Earth's moon

Ceres

Vesta

1,000 miles

1,610 kilometers

1
00:00:07,400 --> 00:00:04,910
what's up for July asteroids hello and

2
00:00:09,290 --> 00:00:07,410
welcome I'm Jane Houston Jones at NASA's

3
00:00:13,280 --> 00:00:09,300
Jet Propulsion Laboratory in Pasadena

4
00:00:15,350 --> 00:00:13,290
California asteroids are scraps of the

5
00:00:17,090 --> 00:00:15,360
original building material of our solar

6
00:00:20,480 --> 00:00:17,100
system so they tell us about our own

7
00:00:23,509 --> 00:00:20,490
origins after the planets formed

8
00:00:25,160 --> 00:00:23,519
residual material remained bits of dust

9
00:00:26,929 --> 00:00:25,170
and rock bumped into each other

10
00:00:31,070 --> 00:00:26,939
sometimes sticking together and

11
00:00:32,900 --> 00:00:31,080
sometimes scattering most asteroids

12
00:00:36,670 --> 00:00:32,910
orbit the Sun between Mars and Jupiter

13
00:00:39,530 --> 00:00:36,680

in a region known as the asteroid belt

14
00:00:42,680 --> 00:00:39,540
this month nasa's dawn mission which

15
00:00:45,410 --> 00:00:42,690
launched in 2007 arrives at the asteroid

16
00:00:48,560 --> 00:00:45,420
Vesta the first of two objects it'll

17
00:00:50,690 --> 00:00:48,570
explore Don will study the conditions

18
00:00:53,900 --> 00:00:50,700
and processes of the solar system's

19
00:00:57,080 --> 00:00:53,910
earliest time and Vesta and Ceres are

20
00:00:59,240 --> 00:00:57,090
the right two bodies to study Vesta is

21
00:01:02,810 --> 00:00:59,250
an asteroid and Ceres is a dwarf planet

22
00:01:05,359 --> 00:01:02,820
like Pluto Vesta and Ceres reside in the

23
00:01:07,789 --> 00:01:05,369
boundary area of the asteroid belt where

24
00:01:10,070 --> 00:01:07,799
the composition of bodies changes from

25
00:01:12,550 --> 00:01:10,080
being almost dry to showing the effects

26
00:01:15,069 --> 00:01:12,560
of hydration

27
00:01:17,440 --> 00:01:15,079
scientists believe Vesta is very dry

28
00:01:19,719 --> 00:01:17,450
while series may have a layer of water

29
00:01:23,050 --> 00:01:19,729
ice or even liquid water beneath its

30
00:01:26,020 --> 00:01:23,060
crust Don will study the roles of water

31
00:01:27,620 --> 00:01:26,030
and size in determining the evolution of

32
00:01:29,929 --> 00:01:27,630
the planets

33
00:01:32,929 --> 00:01:29,939
the spacecraft will orbit Vesta for a

34
00:01:35,840 --> 00:01:32,939
year next July it'll depart for the

35
00:01:40,850 --> 00:01:35,850
dwarf planet ceres arriving in February

36
00:01:42,620 --> 00:01:40,860
of 2015 you can see Vesta yourself this

37
00:01:44,630 --> 00:01:42,630
month and next it'll be a little

38
00:01:46,700 --> 00:01:44,640

brighter in August it's the only

39
00:01:49,840 --> 00:01:46,710
asteroid bright enough to see with your

40
00:01:52,490 --> 00:01:49,850
unaided eye because of its high albedo

41
00:01:57,080 --> 00:01:52,500
albedo refers to how well an object

42
00:02:04,270 --> 00:01:57,090
reflects light series the larger than

43
00:02:10,910 --> 00:02:07,160
you can easily spot series than your

44
00:02:13,550 --> 00:02:10,920
telescopes next month check out the dawn

45
00:02:15,740 --> 00:02:13,560
missions Vesta Fiesta event page and

46
00:02:18,920 --> 00:02:15,750
find a viewing event near you or host

47
00:02:21,589 --> 00:02:18,930
avesta viewing event yourself you can

48
00:02:25,490 --> 00:02:21,599
read all about asteroids at solar system

49
00:02:28,370 --> 00:02:25,500
NASA gov / y SS for year of the solar

50
00:02:32,509 --> 00:02:28,380
system you can learn all about NASA's