

ADAM DRIVER

ASKS



1
00:00:00,400 --> 00:00:04,536
Adam Driver Asks NASA.

2
00:00:04,938 --> 00:00:05,972
Hi, I'm Adam Driver.

3
00:00:05,972 --> 00:00:07,607
I'm in a new movie called 65,

4
00:00:07,607 --> 00:00:11,071
where I play a space pilot who, 65 million years ago,

5
00:00:11,071 --> 00:00:13,346
crash lands on prehistoric Earth.

6
00:00:14,180 --> 00:00:16,649
Location unknown.

7
00:00:16,883 --> 00:00:18,515
I discover that an asteroid,

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00:00:18,518 --> 00:00:22,919
the asteroid that wiped out the dinosaurs, is headed for Earth.

9
00:00:33,633 --> 00:00:34,601
Send help.

10
00:00:35,468 --> 00:00:37,704
So my first question for NASA is,

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00:00:37,704 --> 00:00:39,305
what if we found out that an asteroid

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00:00:39,305 --> 00:00:41,441
like this were going to hit our planet today?

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00:00:44,477 --> 00:00:46,479

Hi, Adam. I'm Kelly Fast.

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00:00:46,479 --> 00:00:47,480

I'm an astronomer,

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00:00:47,480 --> 00:00:50,326

and I manage the Near-Earth Object Observations Program

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00:00:50,326 --> 00:00:52,942

in NASA's Planetary Defense Coordination Office.

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00:00:53,219 --> 00:00:55,422

Well, the good thing is that we're really not

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00:00:55,422 --> 00:00:58,892

that concerned about asteroids of that size.

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00:00:59,192 --> 00:01:01,749

Those large ones — most of them have been found.

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00:01:01,761 --> 00:01:03,329

They're easier to spot.

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00:01:03,329 --> 00:01:04,697

There are fewer of them.

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00:01:04,697 --> 00:01:09,289

But there are asteroids still left to be found that aren't that large,

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00:01:09,302 --> 00:01:12,625

but still are of a size that could do damage should they impact.

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00:01:12,639 --> 00:01:16,728

And so that's why NASA has a Planetary Defense Coordination Office.

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00:01:16,743 --> 00:01:20,734

If an asteroid were discovered that were going to impact Earth,

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00:01:20,734 --> 00:01:25,952

NASA's role would be to inform planning, to give information about the asteroid,

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00:01:25,952 --> 00:01:28,388

about where the impact would happen,

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00:01:28,388 --> 00:01:30,290

about what the effects might be,

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00:01:30,290 --> 00:01:33,860

so that everyone would have the most up-to-date,

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00:01:33,860 --> 00:01:36,529

accurate and expert information available.

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00:01:37,130 --> 00:01:38,979

Last year, NASA sent a spacecraft

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00:01:38,979 --> 00:01:42,435

to intentionally impact an asteroid as a test of technology.

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00:01:42,435 --> 00:01:43,503

Would that work?

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00:01:43,503 --> 00:01:47,419

Could that be an effective means of saving the planet from an asteroid?

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00:01:47,440 --> 00:01:50,575

NASA's Double Asteroid Redirection Test, or DART,

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00:01:50,575 --> 00:01:55,859

did successfully test a method of asteroid deflection, the kinetic impactor.

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00:01:55,882 --> 00:01:58,618

And so DART showed that we do have technology

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00:01:58,618 --> 00:02:01,121

for diverting an asteroid in space.

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00:02:01,121 --> 00:02:03,590

But there is still a lot left to be done.

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00:02:03,823 --> 00:02:06,192

Options for deflecting an asteroid

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00:02:06,192 --> 00:02:09,770

or doing anything about an asteroid really depend on the asteroid —

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00:02:09,796 --> 00:02:12,437

on its size, on its composition.

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00:02:12,437 --> 00:02:16,108

But crucially, on the amount of time before the impact.

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00:02:16,136 --> 00:02:18,037

They have to be discovered early

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00:02:18,037 --> 00:02:20,206

in order to be able to do something about them.

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00:02:20,440 --> 00:02:24,748

NASA sent a spacecraft to a near-Earth asteroid recently to collect a sample.

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00:02:24,777 --> 00:02:26,913

Why are scientists bringing that sample to Earth,

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00:02:26,913 --> 00:02:28,314

and what do they hope to learn?

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00:02:28,314 --> 00:02:32,321

NASA's first asteroid sample return mission, OSIRIS-REx,

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00:02:32,352 --> 00:02:36,357

successfully collected pieces of an asteroid called Bennu

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00:02:36,422 --> 00:02:38,625
to bring that sample back to Earth.

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00:02:38,925 --> 00:02:41,728
Scientists are very interested in studying Bennu

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00:02:41,728 --> 00:02:44,297
because it is largely unchanged

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00:02:44,297 --> 00:02:46,566
since the formation of the solar system.

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00:02:46,566 --> 00:02:49,462
And so scientists plan to study that sample

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00:02:49,462 --> 00:02:51,703
to learn about the early solar system,

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00:02:51,704 --> 00:02:56,042
to learn about the origins of organics and water,

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00:02:56,042 --> 00:02:58,144
which are important for studying life on Earth.

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00:02:58,778 --> 00:02:59,913
Well, this goes without saying,

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00:02:59,913 --> 00:03:02,311
but thank you for your work in keeping the planet safe

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00:03:02,315 --> 00:03:06,448
from world-ending asteroids plummeting into our planet.