

Physics

The Right Stuff

Tape A

What did some engineers before 1945 mean by the term “sound barrier”?

What year was NASA formed?

Why was NASA formed?

What evidence did engineers have for their belief in this so-called “barrier”?

Why did some of the early pilots black out?

What is the name of the air force base in Southern California where aeronautical research was conducted?

The first plane to break the sound barrier was a jet aircraft. This statement is (true, false).

What was the name of the plane that first broke the sound barrier?

Why was steam coming out of the plane as it was fueled?

What was the first sonic boom misinterpreted as?

Why did the pilot ask for a stick of Beaman’s before he got in the cockpit?

What date was the sound barrier broken?

Who broke the sound barrier for the first time?

Why did the military want to suppress the news the sound barrier had been broken?

What does the term “envelope” mean?

The movie portrays the early test pilots as reckless daredevils. This is in fact quite (true, false).

A sonic boom occurs when a plane or missile exceeds the speed of sound. How many sonic booms when a plane goes *twice* the speed of sound? (one *or* two)

Was being as astronaut stressful on marriages/relationships within their family?

Who was the first person to go Mach 2?

For what non-military reason is aeronautical research/space program tied to the military?

Why were the political top brass leery of using test pilots as astronauts?

Why was Eisenhower elected in 1956?

Why did President Kennedy win the election?

What does the word "astro-naut" mean?

What year did the Russians successfully launch Sputnik into space?

What was the first living "thing" launched by a rocket by Americans? Why?

Were the early astronauts competitive?

Who was the first American to "ride" a rocket?

Of the Mercury Seven, which astronaut was quickly embraced by the press/public alike?

Who was the first American to be launched in to orbital flight?

What were some of the concerns about putting people into space?

You might think the life of an astronaut/test pilot is glamorous. In fact, it (is or is not).

Today (1996), the average annual salary of an astronaut is about

- a) \$50,000
- b) \$75,000
- c) \$100,000
- d) \$150,000
- e) \$500,000

Was NASA a willing partner to elevate and project our first astronauts (The Mercury Seven) as national heroes.

What president appointee was placed personally in charge of our space program?

Why is Mission Control Center for our space program located in Houston?

Tape B

At the time Sputnik was launched, did the United States have a reliable rocket to put a man in orbit?

Why was a window installed on the capsule(s)?

Why did the astronauts want a hatch and flight controls added to the spacecraft?

What were the early flights characterized by?

What was the name of the first astronaut/cosmonaut (circle which one) in space?

What historical event occurred in the space program on Mr. Mason's birthday?

Who was the first American to pilot a spacecraft in a sub-orbital flight?

What did President Kennedy do with the Medal of Honor at the awards ceremony?

What was the name of the spacecraft?

What biological function exacerbated by the delays almost caused the flight to be scrubbed?

What embarrassing incident marred the second manned flight by Gus Grissom?

Did the demoralizing snub by the military top brass and the President/Vice President cause Gus Grissom to resign from the astronaut program?

How did Gus Grissom's career end?

What embarrassing political event pressured President Kennedy to distance himself from the second manned flight?

Why did Vice President Johnson want to meet with Mrs. Annie Glenn?

Why did Mrs. Glenn refuse? Did John Glenn support his wife's decision not to see Vice President Johnson?

What did his fellow astronauts do when John Glenn refused to persuade his wife to change her mind and was threatened to have this historic flight re-assigned?

What was the name of the spacecraft?

Who was the first astronaut to experience "zero-g"? When does this occur in the flight? How long does it last?

Who was the first American to view an earth rising?

What did cities in Australia do to wave "hi" to the astronauts thereby cheering them on as they orbited overhead?

President Kennedy appointed Vice President Johnson as head of the space program. Because of his considerable influence to manipulate congress, Lyndon B. Johnson, NASA was well funded. What price did NASA pay for this support?

Although not nearly as impressive as larger than the more powerful rockets like the *Saturn V* that were developed later in the space program, the smaller earlier rockets were capable of larger accelerations. This is actually in accordance with Newton's First Law, the law of inertia, because the rockets have less _____ .

The maximum of acceleration of the space shuttle is less than $1.6g$ (that is, 1.6 times the acceleration of gravity—about 16 m/s^2). (True, False)

Test pilots continue to risk their lives for the sake of their aeronautical research, but do not get any of the recognition or publicity that is afforded the astronauts. The statement is actually quite (true, false).

Although the public thinks being an astronaut as a thrill a minute, the reality is that the tedium of flight preparation and actual flight itself can be quite boring. The statement is actually quite (true, false).

Legend has it that Chuck Yeager is an advocate of the 55-mile per hour speed limit. The statement is actually has it's basis in fact (true, false).