

# 1 Aircraft: The Fighter Jet



F-22 Raptor

Military leaders seeking air superiority will turn to one type of aircraft: the fighter jet. Fighters are small, highly maneuverable, high-speed aircraft equipped with powerful weapons for air-to-air combat. Fighter pilots sit at the front of the aircraft in the cockpit beneath a transparent **canopy**. A fighter jet’s fuselage holds one or more **weapons bays** containing bombs or **missiles**. Fighter jet engines use **thrust nozzles** to constrict airflow and cause jet propulsion that reaches **Mach** speeds. Many fighter jets have **turbofan** engines for quieter, more efficient flight. Most have an **afterburner** for additional thrust during takeoff and in critical air-combat situations.

Modern fighter jets are equipped with sophisticated weaponry and flight technology. **Fly-by-wire controls** automatically react to atmospheric conditions without pilot input. A front-firing **cannon** with several hundred rounds can destroy enemy aircraft. **Electro-optical targeting** systems track targets with deadly precision, and self defense systems enable pilots to apply **countermeasures** against incoming missiles. These characteristics make fighter jets the primary weapons for maintaining air superiority in military conflicts.

## Comprehension

1 Read, listen, and answer the questions.

- 1 What operations do fighters complete? .....
- 2 What increases fighter speeds in combat? .....
- 3 What weapons can fighters use? .....



## Vocabulary

- 2 Label the parts of a fighter jet shown in each picture.



1 .....



2 .....



3 .....



4 .....



5 .....

- 3 Match the definitions (A-F) to the correct terms (1-6).

- 1 \_\_\_ Mach
- 2 \_\_\_ afterburner
- 3 \_\_\_ thrust nozzle
- 4 \_\_\_ countermeasure
- 5 \_\_\_ fly-by-wire control
- 6 \_\_\_ electro-optical targeting system

- A a part of a jet engine that increases pressure
- B a unit of speed measurement
- C an electronic system of automatic flight control
- D a piece of equipment that detects and tracks targets
- E a part of a jet engine that creates extra thrust
- F a device that prevents weapons from striking targets

## Listening

- 4 Listen to an instructor testing a pilot in flight school. Complete the notes on the aircraft that they discuss.

Aircraft 1:

MiG 35

Speed:

(1) .....

Service ceiling:

(2) ..... meters

Aircraft 2:

(3) .....

Speed:

(4) .....

- 5 Listen again, and mark the statements as true (T) or false (F). Correct the false statements.

- 1 \_\_\_ Neither aircraft discussed can fly above the speed of sound.  
.....
- 2 \_\_\_ An F-35 Lightning II is faster than a MiG-35.  
.....
- 3 \_\_\_ The MiG-35 is equipped with afterburners.  
.....

## Speaking

- 6 Describe the capabilities and weapons systems of modern fighters.

