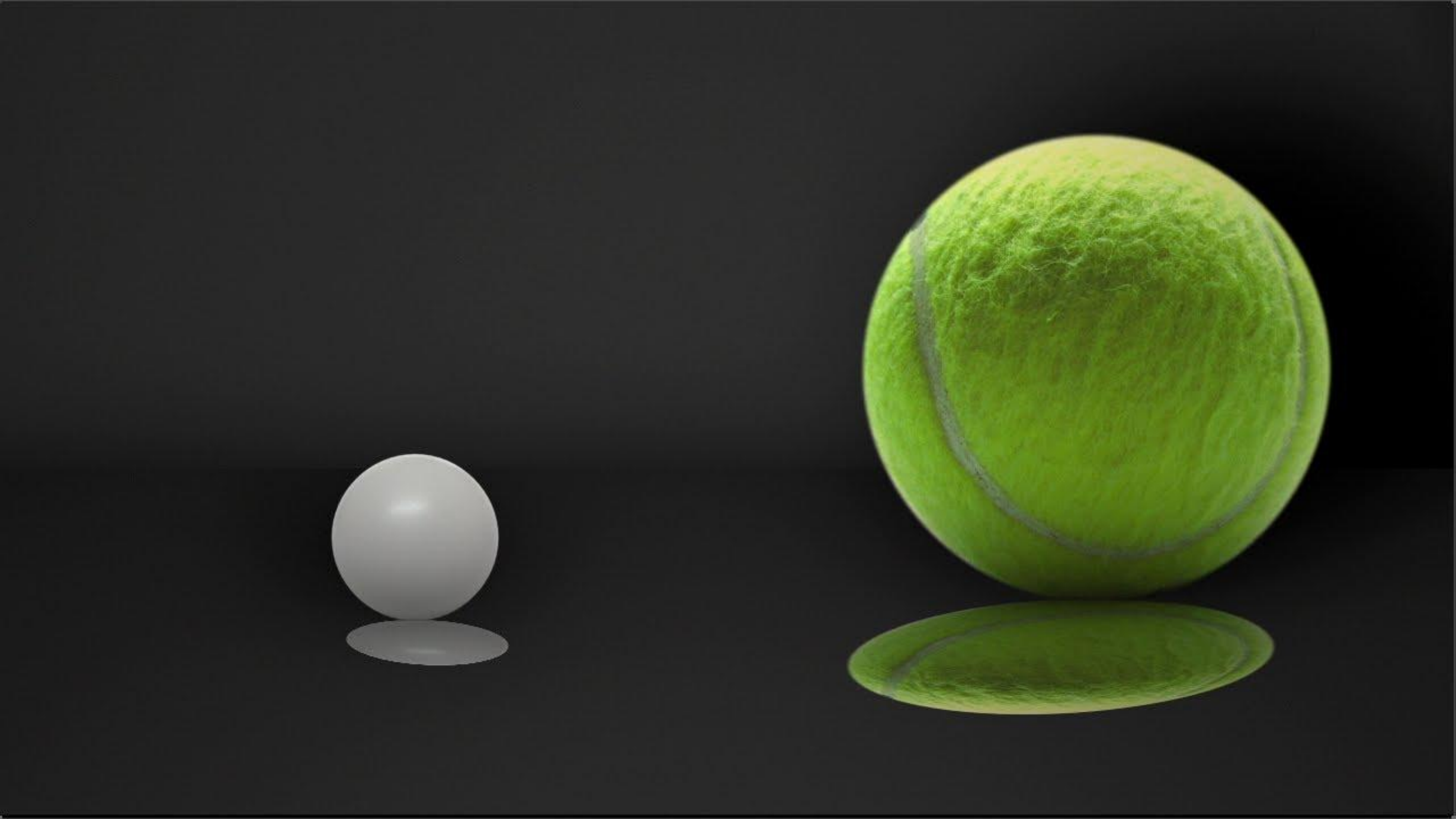

1
00:00:00,050 --> 00:00:10,070
Music

2
00:00:12,110 --> 00:00:16,110
Narrator: This is a very simple activity that models the supernova explosion

3
00:00:16,130 --> 00:00:20,120
that takes place at the end of a large star's life.

4
00:00:20,140 --> 00:00:24,140
The only supplies you will need are two balls of different sizes for each person

5
00:00:24,160 --> 00:00:28,150
that is participating. A tennis ball and a ping pong ball are perfect for this.

6
00:00:28,170 --> 00:00:32,190
If we drop just the tennis ball, it bounces a foot or two.

7
00:00:34,250 --> 00:00:38,290
If we drop just the ping pong ball in the same way, it again

8
00:00:38,310 --> 00:00:42,330
bounces, but not as high. When we drop them both together,

9
00:00:42,350 --> 00:00:46,380
with the ping pong ball stacked on top of the tennis ball, the ping pong ball

10
00:00:46,400 --> 00:00:50,400
goes flying off even further, and the tennis ball basically stays where it is.

11
00:00:50,420 --> 00:00:54,420
The reason this happens is that when the tennis ball hits the

12
00:00:54,440 --> 00:00:58,460
floor, its energy is transferred to the ping pong ball.

13
00:00:58,480 --> 00:01:02,480

In this model, the balls represent layers of the star's

14
00:01:02,500 --> 00:01:06,480
atmosphere that are falling inward during its implosion. These falling

15
00:01:06,500 --> 00:01:10,500
layers meet the energy from the iron core- represented by the floor in our activity-