



SCIENCE IN A MINUTE

INFRARED LIGHT

ISH



1
00:00:06,349 --> 00:00:03,849

[Music]

2
00:00:07,249 --> 00:00:06,359

how do you make sense of something you

3
00:00:09,320 --> 00:00:07,259

can't see

4
00:00:12,290 --> 00:00:09,330

this is the electromagnetic spectrum

5
00:00:14,900 --> 00:00:12,300

where light travels in waves without it

6
00:00:17,000 --> 00:00:14,910

the world you know could not exist the

7
00:00:18,320 --> 00:00:17,010

human eye can only see this very small

8
00:00:20,870 --> 00:00:18,330

part of the spectrum

9
00:00:22,880 --> 00:00:20,880

called visible light but a whole new

10
00:00:25,460 --> 00:00:22,890

universe is revealed by looking through

11
00:00:28,009 --> 00:00:25,470

the infrared infrared light can't be

12
00:00:30,859 --> 00:00:28,019

seen but it can be felt in the form of

13
00:00:33,979 --> 00:00:30,869

heat every objects whether hot or cold

14

00:00:35,930 --> 00:00:33,989

gives off heat special thermal cameras

15

00:00:38,780 --> 00:00:35,940

use colors to show us if something is

16

00:00:40,760 --> 00:00:38,790

warm or cold some objects are hot enough

17

00:00:42,740 --> 00:00:40,770

to show visible lights and things that

18

00:00:45,229 --> 00:00:42,750

are too cold to be seen by the naked eye

19

00:00:46,910 --> 00:00:45,239

can let off in infrared such as your

20

00:00:49,190 --> 00:00:46,920

body or this cup of coffee

21

00:00:52,279 --> 00:00:49,200

ir light can be used in very practical

22

00:00:55,310 --> 00:00:52,289

ways longer IR waves can cook your

23

00:00:58,010 --> 00:00:55,320

dinner shorter IR waves that are used in

24

00:01:00,500 --> 00:00:58,020

your TV's remote control and firemen use

25

00:01:02,959 --> 00:01:00,510

IR cameras to see through smoke to find

26

00:01:05,509 --> 00:01:02,969

people trapped in a fire so how does

27

00:01:07,820 --> 00:01:05,519

this apply to a telescope on top of

28

00:01:09,590 --> 00:01:07,830

showing us colder objects infrared

29

00:01:12,590 --> 00:01:09,600

wavelengths can see through large

30

00:01:15,200 --> 00:01:12,600

amounts of gas and dust lifting the veil

31

00:01:17,420 --> 00:01:15,210

to what lies on the other side Spitzer

32

00:01:19,850 --> 00:01:17,430

sees objects like exoplanets or the

33

00:01:22,490 --> 00:01:19,860

Milky Way by looking at their infrared

34

00:01:24,740 --> 00:01:22,500

glow from the heat they give off this

35

00:01:28,950 --> 00:01:24,750

gives us the ability to see what is