



1
00:00:17,590 --> 00:00:15,190
a sleek research vehicle called the

2
00:00:19,590 --> 00:00:17,600
national aerospace plane may one day

3
00:00:27,509 --> 00:00:19,600
take off from the runway on this

4
00:00:27,519 --> 00:00:32,389
the aerospace plane will

5
00:00:47,590 --> 00:00:34,709
to take off like an airliner and climb

6
00:00:52,389 --> 00:00:49,670
this technology promises to give

7
00:00:55,910 --> 00:00:52,399
efficient and flexible access to space

8
00:01:01,349 --> 00:00:59,110
for now the x30 as it's also called is

9
00:01:03,750 --> 00:01:01,359
flown only with simulators

10
00:01:08,510 --> 00:01:03,760
although the plane is not heavy

11
00:01:08,520 --> 00:01:16,789
defense companies are working together

12
00:01:21,590 --> 00:01:18,950
advanced computer technology and

13
00:01:25,109 --> 00:01:21,600

mathematical models are used to design a

14

00:01:27,109 --> 00:01:25,119

vehicle capable of speeds up to 17

15

00:01:29,109 --> 00:01:27,119

hundred miles per hour

16

00:01:31,510 --> 00:01:29,119

speed so fast

17

00:01:34,550 --> 00:01:31,520

they can't be duplicated in wind tunnels

18

00:01:36,870 --> 00:01:34,560

and other experimental facilities

19

00:01:39,590 --> 00:01:36,880

computers have to be used to simulate

20

00:01:42,710 --> 00:01:39,600

the shock waves and air flows the x-30

21

00:01:46,950 --> 00:01:44,710

materials for the plane's skin must

22

00:01:49,190 --> 00:01:46,960

withstand syrian temperatures for

23

00:01:51,830 --> 00:01:49,200

extended periods of time

24

00:01:54,469 --> 00:01:51,840

composites such as carbon carbon

25

00:01:58,149 --> 00:01:54,479

ceramics and alloys of titanium and

26

00:02:02,789 --> 00:01:59,990

nasa and the air force flew an

27

00:02:07,270 --> 00:02:02,799

experimental aircraft called the x-15 in

28

00:02:13,030 --> 00:02:09,910

times 1960s speed of sound at altitudes

29

00:02:15,830 --> 00:02:13,040

grazing the fringes of space

30

00:02:19,670 --> 00:02:15,840

the next step is an experimental

31

00:02:21,430 --> 00:02:19,680

aerospace plane that can travel 25 times

32

00:02:23,830 --> 00:02:21,440

the speed of sound

33

00:02:25,270 --> 00:02:23,840

about 30 times faster than a jet

34

00:02:26,869 --> 00:02:25,280

airliner

35

00:02:29,190 --> 00:02:26,879

the ultimate goal

36

00:02:32,070 --> 00:02:29,200

to demonstrate the technologies which

37

00:02:35,030 --> 00:02:32,080

will allow efficient flexible access to

38

00:02:39,990 --> 00:02:37,830

vehicles incorporating x30 technology

39

00:02:41,430 --> 00:02:40,000

may someday deliver satellites into

40

00:02:47,830 --> 00:02:41,440

orbit

41

00:02:52,070 --> 00:02:49,509

drawing on the nation's most

42

00:02:54,390 --> 00:02:52,080

sophisticated research efforts the

43

00:02:57,110 --> 00:02:54,400

national aerospace plane will help

44

00:02:59,350 --> 00:02:57,120

maintain world leadership for the united

45

00:03:00,790 --> 00:02:59,360

states in aeronautics and space

46

00:03:03,350 --> 00:03:00,800

technology

47

00:03:06,070 --> 00:03:03,360

meeting this challenge can help today's