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00:00:01,170 --> 00:00:06,460

NARRATOR: Welcome to Kennedy Now! A look at some of the recent accomplishments and changes underwa

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00:00:06,460 --> 00:00:11,580

at America's Premiere Spaceport.

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00:00:11,580 --> 00:00:16,130

NASA's Kennedy Space Center continues to take bold steps toward launching a flight test for

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00:00:16,130 --> 00:00:21,320

the Orion spacecraft in September 2014. Engineers are putting together the

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00:00:21,320 --> 00:00:26,280

cone-shaped spacecraft inside Kennedy's Operations and Checkout Building.

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00:00:26,280 --> 00:00:31,760

The agency's Ground Systems Development and Operations Program, called GSDO,

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00:00:31,760 --> 00:00:35,760

is offering its expertise for the flight, which will see a Delta IV-Heavy send the Orion

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00:00:35,760 --> 00:00:40,430

into a high orbit to test the spacecraft's heat shield and other systems.

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00:00:40,430 --> 00:00:46,060

Orion is designed to carry humans into deep space possibly on missions to an asteroid,

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00:00:46,060 --> 00:00:48,790

Mars or around the moon.

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00:00:48,790 --> 00:00:53,390

Pepper Phillips, program manager for GSDO, said the mission will give the agency a chance to

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00:00:53,390 --> 00:00:57,470

evaluate its plans for the control room operators and engineers, too.

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00:00:57,470 --> 00:01:01,760

Pepper Phillips, GSDO Program Manager: The teams are exercising some static tests now,

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00:01:01,760 --> 00:01:07,960

but we're going to be ready with this full-up active test of a live spacecraft.

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00:01:07,960 --> 00:01:11,630

NARRATOR: Waiting for astronauts at whichever destination they choose may well be a

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00:01:11,630 --> 00:01:18,450

fleet of small robots steadily turning extraterrestrial soils into rocket fuel and breathing air.

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00:01:18,450 --> 00:01:25,340

A team of engineers at Kennedy built the first prototype of a mining robot they dubbed RASSOR.

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00:01:25,340 --> 00:01:31,210

The robust robot uses a pair of barrel-shaped drums to dig and store lunar or Martian soil

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00:01:31,210 --> 00:01:35,420

so it can be processed into usable materials for astronauts.

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00:01:35,420 --> 00:01:39,410

Some of the students who will make their own robotic contributions in the future tested their

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00:01:39,410 --> 00:01:46,120

designs in Orlando during this year's regional contest for the annual FIRST Robotics Competition.

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00:01:46,120 --> 00:01:50,730

The event, funded by private sponsorships, pitted robots designed and built by high

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00:01:50,730 --> 00:01:56,360

school students against each other. The robots had to throw discs to targets and perform some

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00:01:56,360 --> 00:02:00,850

climbing tasks to gain points and progress.

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00:02:00,850 --> 00:02:05,260

Designers from Kennedy and NASA programs mentored several of the teams.

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00:02:05,260 --> 00:02:09,780

Center Director Bob Cabana, a former astronaut, looked at some of the robots up close

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00:02:09,780 --> 00:02:13,000

before offering his own praise of the students' work.

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00:02:13,000 --> 00:02:15,520

Robert Cabana, Director, NASA's Kennedy Space Center: If you look at where we're going as we explore

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00:02:15,520 --> 00:02:19,610

into the future, what do we do first? We send robots as precursors.

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00:02:19,610 --> 00:02:24,420

Many of the same skills you use in developing your robots are the same skills

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00:02:24,420 --> 00:02:30,340

that go into the Mars Science Lab Curiosity, they're just a little more refined than what

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00:02:30,340 --> 00:02:32,270

we're using on the floor today.

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00:02:32,270 --> 00:02:35,310

NARRATOR: More robotic competitions are coming up at Kennedy,