

1
00:00:07,370 --> 00:00:14,429
your guide to constellations deep-sky

2
00:00:10,558 --> 00:00:19,549
objects planets and events tonight's sky

3
00:00:14,429 --> 00:00:19,550
highlights of the February sky

4
00:00:38,280 --> 00:00:45,058
Venus and Mars pair up in the western

5
00:00:41,429 --> 00:00:47,628
sky after sunset on these cold February

6
00:00:45,058 --> 00:00:47,628
evenings

7
00:00:51,210 --> 00:00:57,750
use a telescope to get a better look at

8
00:00:54,579 --> 00:00:57,750
the planetary pair

9
00:01:08,829 --> 00:01:17,409
Mars and Venus will form a tight trio

10
00:01:12,109 --> 00:01:17,409
with the crescent moon on February 20th

11
00:01:24,340 --> 00:01:34,090
as the sky darkens look for Jupiter

12
00:01:30,290 --> 00:01:34,090
shining in the eastern sky

13
00:01:39,829 --> 00:01:45,109
the giant planet will remain a great

14
00:01:42,650 --> 00:01:47,350
target for telescopes throughout the

15
00:01:45,109 --> 00:01:47,349
night

16
00:01:59,560 --> 00:02:05,600
the winter night sky filled with

17
00:02:02,689 --> 00:02:08,829
brilliant stars presents one of the best

18
00:02:05,599 --> 00:02:08,829
celestial views

19
00:02:14,949 --> 00:02:24,639
orion the great hunter of Greek

20
00:02:17,770 --> 00:02:27,010
mythology dominates the winter sky this

21
00:02:24,639 --> 00:02:30,458
constellation is among the easiest to

22
00:02:27,009 --> 00:02:35,500
recognize it is full of young stars

23
00:02:30,459 --> 00:02:38,530
dying stars and many nebulae Betelgeuse

24
00:02:35,500 --> 00:02:42,759
one of Orion's shoulders is a red

25
00:02:38,530 --> 00:02:45,939
supergiant star about 650 times bigger

26
00:02:42,759 --> 00:02:50,848
than the Sun it shines with the

27
00:02:45,939 --> 00:02:50,848
brightness of tens of thousands of Suns

28
00:02:51,360 --> 00:02:57,040
Betelgeuse is near the end of its life

29

00:02:54,329 --> 00:02:59,769
with the fuel at the Stars core

30
00:02:57,039 --> 00:03:02,739
practically depleted the core has

31
00:02:59,769 --> 00:03:07,409
contracted and heated pausing the outer

32
00:03:02,739 --> 00:03:07,409
gaseous layers of the star to swell

33
00:03:08,610 --> 00:03:15,910
Rigel one of Orion's knees is a triple

34
00:03:12,549 --> 00:03:20,469
star system made up of two smaller stars

35
00:03:15,909 --> 00:03:23,879
orbiting a blue supergiant Rigel blue

36
00:03:20,469 --> 00:03:27,639
supergiant star has a short life span

37
00:03:23,879 --> 00:03:30,459
blue supergiant stars are much hotter

38
00:03:27,639 --> 00:03:36,639
than our Sun and use up their fuel

39
00:03:30,459 --> 00:03:40,509
quickly Orion's belt is easy to spot it

40
00:03:36,639 --> 00:03:46,060
is made up of three stars Alma tack on

41
00:03:40,509 --> 00:03:49,000
the lamb and Mintaka from the left side

42
00:03:46,060 --> 00:03:53,019
of Orion's belt look down to the great

43
00:03:49,000 --> 00:03:55,269

Orion Nebula although barely visible to

44

00:03:53,019 --> 00:03:58,379
the naked eye it is the brightest

45

00:03:55,269 --> 00:04:02,799
diffuse gas cloud in the night sky

46

00:03:58,379 --> 00:04:05,469
nebula is Latin for cloud a small

47

00:04:02,799 --> 00:04:09,299
telescope unveils the details and

48

00:04:05,469 --> 00:04:09,299
grandeur of the nebula

49

00:04:12,569 --> 00:04:19,930
embedded inside the Orion Nebula is the

50

00:04:16,089 --> 00:04:22,299
trapezium a group of hot young stars so

51

00:04:19,930 --> 00:04:25,410
brilliant they caused the surrounding

52

00:04:22,300 --> 00:04:25,410
gas to glow

53

00:04:40,779 --> 00:04:46,419
Canis Major the Great dog is the

54

00:04:44,230 --> 00:04:51,160
faithful companion who follows in

55

00:04:46,420 --> 00:04:53,949
Orion's footsteps Canis Major is

56

00:04:51,160 --> 00:04:57,850
dominated by the most brilliant star in

57

00:04:53,949 --> 00:05:00,969
the night sky serious serious is

58
00:04:57,850 --> 00:05:03,820
actually a double system containing a

59
00:05:00,970 --> 00:05:08,050
bright star and a much smaller and

60
00:05:03,819 --> 00:05:11,139
fainter companion it is a mere 8.6

61
00:05:08,050 --> 00:05:13,930
light-years away scanning with

62
00:05:11,139 --> 00:05:17,340
binoculars just below serious will

63
00:05:13,930 --> 00:05:22,110
reveal a lovely cluster of stars called

64
00:05:17,339 --> 00:05:26,679
m41 it contains about 100 stars

65
00:05:22,110 --> 00:05:30,310
including several red giants stars in

66
00:05:26,680 --> 00:05:34,379
clusters like m41 were born together and

67
00:05:30,310 --> 00:05:34,379
are all about the same age

68
00:05:49,699 --> 00:05:55,439
saturn rises well after midnight and

69
00:05:52,860 --> 00:06:07,069
climbs higher during the pre-dawn hours

70
00:05:55,439 --> 00:06:07,069
a telescope reveals its marvelous rings

71
00:06:12,930 --> 00:06:20,228
the night sky is always a celestial

72

00:06:16,750 --> 00:06:22,740

showcase explore its wonders from your

73

00:06:20,228 --> 00:06:22,740

own backyard

74

00:06:39,100 --> 00:06:41,160

you