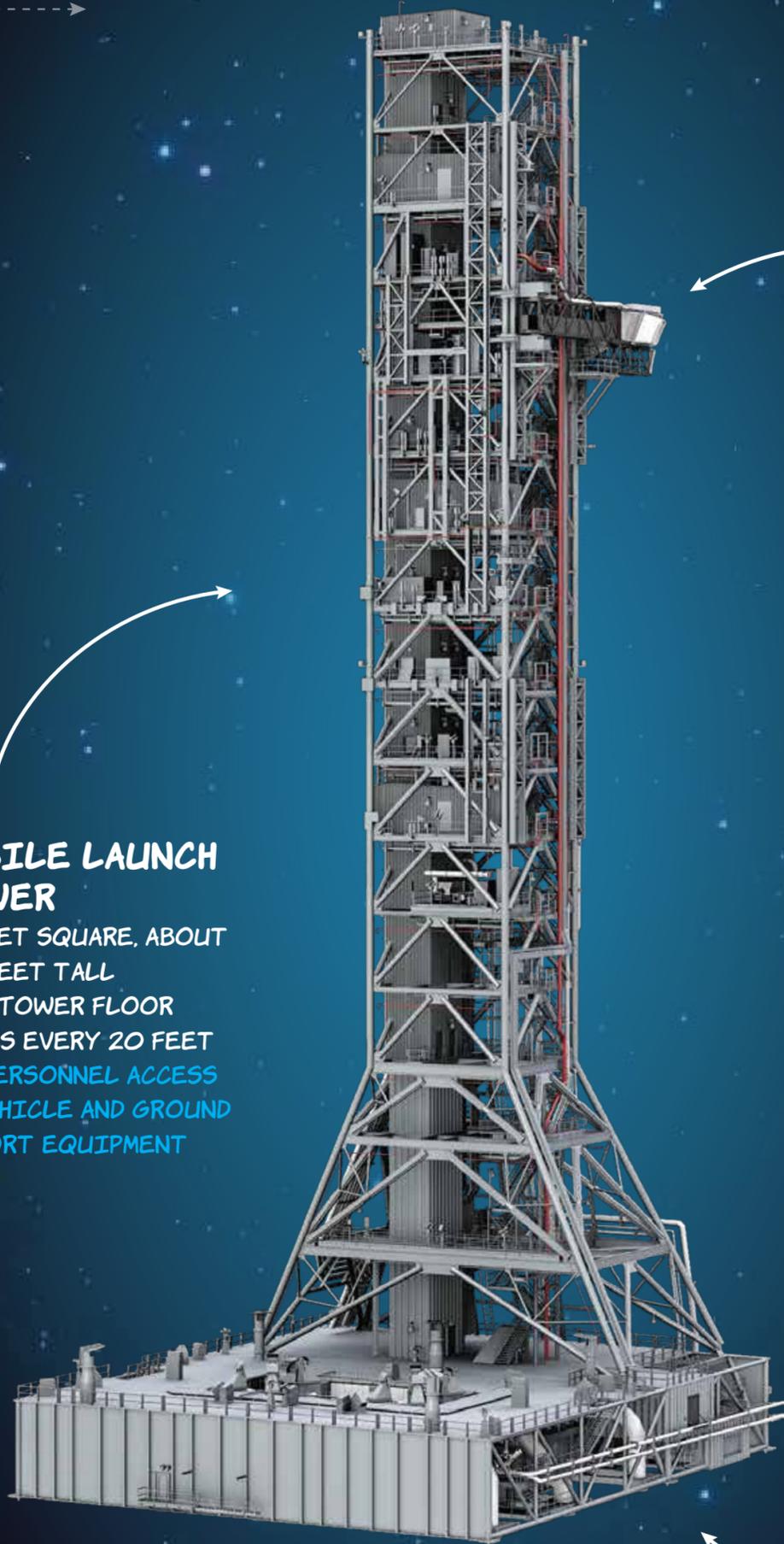


HOW TO DRAW

ARTIFACTS

NASA'S MOBILE LAUNCHER



MOBILE LAUNCH TOWER
40 FEET SQUARE, ABOUT 355 FEET TALL WITH TOWER FLOOR LEVELS EVERY 20 FEET FOR PERSONNEL ACCESS TO VEHICLE AND GROUND SUPPORT EQUIPMENT

CREW ACCESS ARM
AS ASTRONAUTS PREPARE FOR TRIPS TO DESTINATIONS BEYOND LOW-EARTH ORBIT, THEIR LAST STEPS BEFORE BOARDING ORION SPACECRAFT WILL BE ACROSS THE CREW ACCESS ARM (CAA) ON THE MOBILE LAUNCHER.

MOBILE LAUNCHER PLATFORM
STEEL STRUCTURE USED TO SUPPORT NASA'S SPACE LAUNCH SYSTEM SPACE VEHICLE WHICH IS ASSEMBLED (STACKED) VERTICALLY IN THE VEHICLE ASSEMBLY BUILDING (VAB) AND THEN TRANSPORTED TO LAUNCH PAD 39B. THIS PLATFORM REPRESENTS THE SUPPORT STRUCTURE FOR LAUNCH.

WE ARE GOING!

WITH THE *ARTEMIS* PROGRAM, NASA WILL LAUNCH THE FIRST WOMAN AND NEXT MAN TO THE MOON BY 2024, USING INNOVATIVE TECHNOLOGIES TO EXPLORE MORE OF THE LUNAR SURFACE THAN EVER BEFORE.

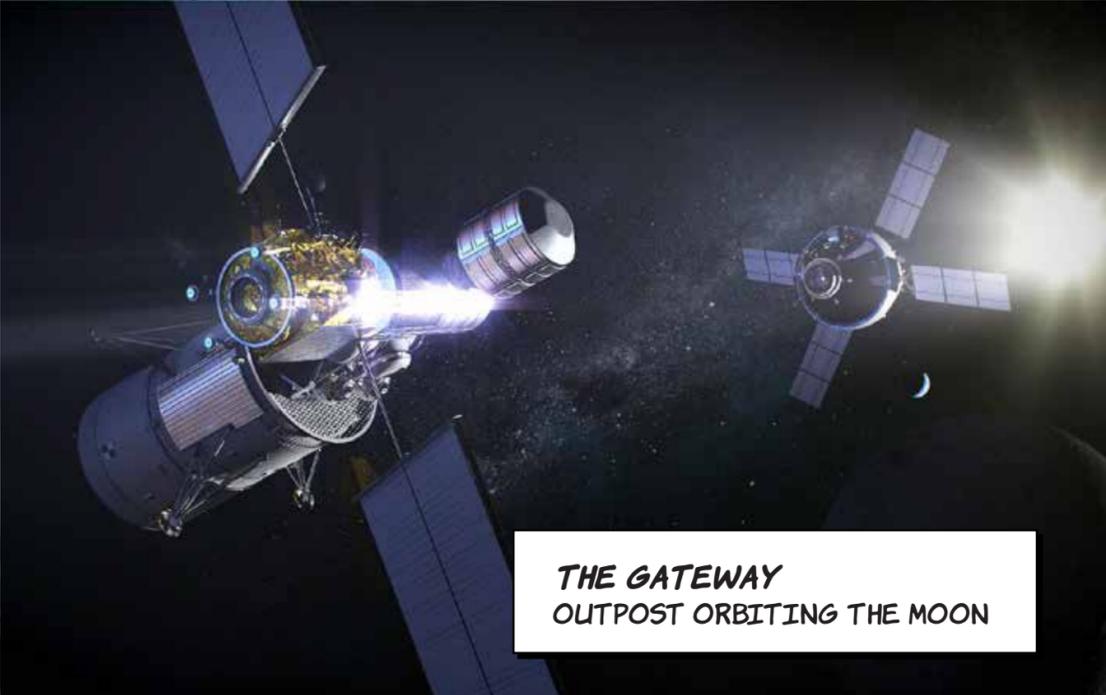
LEARN MORE:
[NASA.GOV/ARTEMIS](https://www.nasa.gov/artemis)



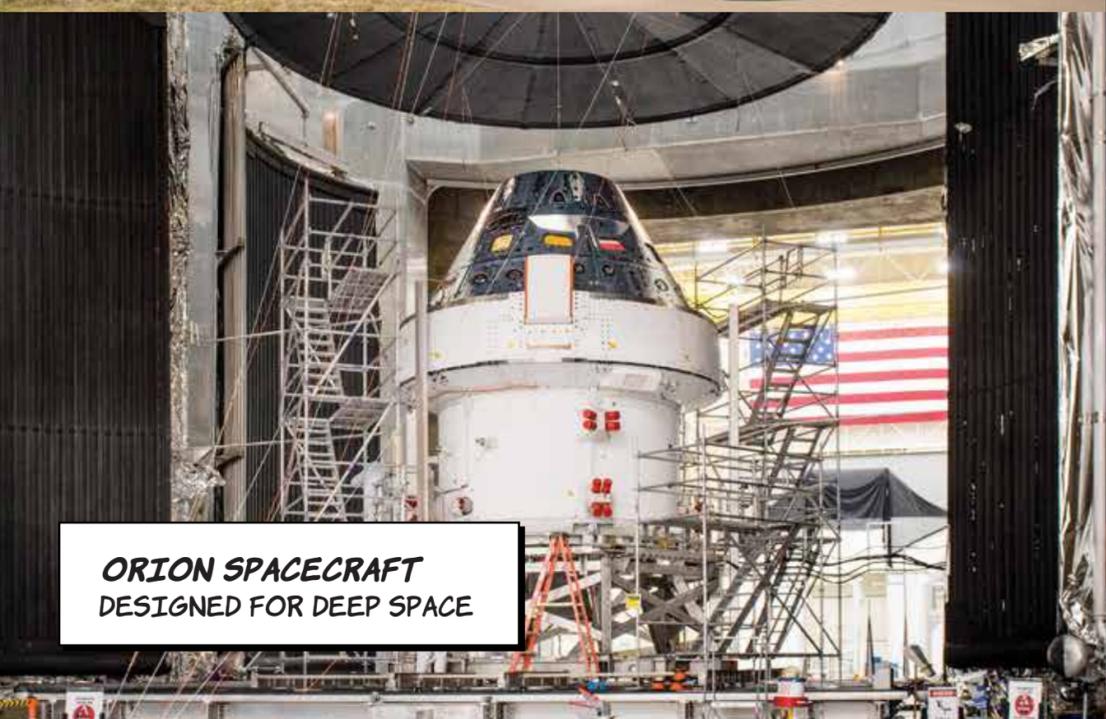
THE SPACE LAUNCH SYSTEM
WORLD'S MOST POWERFUL ROCKET



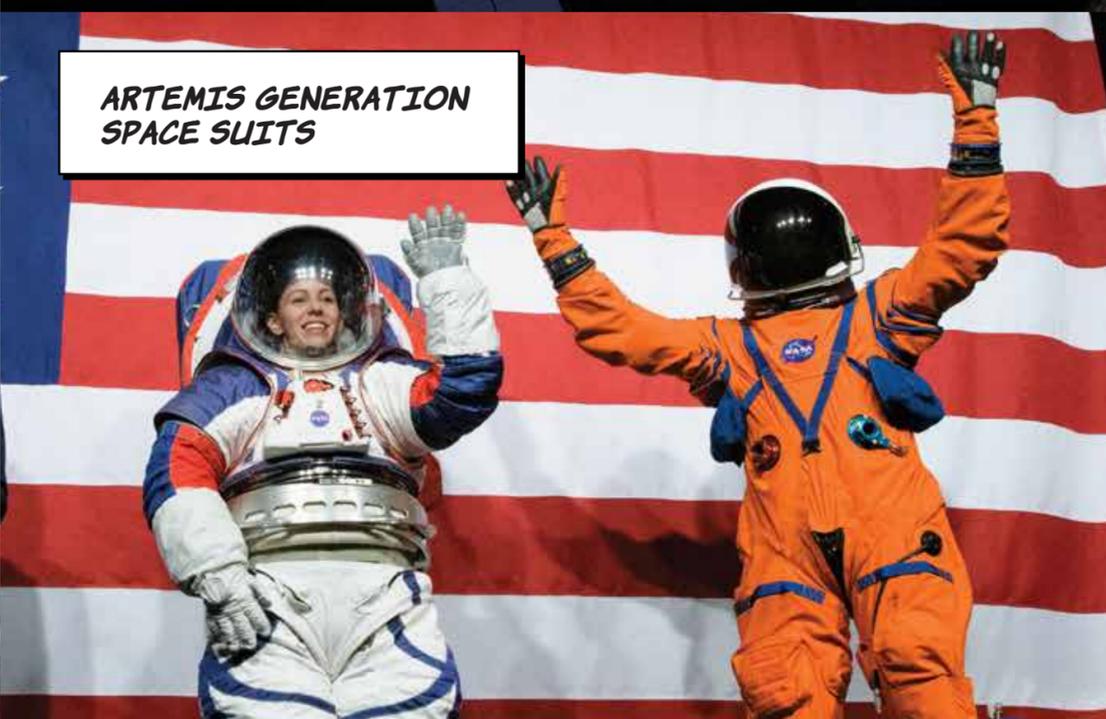
THE GATEWAY
OUTPOST ORBITING THE MOON



ORION SPACECRAFT
DESIGNED FOR DEEP SPACE

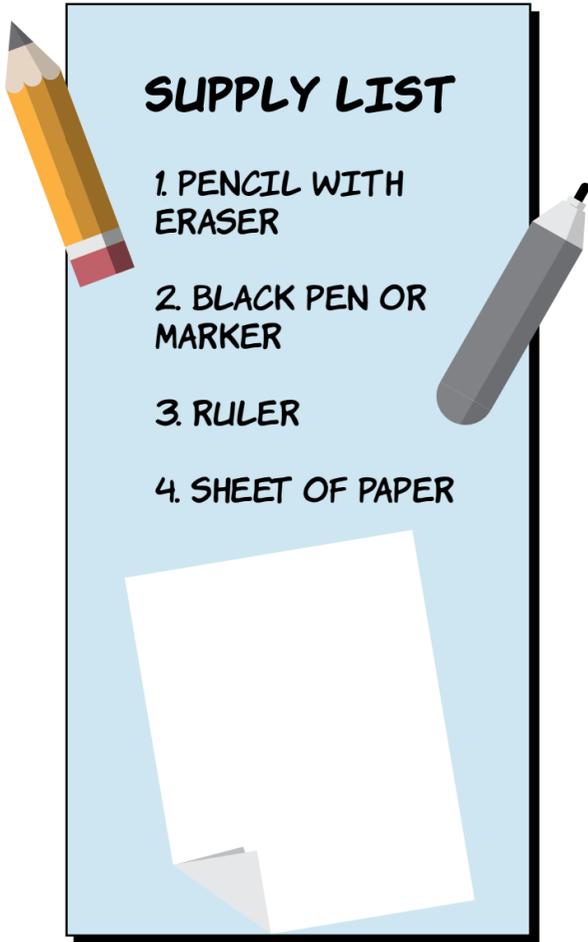


ARTEMIS GENERATION
SPACE SUITS



1.

LET'S DRAW THE MOBILE LAUNCHER!

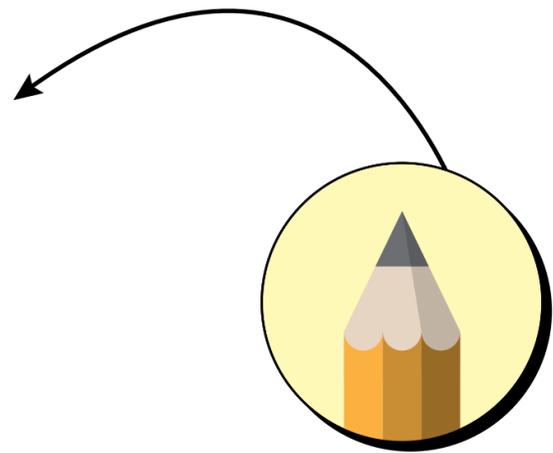


SUPPLY LIST

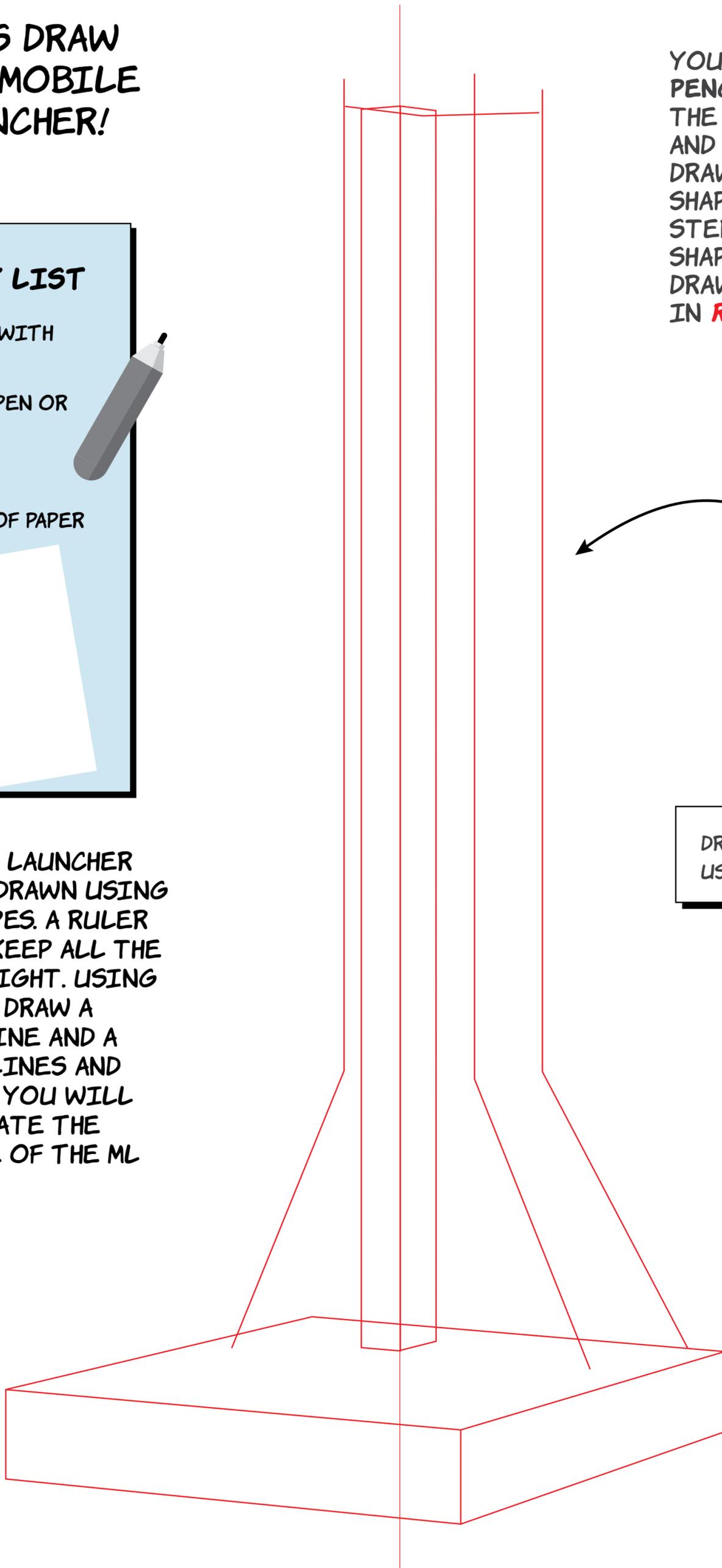
- 1. PENCIL WITH ERASER
- 2. BLACK PEN OR MARKER
- 3. RULER
- 4. SHEET OF PAPER

THE MOBILE LAUNCHER (ML) CAN BE DRAWN USING SIMPLE SHAPES. A RULER WILL HELP KEEP ALL THE LINES STRAIGHT. USING THE PENCIL, DRAW A VERTICAL LINE AND A SERIES OF LINES AND BOXES THAT YOU WILL USE TO CREATE THE BASIC SHAPE OF THE ML STRUCTURE.

YOU WILL USE THE PENCIL TO DRAW THE GUIDELINES AND THE MARKER TO DRAW THE FINAL SHAPES. FOR EVERY STEP, THE CURRENT SHAPES TO BE DRAWN ARE SHOWN IN **RED**.



DRAW THESE LINES USING A PENCIL

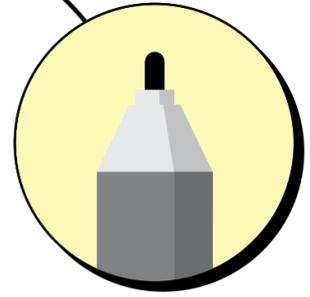
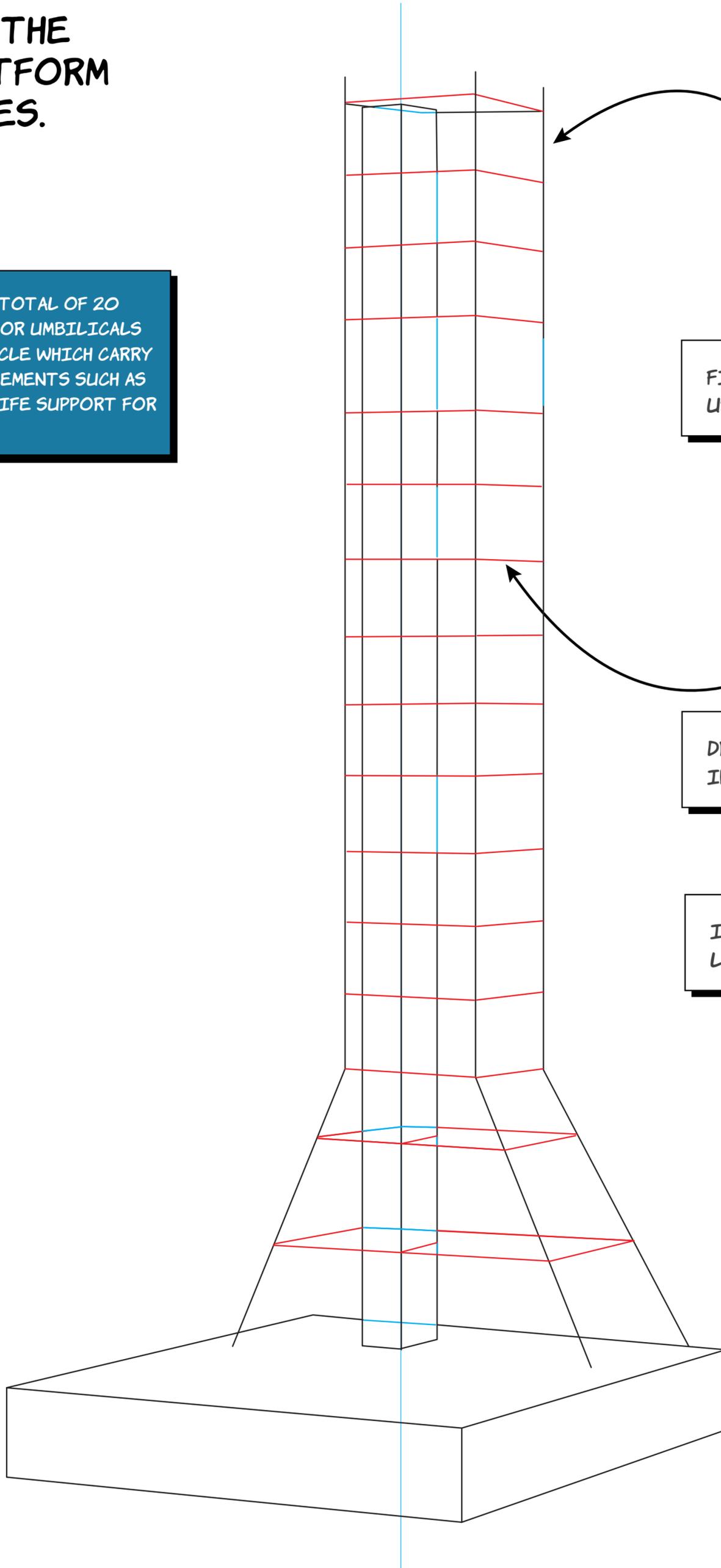


2.

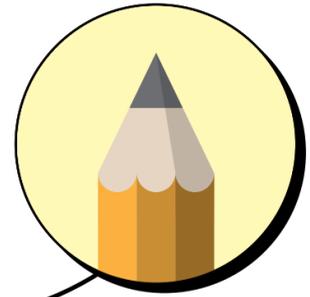
ADD THE PLATFORM LINES.

FUN FACT

THERE ARE A TOTAL OF 20 INTERFACES OR UMBILICALS TO THE VEHICLE WHICH CARRY CRITICAL ELEMENTS SUCH AS POWER AND LIFE SUPPORT FOR THE CREW.



FILL IN BLACK LINES USING A **BLACK PEN**

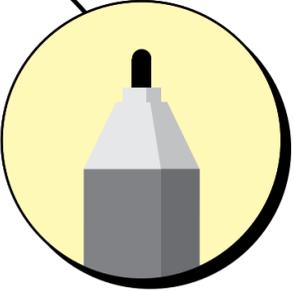
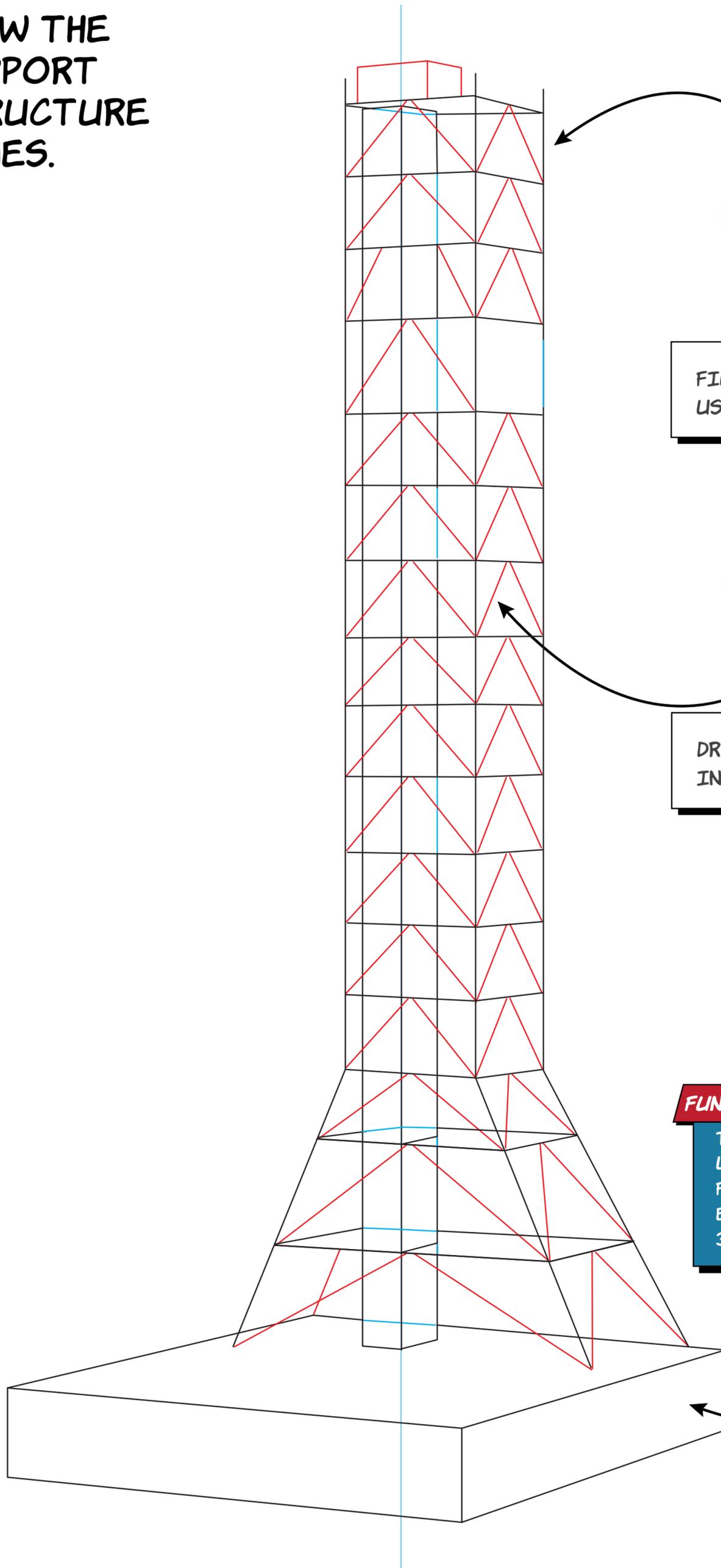


DRAW NEW RED LINES IN **PENCIL**

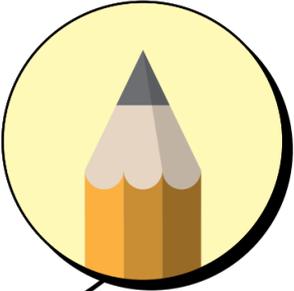
IGNORE THE BLUE LINES FOR NOW.

3.

DRAW THE
SUPPORT
STRUCTURE
LINES.



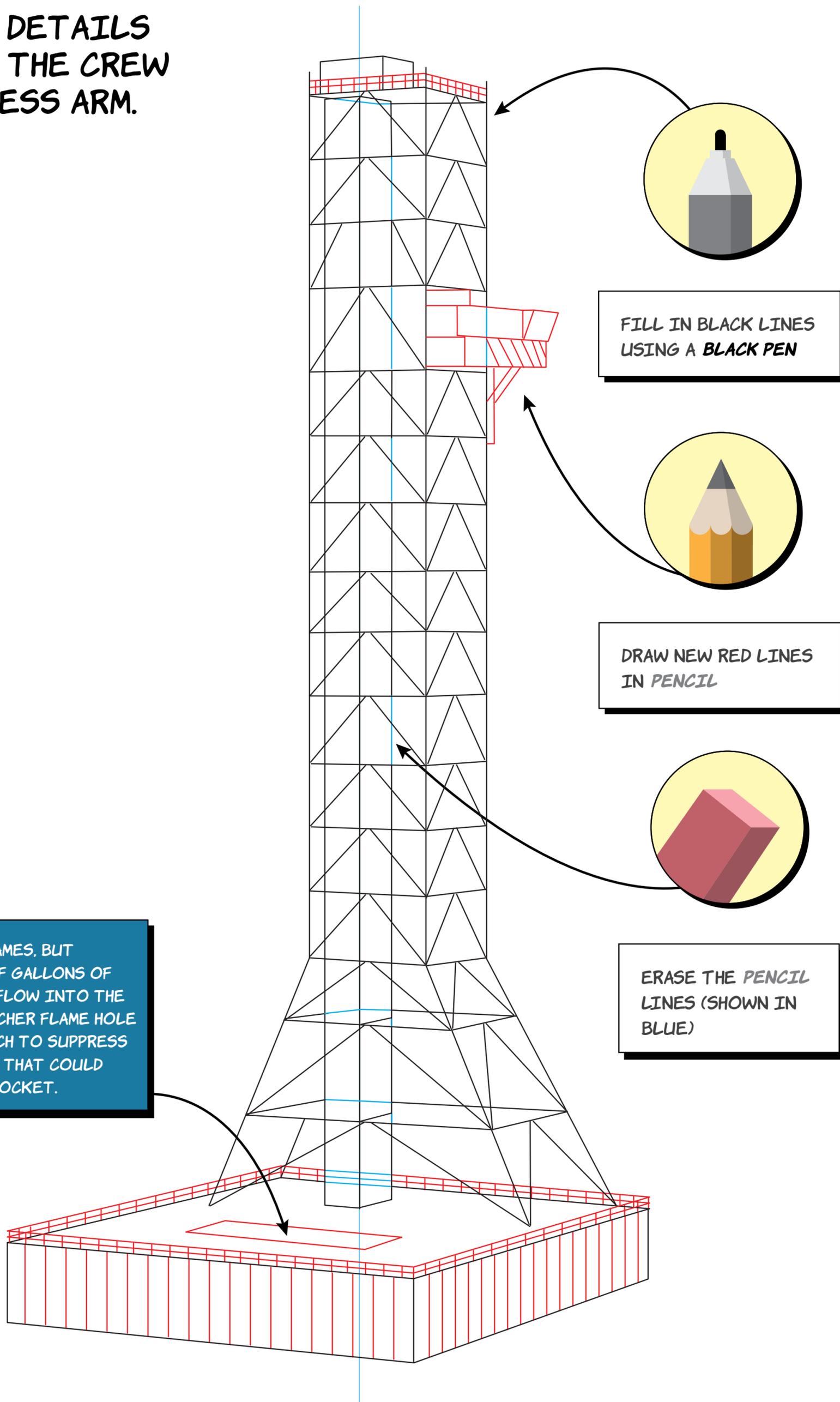
FILL IN BLACK LINES
USING A **BLACK PEN**



DRAW NEW RED LINES
IN **PENCIL**

FUN FACT
THE BASE OF THE MOBILE
LAUNCHER IS 20600 SQUARE
FEET OF FLOOR SPACE,
EQUIVALENT TO 10
3-BEDROOM HOUSES!

4. ADD DETAILS AND THE CREW ACCESS ARM.



FILL IN BLACK LINES USING A **BLACK PEN**

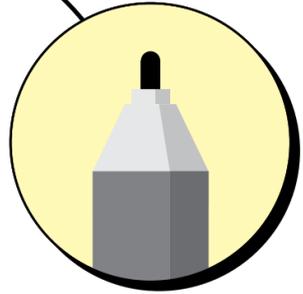
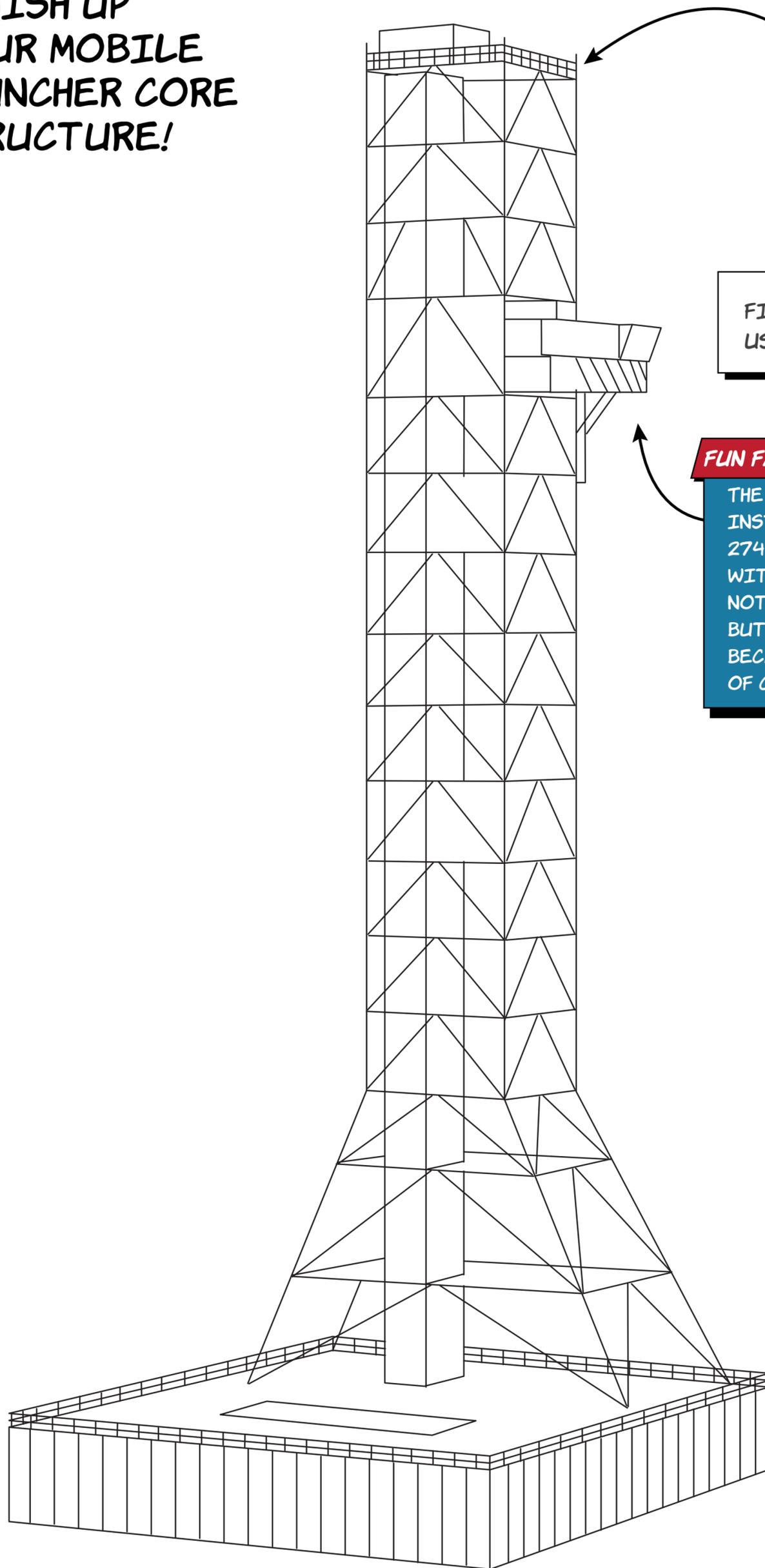
DRAW NEW RED LINES IN **PENCIL**

ERASE THE **PENCIL** LINES (SHOWN IN BLUE)

FUN FACT

NOT ONLY FLAMES, BUT THOUSANDS OF GALLONS OF WATER WILL FLOW INTO THE MOBILE LAUNCHER FLAME HOLE DURING LAUNCH TO SUPPRESS SOUND WAVES THAT COULD DAMAGE THE ROCKET.

5. FINISH UP YOUR MOBILE LAUNCHER CORE STRUCTURE!



FILL IN BLACK LINES USING A **BLACK PEN**

FUN FACT
THE CREW ACCESS ARM IS INSTALLED AT ABOUT THE 274-FOOT LEVEL AND ENDS WITH A WHITE ROOM. THIS IS NOT ONLY PAINTED WHITE, BUT IT IS GIVEN THE NAME BECAUSE IT IS KEPT CLEAN OF CONTAMINANTS.

6. FILL OUT THE MAIN STRUCTURE LINES.

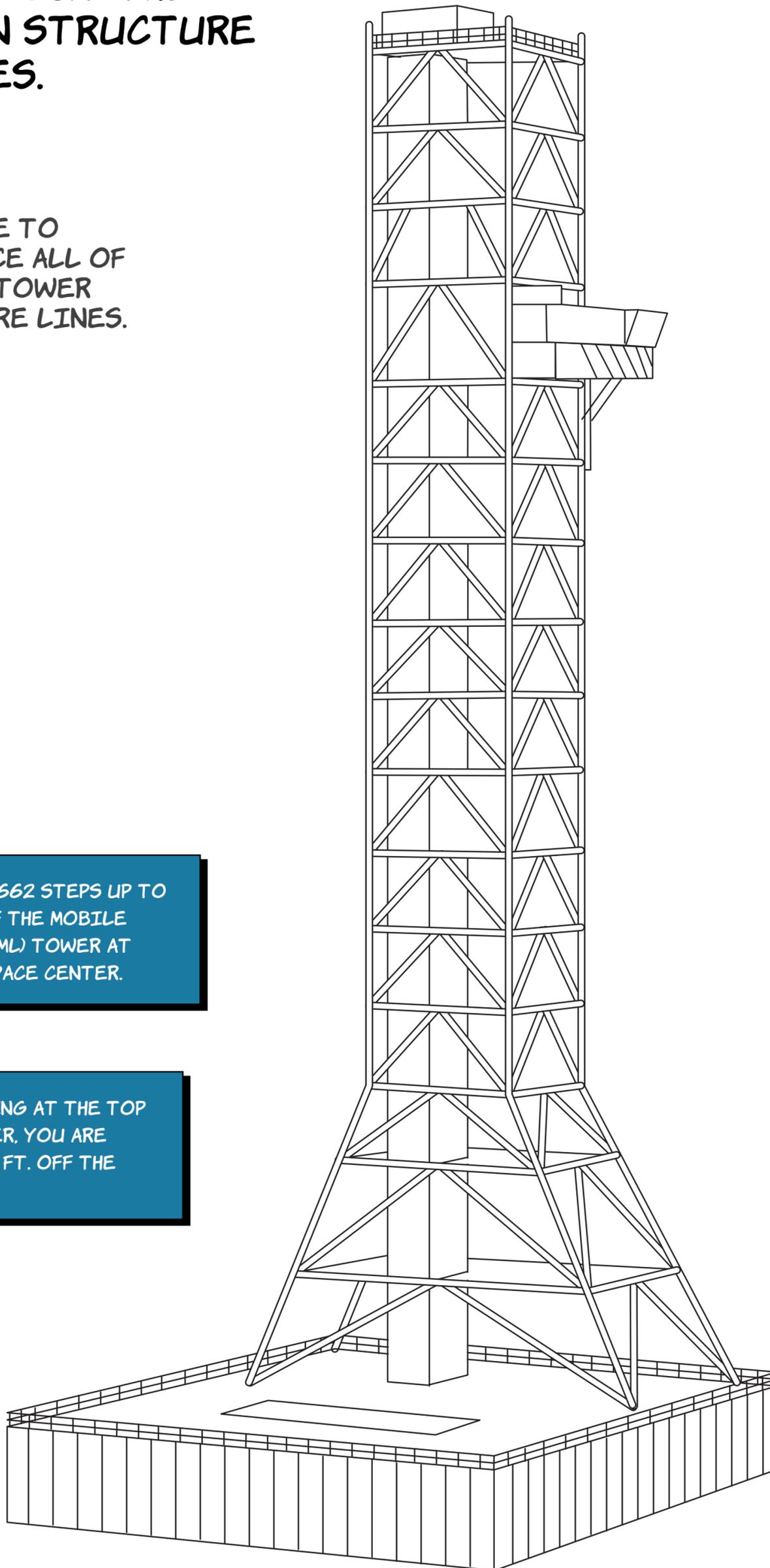
FEEL FREE TO REINFORCE ALL OF YOUR ML TOWER STRUCTURE LINES.

FUN FACT

THERE ARE 662 STEPS UP TO THE TOP OF THE MOBILE LAUNCHER (ML) TOWER AT KENNEDY SPACE CENTER.

FUN FACT

WHEN STANDING AT THE TOP OF THE TOWER, YOU ARE APPROX. 400 FT. OFF THE GROUND!



7.

**FINISH & SHARE
YOUR WORK OF
ART!**

**NOW GET CREATIVE! ADD
THE ML'S UNIQUE RED
PIPING. DRAW STARS AND
THE MOON.**

**ADD NASA'S SPACE LAUNCH
SYSTEM ROCKET ONTO
THE ML PLATFORM. MAKE
IT LAUNCH!**

**DON'T FORGET TO SHARE
YOUR MASTERPIECE ON
SOCIAL MEDIA!**

#DRAWARTEMIS

