1
00:00:04,570 --> 00:00:01,350
[Music]

2
00:00:07,360 --> 00:00:04,580
what's up for September following the

3
00:00:11,110 --> 00:00:07,370
crescent moon the September equinox and

4
00:00:12,910 --> 00:00:11,120
wait where did Mars go we're at a

5
00:00:15,009 --> 00:00:12,920
several month period right now when the

6
00:00:17,440 --> 00:00:15,019
new moon falls right around the end of

7
00:00:20,290 --> 00:00:17,450
each month this means we get to enjoy

8
00:00:21,960 --> 00:00:20,300
lovely waning crescent moons at dusk for

9
00:00:24,580 --> 00:00:21,970
the first few days of each month and

10
00:00:26,700 --> 00:00:24,590
delightful waxing crescent in the

11
00:00:29,859 --> 00:00:26,710
pre-dawn sky near the end of each month

12
00:00:31,900 --> 00:00:29,869
this month look low in the West about

13
00:00:33,969 --> 00:00:31,910

half an hour after sunset to enjoy the

14
00:00:36,250 --> 00:00:33,979
crescent moon on September 1st through

15
00:00:39,129 --> 00:00:36,260
the 4th with the moon appearing a bit

16
00:00:41,379 --> 00:00:39,139
higher in the sky each night by the

17
00:00:44,169 --> 00:00:41,389
fifth the first quarter that is half

18
00:00:46,660 --> 00:00:44,179
full moon winds up here just a couple of

19
00:00:49,029 --> 00:00:46,670
degrees to the right of Jupiter at the

20
00:00:51,910 --> 00:00:49,039
end of the month from September 23rd to

21
00:00:53,860 --> 00:00:51,920
the 27th look east half an hour before

22
00:00:55,660 --> 00:00:53,870
dawn for an increasingly slimmer

23
00:00:58,509 --> 00:00:55,670
Crescent that appears lower in the sky

24
00:01:00,399 --> 00:00:58,519
each day as you make your lunar

25
00:01:02,500 --> 00:01:00,409
observations remember that for many

26
00:01:04,600 --> 00:01:02,510
thousands of years the cycles of the

27
00:01:06,370 --> 00:01:04,610
Moon and Sun were the basis of human

28
00:01:08,710 --> 00:01:06,380
timekeeping and many traditional

29
00:01:12,310 --> 00:01:08,720
cultures still rely on these cycles to

30
00:01:14,770 --> 00:01:12,320
mark special events a few months ago it

31
00:01:16,750 --> 00:01:14,780
seemed like the red planet Mars was a

32
00:01:19,630 --> 00:01:16,760
constant companion in the evening sky

33
00:01:21,280 --> 00:01:19,640
but as our two planets moved along in

34
00:01:22,810 --> 00:01:21,290
their orbits this summer Mars has

35
00:01:25,180 --> 00:01:22,820
drifted further into the glare of the

36
00:01:27,540 --> 00:01:25,190
Sun finally disappearing from our skies

37
00:01:30,370 --> 00:01:27,550
altogether in July did you notice in

38
00:01:32,800 --> 00:01:30,380

late August and early September this

39
00:01:34,990 --> 00:01:32,810
year Mars is more or less behind the Sun

40
00:01:37,210 --> 00:01:35,000
as seen from Earth this has implications

41
00:01:40,180 --> 00:01:37,220
for spacecraft at Mars like NASA's

42
00:01:43,060 --> 00:01:40,190
insight Lander and Curiosity rover this

43
00:01:45,790 --> 00:01:43,070
event called solar conjunction happens

44
00:01:47,710 --> 00:01:45,800
about every two years during this time

45
00:01:49,600 --> 00:01:47,720
mission controllers on earth stopped

46
00:01:51,160 --> 00:01:49,610
sending commands to our spacecraft in

47
00:01:53,710 --> 00:01:51,170
order to avoid potential radio

48
00:01:55,750 --> 00:01:53,720
interference from the Sun a few weeks

49
00:01:57,969 --> 00:01:55,760
later when Mars has moved farther apart

50
00:02:00,730 --> 00:01:57,979
from the Sun as seen from Earth normal

51
00:02:02,560 --> 00:02:00,740
communications can resume for those of

52
00:02:04,630 --> 00:02:02,570
us eater for a peek at Mars with our own

53
00:02:07,529 --> 00:02:04,640
eyes once again it'll return to our

54
00:02:10,959 --> 00:02:07,539
pre-dawn skies in early November

55
00:02:13,380 --> 00:02:10,969
September 23rd marks the equinox with

56
00:02:15,510 --> 00:02:13,390
day and night being of equal length

57
00:02:17,340 --> 00:02:15,520
this marks the beginning of fall in the

58
00:02:19,290 --> 00:02:17,350
northern hemisphere and although this

59
00:02:21,720 --> 00:02:19,300
means it's time to bid farewell to those

60
00:02:24,540 --> 00:02:21,730
long summer days the upshot for

61
00:02:28,110 --> 00:02:24,550
stargazers as longer nights meaning more

62
00:02:32,250 --> 00:02:28,120
time to look up here are the phases of

63
00:02:34,020 --> 00:02:32,260

the Moon for September you can catch up

64
00:02:37,530 --> 00:02:34,030
on all of NASA's current and future

65
00:02:39,150 --> 00:02:37,540
missions at nasa.gov I'm Preston dykes