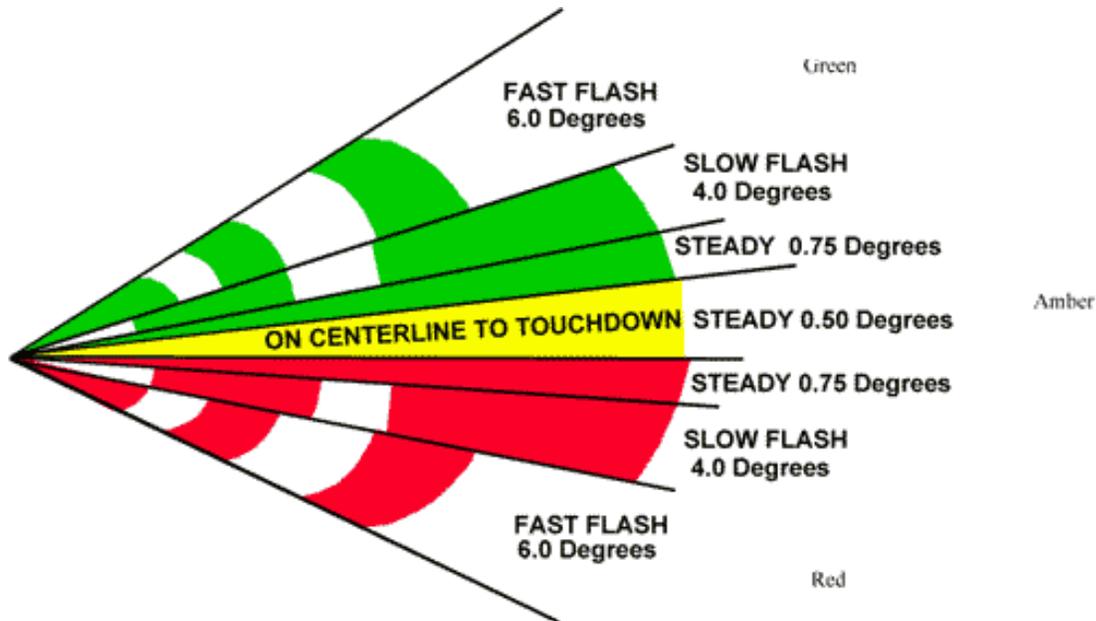


2020 I-ASC All Rights Reserved





Examine this image and we will learn a little more about the lights used on the deck for landing.



Long Range Line-up System

The diagram we just looked at is an illustration of the Long-Range Lineup System or LRLS. It is commonly referred to as the “lens” and consists of a series of lights, FRESNEL lenses (like a magnifying glass) and a GYROSCOPIC (spinning) platform. The lens sends out beams at different angles. Depending upon the angle of the aircraft upon approach the pilot will see certain color patterns. The pilot looks for an AMBER (yellow) light known as “meatball” then he knows he is right on!

Spell DIAGRAM BEAM

The light system we just looked at is called the Long Range ____ ____ . Lineup system

This system is commonly referred to as what? The lens

A ____ lens is like a magnifying glass. Fresnel

The amber yellow light is called ____ as a nickname. Meatball

How does the LRLS signal the pilot? By sending out beams at different angles. Depending on the angle they approach the pilot sees certain color patterns.

What two main components make up the LRLS? The Fresnel lens and the gyroscopic platform.

Question Type Key

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN – VAKT



What does a pilot look for to know they are coming in at the correct angle? An amber/yellow light known as meatball

Do you know how to say meatball in Italian? Polpetta

If the meatball appears along with green that's ok too but if the green lights show above the meatball he is too high...green lights below the meatball means too low and red below the meatball.... Look out! Way too low!

You might think that once the plane hits the deck the pilot would slam on the breaks. Nope. They do the complete opposite. They push the engines to full power!! This may seem COUNTERINTUITIVE (contrary to intuition or to common-sense expectation)but if the tailhook doesn't catch any of the arresting wires, the plane needs to be moving fast enough to do a bolter. Once landed the aircraft is moved to the side of the flight deck where the inactive aircraft are kept chained down.

Spell COUNTERINTUITIVE CHAINED BELOW

What color lights show above the meatball if the angle is too high? Green

If the pilots angle is way too low the pilot sees red below the ____ . Meatball

Once the plane hits the deck the pilot pushes the engines to ____ ____ . Full power.

What does the crew use to secure the inactive aircraft? Chains

The landed aircraft is moved to the ____ of the flight deck. Side

What does a pilot see if their angle is right on? An amber (yellow) light or meatball.

What does the pilot know about his angle if he sees green lights above the meatball. He is angled too high

If the pilot was about to crash into the flight deck what would he see from the LRLS? Red lights below the meatball

Why does the pilot push engines to full power? If they miss the arresting wires they can do a bolter or take off and try again.

Once landed what does the crew do with the aircraft? It is moved to the side of the flight deck and chained down.

What do you think of when I say "meatball"? Tell me why?

Take a look at some of these images of daily life on board an aircraft carrier.



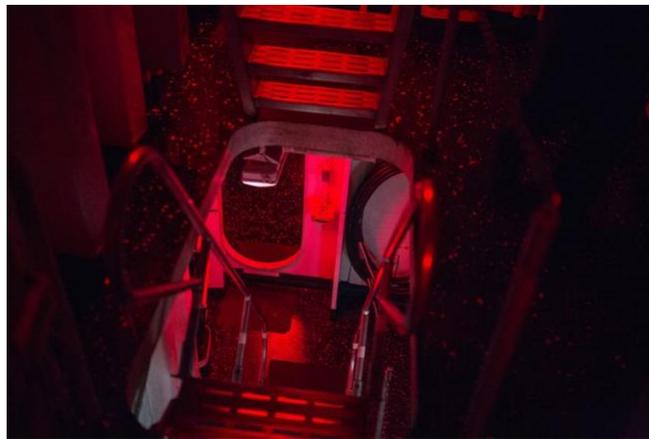
Sailors exercise on the hangar deck next to an airplane undergoing



service



Pilots wait for coffee at an onboard Starbucks



Above is one of the “nearly vertical” staircases. Different lights are used to preserve the night vision of the crew.

So is your interest PIQUED? Can you picture yourself living on an aircraft carrier? Or maybe you would need to give it a day or two on an actual carrier to know for sure. Well that is exactly what journalist Matt LUTTON did and he wrote an article about it. Matt was 8 years old and saw the movie Top Gun. He fell in love with

Question Type Key

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN – VAKT



everything “fighter jet” and the idea of “macho sailors protecting the free world”. So when he grew up he traveled to the PERSIAN Gulf and visited the USS Harry S. TRUMAN to see what life on a carrier actually looked like while at war. Would it be like the movies?

Spell PIQUED ARTICLE SAILOR

Matt Lutton has a career as a _____. Journalist

What movie did Matt watch? Top Gun

How old was Matt when he saw the movie Top Gun? 8

Matt traveled to the _____ Gulf. Persian

What did Matt fall in love with thanks to the movie Top Gun? Everything fighter jet, the idea of macho

Why did Matt visit the USS Harry S. Truman? To see what life on a carrier actually looked like while at war.

Do you know what famous actor played the role of Maverick in the movie Top Gun? Tom Cruise

Many people will make a visit to an area to help determine if they would be happy living there. Is there a place you would want to visit where you think you might enjoy living?

Do you have a favorite drink from Starbucks? What is it or why not?

Matt shares that “being on deck is awe- inspiring and brutal.. He summed it up in three words “noise, steam, danger”. He MARVELED at the “shooters”, (men and women that set up planes in the CATAPULTS for launch). Matt wandered about below deck and compared the atmosphere of “so many young people hanging out in small groups” to high school.

Spell MARVELED LAUNCH HANGING

Matt said that being ____ is awe-inspiring and brutal. On deck

A ____ is someone who sets up a plane for launch. Shooter

Matt _____ at the shooters. Marveled

How did Matt sum up being on deck? Noise, steam, danger

What is a shooter? A person that sets up planes in the catapults for launch

Question Type Key

10

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN - VAKT



What does Matt notice when wandering below deck? Young people hanging out in small groups like in high school

What is another job/career that you might sum up as noise, steam, danger. Why?

While on board Lutton asked Rear ADMIRAL BATCHELDER how he thought the world PERCEIVED (grasp, understand) these ships and their power. “Did they project a positive image of the U.S., he asked? The admiral responded, “ Whether or not people like the carrier, they must respect it. We are the hard side of DIPLOMACY”. (the skill of managing relationships between nations) In the closing of his article Matt reflects. He comments that he was “seduced by the sheer power of American naval aviation”. Then his mind thought back to the bombs and MISSILES he had seen, as well as some of the faces of the pilots. “Real human lives are at stake when a carrier is at war”, he states. In the end Matt comes to the realization that his “fond childhood memories” and dreams of flying a fighter jet, “all exist SOLELY because of war.

Spell PERCEIVED HUMAN DREAMS POWER

What word means to grasp or understand? Perceive

Admiral Batchelder responds that carriers are the hard side of what? Diplomacy

What did Matt say is at stake when a carrier is at war? Real human lives

What adjective does Matt use to describe his childhood memories? Fond

Tell me the things that Matt thought back to as he reflected on his time on the carrier. Bombs, missiles, faces of the pilots

What is Matt’s final realization? His fond childhood memories and dreams.... all exist solely because of war.

How does Matt say that the sheer power of naval aviation affected him? He was seduced by it.

Creative Writing-

Write a short story as if you and a friend spent 24 hours on an aircraft carrier.

or

Matt Lutton’s dream would not have been realized if it wasn’t for the unfavorable reality of war. Have you had a positive experience or accomplishment that might not have been realized if it wasn’t for an unfavorable aspect of life?



Joy Schneider is an S2C practitioner who lives in Florida with her three sons and Newfiepoo. They are all spellers (well not the dog :) She enjoys dramas with subtitles and helping to plan events for The Tampa Bay Letterboard Community.

<https://blog.museumofflight.org/fly-the-ball-and-other-facts-of-life-on-an-aircraft-carrier>

<https://science.howstuffworks.com/aircraft-carrier7.htm>

<https://dangerousjobsguide.com/jobs/aircraft-carrier-flight-deck-crew/>

<https://science.howstuffworks.com/aircraft-carrier4.htm>

<https://www.businessinsider.com/12-most-important-places-on-an-aircraft-carrier-2016-1#ready-rooms-4>

<https://mashable.com/2016/06/23/what-its-really-like-to-live-and-work-on-an-aircraft-carrier/>

Question Type Key

KNOWN – SEMI-OPEN – PRIOR KNOWLEDGE – MATH – OPEN – VAKT



2020 I-ASC All Rights Reserved

