



**NASA  
HUMAN  
EXPLORATION  
ROVER CHALLENGE**  
VIRTUAL AWARDS CEREMONY  
2022



1  
00:04:27,951 --> 00:02:45,899  
music

2  
00:11:00,292 --> 00:11:02,311  
Hello, and welcome to the virtual awards

3  
00:11:02,311 --> 00:11:06,349  
ceremony for the 2022 NASA Human  
Exploration Rover Challenge.

4  
00:11:06,649 --> 00:11:08,000  
My name is Christopher Blair

5  
00:11:08,000 --> 00:11:11,604  
with NASA's Marshall Space  
Flight Center here in Huntsville, Alabama.

6  
00:11:12,204 --> 00:11:15,558  
It is my pleasure to serve  
as emcee for today's event.

7  
00:11:16,108 --> 00:11:19,378  
Our first distinguished speaker  
is the acting deputy

8  
00:11:19,378 --> 00:11:22,882  
associate administrator  
for NASA's Office of STEM Engagement.

9  
00:11:23,032 --> 00:11:24,350  
Please welcome Mr.

10  
00:11:24,350 --> 00:11:28,621  
Tori Johnson,  
hello and welcome, Herc teams.

11  
00:11:29,155 --> 00:11:32,792  
My name is Tori Johnson,  
and I serve as the acting deputy

12  
00:11:32,792 --> 00:11:38,397  
associate administrator of NASA's  
office of STEM engagement at NASA's STEM

13  
00:11:38,397 --> 00:11:42,768  
engagement takes place at every center  
and in every mission directorate.

14  
00:11:43,502 --> 00:11:48,441  
Our broad spectrum of student experiences  
offers students like you across

15  
00:11:48,441 --> 00:11:54,230  
the country unique opportunities to engage  
with and contribute to NASA's missions.

16  
00:11:55,698 --> 00:11:57,533  
NASA's Artemus Mission

17  
00:11:57,533 --> 00:12:01,287  
will send the first woman  
and the first person of color to the moon.

18  
00:12:02,238 --> 00:12:04,323  
All of the students listening today

19  
00:12:04,323 --> 00:12:10,112  
are members of the Artemus generation  
and being a part of NASA's ARTEMIS Student

20  
00:12:10,112 --> 00:12:14,366  
Challenges allows each of you to build  
foundational knowledge

21  
00:12:14,900 --> 00:12:20,005  
on topics and technologies critical  
to the success of these future missions.

22

00:12:20,005 --> 00:12:20,673

Ahead,

23

00:12:21,624 --> 00:12:23,959

the human exploration rover challenge

24

00:12:24,176 --> 00:12:26,779

gives students the opportunity to explore,

25

00:12:27,229 --> 00:12:30,950

collaborate, learn new skills,  
make mistakes

26

00:12:31,200 --> 00:12:34,437

and concur obstacles on and off the track

27

00:12:35,721 --> 00:12:39,809

from initial designs on paper  
to seeing your rovers built

28

00:12:39,809 --> 00:12:44,363

for the first time, to even testing  
those builds in complex ways,

29

00:12:44,897 --> 00:12:47,850

you should feel very proud of all that  
you have achieved.

30

00:12:48,601 --> 00:12:53,239

Your perseverance to get across  
the finish line is truly an inspiration

31

00:12:54,323 --> 00:12:55,524

I'm thrilled to be

32

00:12:55,524 --> 00:12:58,527

here to congratulate  
all of you at the culmination

33

00:12:58,861 --> 00:13:02,515  
of this hard work and dedication  
that you've been putting in

34

00:13:02,782 --> 00:13:05,184  
into your projects  
for the past eight months.

35

00:13:06,318 --> 00:13:09,438  
I would like to take a moment  
to invite you to reflect

36

00:13:09,588 --> 00:13:12,558  
on all the time  
you spent working together as a team.

37

00:13:13,142 --> 00:13:15,528  
Growing as individuals.

38

00:13:15,528 --> 00:13:20,032  
I'm sure you've experienced moments  
of excitement, unexpected challenges,

39

00:13:20,449 --> 00:13:23,519  
and rewarding successes  
on your journey to today.

40

00:13:24,503 --> 00:13:28,257  
I hope you can recognize the impact  
of these experiences

41

00:13:28,257 --> 00:13:31,861  
on your personal growth  
and skill sets that you've developed

42

00:13:32,778 --> 00:13:35,631  
these moments of growth are ones  
that you will take

43

00:13:35,631 --> 00:13:40,019

with you long after today and hopefully  
into your careers in the future.

44

00:13:41,220 --> 00:13:46,225

I too recall my time as a student  
working with teams, and I recognized

45

00:13:46,225 --> 00:13:51,330

the importance of successes  
and learning together with a cohort

46

00:13:51,797 --> 00:13:55,801

and I was really excited about the wins  
that we were able to accomplish together.

47

00:13:56,552 --> 00:14:00,239

So to every team that participated,  
congratulations

48

00:14:00,239 --> 00:14:03,509

on your many achievements  
and have a great awards ceremony.

49

00:14:03,993 --> 00:14:04,443

Thank you.

50

00:14:06,028 --> 00:14:06,662

Thank you, Mr.

51

00:14:06,662 --> 00:14:07,313

Johnson.

52

00:14:07,313 --> 00:14:11,700

Next up, sharing words of inspiration  
from NASA's Johnson Space Center.

53

00:14:11,934 --> 00:14:14,937

Please welcome NASA astronaut and McClain.

54

00:14:17,456 --> 00:14:19,108

Hello from Houston's Johnson

55

00:14:19,108 --> 00:14:22,912

Space Center, where we are busy training  
for today's space station.

56

00:14:22,912 --> 00:14:25,431

And tomorrow's Artemus Mission's.

57

00:14:25,431 --> 00:14:27,716

My name is Nancy Astronaut and McClain.

58

00:14:27,716 --> 00:14:30,903

And I am so pleased  
to share this special day with you.

59

00:14:31,787 --> 00:14:36,025

I wanted to take a moment to congratulate  
each and every one of you for navigating

60

00:14:36,025 --> 00:14:41,013

the complex challenges of NASA's  
human exploration rover challenge.

61

00:14:42,348 --> 00:14:46,702

For more than 25 years, her has provided  
an authentic engineering experience

62

00:14:46,702 --> 00:14:51,206

to students to better benefit  
for both individually and as a team.

63

00:14:51,657 --> 00:14:54,710

And now you are part of that tradition.

64

00:14:54,710 --> 00:14:57,212

How exciting  
it must have been to take your innovative

65

00:14:57,212 --> 00:15:02,268

ideas from a theory to reality,  
from the drawing board to field analysis.

66

00:15:03,903 --> 00:15:05,638

We have all enjoyed watching you apply

67

00:15:05,638 --> 00:15:08,874

your classroom education  
and experiences to real world design.

68

00:15:09,391 --> 00:15:12,444

I know this is the fun  
part of engineering,

69

00:15:12,444 --> 00:15:15,714

designing real vehicles  
and tools to be fabricated and tested

70

00:15:16,048 --> 00:15:20,252

I participated in a similar program  
when I was in college, and it really was

71

00:15:20,252 --> 00:15:24,707

my first experience understanding  
what Nassar did and how satisfying

72

00:15:24,707 --> 00:15:28,160

it can be to be an engineer  
and take something from idea

73

00:15:28,677 --> 00:15:32,181

to design to creation and testing

74

00:15:34,249 --> 00:15:36,452

one of Nash's goals  
for the art of this program

75

00:15:36,452 --> 00:15:39,204

is to develop  
a sustained human presence on the moon,

76

00:15:39,955 --> 00:15:43,859  
where astronauts can conduct science  
on the lunar surface over longer periods.

77

00:15:43,859 --> 00:15:44,760  
Of time.

78

00:15:45,511 --> 00:15:48,948  
Such research will be possible  
with creative designs

79

00:15:49,014 --> 00:15:52,885  
like yours, designs  
that NASA and our partners may someday

80

00:15:53,268 --> 00:15:58,257  
use on expeditions to the Moon, Mars,  
or other deep space destinations.

81

00:15:59,758 --> 00:16:01,143  
Each one of you are attaining

82

00:16:01,143 --> 00:16:05,214  
the skills needed to be part  
of that Artemus team maybe one day

83

00:16:05,364 --> 00:16:08,450  
one of you will create the technology  
to make the mission possible.

84

00:16:09,084 --> 00:16:12,838  
Or maybe somebody in this room  
today will be on our team

85

00:16:13,222 --> 00:16:14,306  
and go on these missions.

86

00:16:14,306 --> 00:16:15,858

As an astronaut,

87

00:16:16,608 --> 00:16:19,378

you should be very proud  
of what you have done to this point.

88

00:16:19,979 --> 00:16:22,614

I know it was not always easy.

89

00:16:22,614 --> 00:16:26,418

It was probably not always fun  
and it was probably at times frustrating,

90

00:16:27,019 --> 00:16:29,688

but you persevered  
and that's what it takes.

91

00:16:30,839 --> 00:16:33,859

So on behalf of NASA  
and all of our engineers

92

00:16:34,009 --> 00:16:38,430

and all of our scientists,  
educators, leaders, and our astronauts,

93

00:16:39,148 --> 00:16:41,750

we sincerely thank you for your hard work

94

00:16:41,750 --> 00:16:45,320

and we congratulate you on your success.

95

00:16:45,320 --> 00:16:46,105

Robert Games.

96

00:16:46,105 --> 00:16:48,841

The art of this generation  
is your generation.

97

00:16:49,141 --> 00:16:53,012

And from what we've seen in this competition, you're ready for the challenge.

98

00:16:55,314 --> 00:16:56,365

It is my privilege

99

00:16:56,365 --> 00:17:00,269

to welcome the director of the engineering  
directorates here at NASA's Marshall.

100

00:17:00,469 --> 00:17:01,170

Please welcome

101

00:17:01,170 --> 00:17:05,340

Miss Mary Beth Koelbl On behalf of NASA's  
Marshall Space Flight Center.

102

00:17:05,641 --> 00:17:09,678

I would like to congratulate every team  
that participated in this year's event.

103

00:17:10,279 --> 00:17:13,232

Thank you for all your enthusiasm  
for the competition

104

00:17:13,232 --> 00:17:15,984

and for all the hard work  
your entries represented.

105

00:17:16,969 --> 00:17:19,254

You were such an inspiration to NASA.

106

00:17:20,422 --> 00:17:24,243

NASA's proud to be part of the Human  
Exploration Rover Challenge,

107

00:17:24,243 --> 00:17:27,963

because we want you to be excited  
about potential careers in science,

108

00:17:28,080 --> 00:17:30,749

technology, math and engineering.

109

00:17:31,200 --> 00:17:33,318

The STEM fields.

110

00:17:33,318 --> 00:17:37,022

This competition is a terrific example  
of how leaders in government,

111

00:17:37,289 --> 00:17:40,793

industry and academia  
can work with young people

112

00:17:40,793 --> 00:17:45,347

to foster their talents and show  
how teamwork can lead to great things.

113

00:17:47,132 --> 00:17:48,801

And even though we couldn't compete

114

00:17:48,801 --> 00:17:52,137

in the grand finale at the Space  
and Rocket Center, this month,

115

00:17:52,821 --> 00:17:56,492

the lessons you learned along  
the way are the same things

116

00:17:56,492 --> 00:17:58,761

NASA's needs to execute our missions

117

00:18:00,295 --> 00:18:02,698

as pioneers of space exploration.

118

00:18:03,265 --> 00:18:06,118

NASA also faces challenges in everything

119

00:18:06,118 --> 00:18:09,321

we do on a regular basis.

120

00:18:09,321 --> 00:18:10,973

Your skills went beyond

121

00:18:10,973 --> 00:18:14,126

the course this year,  
and you demonstrated all the attributes.

122

00:18:14,126 --> 00:18:16,762

We are looking for it. Asset,

123

00:18:16,762 --> 00:18:20,365

problem solving, creating unique solutions

124

00:18:21,049 --> 00:18:25,404

enthusiasm and is always pushing  
the limits of innovation.

125

00:18:26,638 --> 00:18:30,926

All those traits are a great foundation  
for your future in STEM fields

126

00:18:31,760 --> 00:18:34,046

skills that we need across the agency.

127

00:18:35,447 --> 00:18:39,618

For more than 25 years, the Rover  
Challenge and its sponsors have encouraged

128

00:18:39,618 --> 00:18:43,188

student teams from across the  
world to overcome obstacles.

129

00:18:44,423 --> 00:18:47,693

And these awards recognize the hard work  
each team

130

00:18:47,693 --> 00:18:50,996

accomplished in designing and building  
human powered rovers.

131

00:18:53,065 --> 00:18:54,032

To all the students

132

00:18:54,032 --> 00:18:57,870

that took on these tasks  
and participated in the Rover Challenge,

133

00:18:58,854 --> 00:19:01,373

we salute you and congratulate

134

00:19:01,373 --> 00:19:04,409

you on all your accomplishments.

135

00:19:04,409 --> 00:19:07,312

I hope you take  
what you learned from this event

136

00:19:07,796 --> 00:19:10,282

and use it in whatever  
the future holds for you

137

00:19:12,151 --> 00:19:14,353

based on what I've seen from this awards.

138

00:19:14,369 --> 00:19:17,222

We have a very bright future,

139

00:19:17,222 --> 00:19:19,374

and hopefully we will see you again.

140

00:19:19,374 --> 00:19:22,728

As engineers and scientists  
working in the aerospace industry,

141

00:19:23,478 --> 00:19:25,581  
or maybe even one day working at NASA

142  
00:19:27,649 --> 00:19:29,668  
no matter where your future leads you.

143  
00:19:29,718 --> 00:19:33,689  
I encourage each of you not to lose  
the sense of purpose that led you here

144  
00:19:33,689 --> 00:19:34,590  
today.

145  
00:19:35,274 --> 00:19:37,609  
I hope you stay involved in the stem  
fields.

146  
00:19:38,327 --> 00:19:43,198  
After all, you were the scientist,  
engineers, technicians and explorers

147  
00:19:43,615 --> 00:19:47,002  
who will carry on the mission  
of exploration in the decades to come.

148  
00:19:48,470 --> 00:19:49,671  
In closing,

149  
00:19:49,671 --> 00:19:53,508  
I want to give a really big  
thanks to all the mentors, the faculty,

150  
00:19:53,508 --> 00:19:56,178  
advisors,  
and the teachers who helped these teams

151  
00:19:57,262 --> 00:19:59,932  
You should all be proud of your successes  
this year.

152

00:20:00,532 --> 00:20:03,602

It didn't go unnoticed

153

00:20:04,803 --> 00:20:07,072

And now it is my honor to present

154

00:20:07,072 --> 00:20:09,858

the very first award for the 2022 year

155

00:20:10,592 --> 00:20:12,928

The Ingenuity award.

156

00:20:12,928 --> 00:20:17,432

This award is given to a team who is impressed us with their overall ingenuity.

157

00:20:18,600 --> 00:20:20,602

It is critical for NASA to approach

158

00:20:20,602 --> 00:20:25,224

engineering problems with creative ideas and we were so pleased

159

00:20:25,224 --> 00:20:28,460

in seeing the unique methods displayed by all the student teams.

160

00:20:30,112 --> 00:20:31,847

This year's winning team

161

00:20:31,847 --> 00:20:34,616

presented NASA with innovative tactics

162

00:20:35,033 --> 00:20:37,586

to build and design a human powered rover

163

00:20:38,837 --> 00:20:40,822

using nontraditional methods,

164

00:20:40,822 --> 00:20:43,558

components and mechanical design systems.

165

00:20:43,942 --> 00:20:47,362

Their ingenuity and creativity  
was evident to all the judges.

166

00:20:48,897 --> 00:20:51,717

This year's winner in the College  
University Division

167

00:20:52,067 --> 00:20:55,020

presented us with a unique and innovative  
frame design.

168

00:20:56,038 --> 00:20:59,358

They used unexpected materials  
and a modular system

169

00:20:59,574 --> 00:21:03,111

to tackle the engineering challenge  
of a rigid and lightweight chassis.

170

00:21:04,313 --> 00:21:06,682

The winning team is technological.

171

00:21:06,682 --> 00:21:08,817

To Monterrey, Mexico.

172

00:21:09,201 --> 00:21:11,253

Congratulations

173

00:21:18,777 --> 00:21:22,130

our next award presenter  
is the director of NASA's Office

174

00:21:22,130 --> 00:21:26,068

of STEM Engagement for the Southeast

Region of the United States of America.

175

00:21:26,335 --> 00:21:27,602

Please welcome Mr.

176

00:21:27,602 --> 00:21:29,521

Kevin McGhaw.

177

00:21:30,238 --> 00:21:31,556

Thanks, Chris.

178

00:21:31,823 --> 00:21:35,160

I need to tell you,

I am thrilled to present this year's

179

00:21:35,160 --> 00:21:40,799

science, technology, engineering and Math  
or STEM Engagement Award.

180

00:21:41,400 --> 00:21:45,654

The STEM Engagement Award provides teams  
with an opportunity to share their passion

181

00:21:45,654 --> 00:21:46,788

and knowledge

182

00:21:46,788 --> 00:21:51,393

with the goal of motivating others to  
explore STEM opportunities in the future.

183

00:21:52,010 --> 00:21:56,848

Each team is asked to conduct hands  
on instructional STEM learning activities

184

00:21:57,182 --> 00:22:01,503

with at least 200 participants  
through in-person or online.

185

00:22:01,503 --> 00:22:06,692

Engagement teams are judged  
not only on the number of students reached

186

00:22:06,692 --> 00:22:10,495

but also their creativity,  
the activity, uniqueness,

187

00:22:11,029 --> 00:22:13,949

and the ability to demonstrate

188

00:22:13,949 --> 00:22:16,735

the impact of each engagement on student  
learning.

189

00:22:17,552 --> 00:22:21,840

This year's winner in the high school  
division contacted three local schools,

190

00:22:22,140 --> 00:22:25,260

and their focus  
was bringing STEM activities to the areas

191

00:22:25,260 --> 00:22:27,963

where STEM activities  
are not currently conducted.

192

00:22:28,730 --> 00:22:32,034

They engaged around 3000 students

193

00:22:32,034 --> 00:22:34,953

in various activities, including seminars,

194

00:22:35,370 --> 00:22:38,306

drawings, and building Lego rovers.

195

00:22:38,990 --> 00:22:42,861

This year's High School  
STEM Engagement Award is Decent

196

00:22:43,495 --> 00:22:48,533

Children Model

Presidency School in Punjab, India.

197

00:22:51,803 --> 00:22:53,905

In the college or university division.

198

00:22:53,905 --> 00:22:57,692

STEM engagement was the top priority  
for this year's this team's winner,

199

00:22:57,893 --> 00:22:59,127

this year's winner.

200

00:22:59,127 --> 00:23:02,631

The team has devised a series of direct  
and personal interactions

201

00:23:02,898 --> 00:23:07,052

involving mechanics, simulators,  
engineering, design activities,

202

00:23:07,285 --> 00:23:11,957

science games and more  
with several private and public schools

203

00:23:11,957 --> 00:23:15,510

ranging from a variety of sectors  
and ages of students.

204

00:23:16,161 --> 00:23:19,915

So this year's college and university  
division STEM engagement award

205

00:23:20,298 --> 00:23:23,185

goes to Instituto Technological,

206

00:23:23,552 --> 00:23:26,838

the Santa Domingo in Santa Domingo,  
Dominican Republic.

207

00:23:26,972 --> 00:23:29,007

Congratulations

208

00:23:33,028 --> 00:23:34,262

thank you, Kevin.

209

00:23:34,262 --> 00:23:38,417

Next up, we welcome the director of  
the Office of Communications here at NASA.

210

00:23:38,433 --> 00:23:41,420

Marshall please  
welcome Miss Marty Schaefer.

211

00:23:42,888 --> 00:23:43,889

Good morning.

212

00:23:43,889 --> 00:23:46,792

It's my pleasure to present this year's  
Videography Award,

213

00:23:47,692 --> 00:23:52,047

Digital Storytelling is a valuable skill  
set in the 21st Century workplace.

214

00:23:52,397 --> 00:23:55,550

For Nassar, it's essential  
we share our important discoveries

215

00:23:55,550 --> 00:23:58,737

and accomplishments  
on a variety of multimedia platforms.

216

00:23:59,070 --> 00:24:00,539

Including video.

217

00:24:00,539 --> 00:24:03,859

We were pleased to offer this video

challenge for students to hone

218

00:24:03,859 --> 00:24:06,745

both their creativity  
and their digital talents.

219

00:24:07,646 --> 00:24:11,133

It was enjoyable and informational  
to watch all the video submissions.

220

00:24:11,783 --> 00:24:15,086

We learned a great deal about everyone's  
hard work and dedication

221

00:24:15,086 --> 00:24:18,590

throughout this long process,  
and we appreciate your efforts

222

00:24:19,641 --> 00:24:21,776

the winner of the videography award

223

00:24:21,776 --> 00:24:26,848

for the high school division is Parish  
Episcopal School from Dallas, Texas.

224

00:24:27,265 --> 00:24:30,085

Let's watch their video now

225

00:28:42,771 --> 00:28:43,855

great job

226

00:28:44,189 --> 00:28:46,374

for the College University Division  
winner.

227

00:28:46,558 --> 00:28:49,761

Please join me in  
congratulating the University

228

00:28:49,761 --> 00:28:53,131  
of Puerto Rico, Mayaguez, Mayaguez,  
Puerto Rico.

229  
00:28:53,815 --> 00:28:55,967  
Let's watch their video.

230  
00:30:57,038 --> 00:32:57,709  
On our next award.

231  
00:32:57,709 --> 00:33:00,178  
Presenter may be recognizable  
to many of you

232  
00:33:00,411 --> 00:33:03,564  
she has served  
as the activity lead for years past.

233  
00:33:03,798 --> 00:33:05,400  
Please welcome Dr.

234  
00:33:05,400 --> 00:33:08,753  
Julie Edstrom Thank you, Chris.

235  
00:33:09,020 --> 00:33:12,390  
I'm excited to present this year's  
Project Review Award.

236  
00:33:13,041 --> 00:33:17,028  
This year, we continue the requirement  
of technical reports and presentations

237  
00:33:17,278 --> 00:33:20,248  
with added rigor  
from our previous year's requirements.

238  
00:33:20,848 --> 00:33:24,018  
The Project Review Award recognizes  
Excellence

239

00:33:24,018 --> 00:33:27,588

in Design, Review  
and Operational Readiness Review reports.

240

00:33:28,373 --> 00:33:30,808

The winning teams  
addressed various aspects

241

00:33:30,808 --> 00:33:34,212

of the entire plan  
from start to end to start to finish.

242

00:33:34,562 --> 00:33:38,900

To include rover design,  
construction and testing,

243

00:33:39,500 --> 00:33:42,153

safety identification and mitigation.

244

00:33:42,870 --> 00:33:46,491

Technical challenges  
and course corrections and budget

245

00:33:46,491 --> 00:33:51,212

and schedule management, along with team  
bios and STEM engagement activities.

246

00:33:51,929 --> 00:33:55,550

This year's winning teams demonstrated  
their knowledge of the engineering

247

00:33:55,550 --> 00:33:59,670

process and technical report requirements  
while providing insight

248

00:33:59,837 --> 00:34:04,192

as to how their evolution throughout  
the year was shaped by each team member.

249

00:34:05,209 --> 00:34:05,760

The winner

250

00:34:05,760 --> 00:34:09,330

of this year's Project Review  
Award in the High School Division

251

00:34:09,564 --> 00:34:12,767

demonstrated  
that continued hard work and dedication

252

00:34:13,167 --> 00:34:16,287

is a top objective  
in their engineering design process.

253

00:34:16,404 --> 00:34:19,974

Process through an increase and design  
justify patience,

254

00:34:20,308 --> 00:34:23,461

graphical evidence  
and improved technical writing.

255

00:34:24,595 --> 00:34:27,632

They also had the greatest overall review  
score.

256

00:34:28,850 --> 00:34:32,120

This year's High School  
Division Project Review Award

257

00:34:32,120 --> 00:34:35,757

winner is Parents Episcopal School

258

00:34:35,757 --> 00:34:38,342

from Dallas, Texas.

259

00:34:44,515 --> 00:34:47,034

This year's  
winner of the Project Review Award

260

00:34:47,034 --> 00:34:50,755

and the College and University Division  
with impressive reporting

261

00:34:51,239 --> 00:34:54,809

specifically in the Mission  
Performance Prediction category

262

00:34:55,226 --> 00:34:58,646

is my alma mater,  
Auburn University from Auburn, Alabama.

263

00:34:59,063 --> 00:35:00,381

Or Eagle

264

00:35:01,849 --> 00:35:03,417

Thank you, Dr. Hedstrom.

265

00:35:03,417 --> 00:35:07,705

To present our next award, we welcome  
one of our many talented coordinators.

266

00:35:08,039 --> 00:35:10,825

Here to present  
the next award is Miss Amy McDowell.

267

00:35:12,627 --> 00:35:15,446

I am pleased to present the Phenix Award.

268

00:35:16,247 --> 00:35:19,367

This award is given to the teams  
who raise their scores

269

00:35:19,367 --> 00:35:22,787

with the greatest improvements  
from design review

270

00:35:23,037 --> 00:35:26,007

to the Operational Readiness Review.

271

00:35:26,007 --> 00:35:29,477

These teams implemented feedback given by NASA's experts,

272

00:35:29,777 --> 00:35:33,231

then carried it forward through their explanations.

273

00:35:33,264 --> 00:35:36,684

They shared a deeper knowledge of the engineering design process,

274

00:35:37,101 --> 00:35:39,620

design modifications and testing

275

00:35:40,671 --> 00:35:45,293

This year's winning teams demonstrated growth in the understanding of mission

276

00:35:45,293 --> 00:35:49,230

readiness, performance prediction project plans,

277

00:35:49,397 --> 00:35:51,449

and overall project management.

278

00:35:52,500 --> 00:35:56,270

The winner of the Phenix Award in the high school division is

279

00:35:57,355 --> 00:36:00,224

Academy of Arts, Careers and Technology.

280

00:36:00,241 --> 00:36:02,577

From Reno, Nevada.

281

00:36:07,198 --> 00:36:10,434

The winner of the Phenix Award  
in the College University

282

00:36:10,434 --> 00:36:14,689

Division is Middle

Tennessee State University

283

00:36:14,822 --> 00:36:18,543

from Murfreesboro, Tennessee.

284

00:36:24,765 --> 00:36:25,466

Coming up

285

00:36:25,466 --> 00:36:28,970

next to share the importance  
of your research into a sample collection.

286

00:36:29,220 --> 00:36:32,874

Our three Apollo  
sample scientists from NASA's Johnson

287

00:36:32,874 --> 00:36:36,827

Space Center here are Ryan Ziegler,  
Julianne Grosz

288

00:36:37,111 --> 00:36:40,431

and Andrea Mosey with this fun  
congratulations video.

289

00:36:40,898 --> 00:36:41,482

Hello.

290

00:36:41,482 --> 00:36:46,254

We are part of the lunar curation  
team of the Astro Materials Research

291

00:36:46,254 --> 00:36:49,891

and Exploration Science or Areas Group  
here at NASA's Johnson Space Center.

292

00:36:50,191 --> 00:36:53,628

And we are honored to present  
this year's Task Challenge Award

293

00:36:55,012 --> 00:36:56,280

from inside

294

00:36:56,280 --> 00:37:00,201

this team practicing that we monitor  
and maintain the facilities

295

00:37:00,201 --> 00:37:03,688

that keep the Apollo samples  
clean and safe.

296

00:37:03,688 --> 00:37:08,492

To ensure future generations of scientists  
can continue to study them.

297

00:37:09,026 --> 00:37:13,497

Right now, we have just opened  
a new Apollo sample to learn things

298

00:37:13,547 --> 00:37:17,668

about the moon and get ready  
for the upcoming autonomous missions.

299

00:37:18,269 --> 00:37:21,722

We are so proud of your efforts  
to simulate the difficult task

300

00:37:22,023 --> 00:37:23,040

of sample collection.

301

00:37:23,040 --> 00:37:23,507

I just did.

302

00:37:23,507 --> 00:37:27,678

Morales, we appreciate your attention

to detail regarding cross-contamination,

303

00:37:27,895 --> 00:37:30,865

cross-contamination risks,  
and which techniques work best.

304

00:37:31,499 --> 00:37:35,253

Your creativity and ingenuity  
in attempting to solve these authentic

305

00:37:35,253 --> 00:37:38,356

and complex  
challenges aligns directly with the work

306

00:37:38,372 --> 00:37:41,459

NASA's and our partners are planning  
for future human being.

307

00:37:41,459 --> 00:37:44,512

Space exploration missions.

308

00:37:44,512 --> 00:37:46,731

We have a job here.

309

00:37:47,064 --> 00:37:48,299

We congratulate.

310

00:37:48,299 --> 00:37:51,686

All. The teams on a year of hard work and.

311

00:37:51,686 --> 00:37:56,757

Success for our next award,  
we welcome one of our event sponsors.

312

00:37:56,958 --> 00:38:01,646

Please welcome project manager  
with Science Inc, Mistress Carl Gero.

313

00:38:04,131 --> 00:38:05,333

My apologies

314

00:38:05,333 --> 00:38:07,952  
to Trish Cold Europe with Site Inc

315

00:38:09,236 --> 00:38:12,206  
and I also have my counterpart, Hitoshi

316

00:38:12,923 --> 00:38:17,428  
who is also engaged  
to giving this award award.

317

00:38:17,545 --> 00:38:21,332  
I will say thank you so much  
for the introduction and it's

318

00:38:21,332 --> 00:38:26,304  
also my my honor to announce the winner  
of this year's Task Challenge Award.

319

00:38:27,021 --> 00:38:29,790  
This award is given to the team  
in each division

320

00:38:30,057 --> 00:38:32,693  
who demonstrate a three D print tool

321

00:38:33,260 --> 00:38:35,930  
for the sample retrieval tasks.

322

00:38:35,930 --> 00:38:39,200  
3D manufacturing is an affordable,  
efficient way

323

00:38:39,233 --> 00:38:43,838  
to rapidly create necessary  
components on site testing.

324

00:38:43,838 --> 00:38:48,559

The tools on earth will help improve  
3D processes for future.

325

00:38:48,993 --> 00:38:51,629

ARTEMUS missions.

326

00:38:52,380 --> 00:38:56,217

The 2022 Capstone Award

327

00:38:57,351 --> 00:38:59,820

in the high school division goes to.

328

00:39:00,805 --> 00:39:02,123

To see you.

329

00:39:02,123 --> 00:39:06,377

See a job in Santa Cruz, Bolivia.

330

00:39:09,630 --> 00:39:10,881

The 2022

331

00:39:10,881 --> 00:39:14,118

task award to the

College University Division

332

00:39:15,469 --> 00:39:18,472

goes to Campbell University for East

333

00:39:19,306 --> 00:39:21,559

Creek, North Carolina.

334

00:39:22,760 --> 00:39:26,130

Congratulations everybody and best wishes.

335

00:39:30,084 --> 00:39:31,469

Thank you, Trish.

336

00:39:31,469 --> 00:39:34,338

Our next award presenter has shared critical information

337

00:39:34,338 --> 00:39:38,342

which each team please welcome the safety officer. Mr.

338

00:39:38,342 --> 00:39:40,261

Zach Koch.

339

00:39:40,878 --> 00:39:41,612

Hello.

340

00:39:42,096 --> 00:39:45,499

I am honored to present the safety award on behalf of professionals

341

00:39:45,499 --> 00:39:48,919

dedicated to the safety of systems products and services.

342

00:39:49,670 --> 00:39:51,389

This award recognizes the team.

343

00:39:51,389 --> 00:39:56,010

In each division, the best demonstrated a comprehensive approach to system safety

344

00:39:56,093 --> 00:39:59,280

as it relates to their vehicle personnel and operations.

345

00:40:00,081 --> 00:40:03,717

This year's winning teams demonstrated that safety needs to be incorporated

346

00:40:03,717 --> 00:40:07,138

into the rover design rather than just added on as an afterthought.

347

00:40:08,005 --> 00:40:12,209

They focused on personal hazard analysis  
and failure modes and effects analysis.

348

00:40:12,860 --> 00:40:15,563

With these analyzes,  
they identified and characterized

349

00:40:15,563 --> 00:40:18,482

the hazards posed by  
the system and its operation.

350

00:40:19,500 --> 00:40:21,051

This year's winning team

351

00:40:21,051 --> 00:40:23,421

teams did an entire hazard analysis

352

00:40:23,721 --> 00:40:26,390

by defining the challenges  
and summarizing the risks

353

00:40:27,208 --> 00:40:30,327

the teams worked to make significant  
enhancements to their rover

354

00:40:30,661 --> 00:40:32,997

for an overall safe  
and comfortable experience.

355

00:40:34,281 --> 00:40:38,002

The winner of the safety award  
in high school division wowed the judges

356

00:40:38,252 --> 00:40:39,153

and the staff

357

00:40:39,153 --> 00:40:43,157

with their Safety and Mitigations Handbook

and their extensive safety analysis.

358

00:40:43,824 --> 00:40:46,944

Congratulations to the Academy of Arts  
Careers

359

00:40:47,211 --> 00:40:50,815

and Technology in Reno, Nevada.

360

00:40:54,168 --> 00:40:54,618

This year's

361

00:40:54,618 --> 00:40:58,405

Safety Award winner in the College  
and university division showed the judges

362

00:40:58,405 --> 00:41:01,592

that they have a clear and strong  
understanding of failure modes and effects

363

00:41:01,592 --> 00:41:04,578

analysis,  
as well as risk and hazard analysis

364

00:41:04,795 --> 00:41:07,832

with their all encompassing  
charts and checklists.

365

00:41:08,516 --> 00:41:12,470

Congratulations,  
Universidad Nacional de Colombia

366

00:41:12,870 --> 00:41:15,389

in Bogota, Colombia.

367

00:41:21,979 --> 00:41:23,280

Thank you, Zack.

368

00:41:23,280 --> 00:41:26,250

Making just her second appearance  
on a national broadcast,

369

00:41:26,400 --> 00:41:30,437

we welcome our Nancy Marshall  
Communications intern, Miss Bre Sims.

370

00:41:32,223 --> 00:41:33,023

I'm excited

371

00:41:33,023 --> 00:41:35,392

to present this year's Social Media Award

372

00:41:36,060 --> 00:41:40,397

Social media is an excellent platform  
that provides opportunities for teams

373

00:41:40,397 --> 00:41:45,386

to showcase their ongoing process  
and team spirit through public engagement.

374

00:41:46,136 --> 00:41:49,857

Teams use their social media accounts  
to connect with their communities

375

00:41:50,040 --> 00:41:52,376

and give them a glimpse  
into the fun of her work.

376

00:41:53,928 --> 00:41:56,547

This year's winners  
open the doors to their labs

377

00:41:56,547 --> 00:41:59,133

virtually and invited their audiences in.

378

00:42:00,017 --> 00:42:04,438

From design planning to building  
and testing, we were able to see it all

379

00:42:05,539 --> 00:42:10,077

The winner of the high school division captured their genuine camaraderie while

380

00:42:10,077 --> 00:42:15,115

highlighting students engaged in hands on planning, designing and fabrication.

381

00:42:15,983 --> 00:42:18,118

This year's High School Social Media Award

382

00:42:18,118 --> 00:42:21,055

winner is Gladstone County High School

383

00:42:21,272 --> 00:42:23,958

in Pikeville, Tennessee.

384

00:42:29,163 --> 00:42:29,697

This year's

385

00:42:29,697 --> 00:42:33,567

College University Division winner provided great content

386

00:42:33,567 --> 00:42:38,539

with impressive fabrication videos and highlighted STEM outreach efforts

387

00:42:39,206 --> 00:42:42,409

to build awareness and advocacy and their social media.

388

00:42:43,494 --> 00:42:45,379

The winner of the College University

389

00:42:45,379 --> 00:42:49,583

Social Media Award is the Law Institute of Technology

390

00:42:49,583 --> 00:42:51,869  
and Valor India.

391

00:42:58,442 --> 00:43:01,011  
Thank you, Bre, and great job

392

00:43:01,011 --> 00:43:03,180  
with the awards presentation now complete.

393

00:43:03,197 --> 00:43:05,816  
We are ready to announce the overall  
winners.

394

00:43:06,267 --> 00:43:10,337  
To do so,  
we welcome the technical coordinator, Dr.

395

00:43:10,337 --> 00:43:13,190  
Saharnaz Montazeri.

396

00:43:13,190 --> 00:43:14,458  
Thank you.

397

00:43:14,458 --> 00:43:17,361  
It was my pleasure  
to be part of the HERC team.

398

00:43:17,761 --> 00:43:21,899  
I've enjoyed seeing all your progress  
from Design Review, all the way

399

00:43:21,899 --> 00:43:25,970  
to the Operational Readiness Review  
and completing your row, your rover.

400

00:43:27,271 --> 00:43:30,324  
I'm so excited to announce the third place

401

00:43:30,324 --> 00:43:33,594  
of overall winners in high school  
division.

402  
00:43:33,594 --> 00:43:37,615  
The awards goes to Tu  
Ciencia Jovan in Santa

403  
00:43:37,615 --> 00:43:40,250  
Cruz, Bolivia.

404  
00:43:44,905 --> 00:43:47,358  
And our third place winner

405  
00:43:47,358 --> 00:43:51,228  
for the university  
division is Campbell University,

406  
00:43:51,228 --> 00:43:55,082  
Buies Creek, North Carolina.

407  
00:43:59,837 --> 00:44:00,504  
Thank you, Dr.

408  
00:44:00,504 --> 00:44:04,224  
Saharnaz Next,  
we are joined by the project manager

409  
00:44:04,408 --> 00:44:08,362  
for the next Gen STEM program  
from NASA's Office of STEM Engagement.

410  
00:44:08,612 --> 00:44:10,831  
Please welcome Dr. Carrie Olson.

411  
00:44:12,483 --> 00:44:13,617  
Thank you.

412  
00:44:13,701 --> 00:44:16,487

I'm excited to be here today  
to represent the Office

413

00:44:16,487 --> 00:44:19,373  
of STEM Engagement  
and the next gen STEM project.

414

00:44:19,857 --> 00:44:22,743  
And we're proud to sponsor the high school  
division of her work.

415

00:44:23,127 --> 00:44:24,144  
Congratulations.

416

00:44:24,144 --> 00:44:27,498  
To all the participants  
for your hard work and accomplishments.

417

00:44:28,349 --> 00:44:31,285  
Next gen STEM uses  
the excitement of NASA's work

418

00:44:31,552 --> 00:44:35,222  
to inspire, engage and educate K-12  
students,

419

00:44:35,756 --> 00:44:38,308  
the next generation of explorers

420

00:44:38,308 --> 00:44:40,377  
to the high school heart participants.

421

00:44:40,828 --> 00:44:45,866  
I hope you all have been inspired and  
will continue in your own STEM journeys.

422

00:44:46,884 --> 00:44:50,237  
And now I will announce the second place  
overall winners.

423

00:44:51,622 --> 00:44:54,024

The second place  
overall winner in the high school

424

00:44:54,024 --> 00:44:59,012

division is the Academy of Arts, Careers  
and Technologies

425

00:44:59,246 --> 00:45:01,398

from Reno, Nevada.

426

00:45:06,770 --> 00:45:08,572

And the second place

427

00:45:08,572 --> 00:45:12,109

overall winner  
in the college and university division is

428

00:45:13,077 --> 00:45:16,263

trying university from Angola, Indiana.

429

00:45:16,830 --> 00:45:19,233

Congratulations.

430

00:45:24,138 --> 00:45:24,772

Thank you, Dr.

431

00:45:24,772 --> 00:45:25,672

Olson.

432

00:45:25,672 --> 00:45:29,093

Here to present our final award of  
the year is the director

433

00:45:29,343 --> 00:45:32,629

of the Strategic Integration  
and Management Division with NASA.

434

00:45:32,813 --> 00:45:35,365  
Please welcome Dr. A Lada Taylor.

435  
00:45:40,637 --> 00:45:36,900  
Good morning.

436  
00:45:41,121 --> 00:45:44,808  
It's always an honor  
and a pleasure for me to participate.

437  
00:45:45,142 --> 00:45:47,161  
In this. Program.

438  
00:45:47,161 --> 00:45:49,430  
I want to just start off by saying

439  
00:45:49,680 --> 00:45:52,800  
I wish we could have been there  
to hug each other and.

440  
00:45:53,117 --> 00:45:53,817  
Put this.

441  
00:45:53,817 --> 00:45:56,687  
Together virtually,  
I mean, rather than virtually.

442  
00:45:56,970 --> 00:46:00,357  
But since we can't, let's just reach out  
and give each other hug

443  
00:46:01,525 --> 00:46:04,528  
and just make sure  
that we're still loving on each other.

444  
00:46:05,062 --> 00:46:07,347  
So it is now, my honor.

445  
00:46:07,681 --> 00:46:09,750

I'm thrilled to announce.

446

00:46:09,750 --> 00:46:13,821

The. Third place

winner of the College University Division,

447

00:46:14,521 --> 00:46:16,974

Campbell University,

448

00:46:16,974 --> 00:46:19,376

who is Creek North Carolina

449

00:46:26,600 --> 00:46:28,702

It is now my pleasure

450

00:46:28,702 --> 00:46:34,074

to say congratulations to our first place  
college

451

00:46:34,408 --> 00:46:38,245

university division winner for the 21,

452

00:46:38,779 --> 00:46:41,515

NASA's Human Exploration Rover Challenge.

453

00:46:42,332 --> 00:46:44,818

It is technological.

454

00:46:45,118 --> 00:46:49,490

There are Monterrey though  
Chico Peck Mexico

455

00:46:49,490 --> 00:46:52,860

all congratulate since.

456

00:46:57,898 --> 00:46:58,549

Thank you, Dr.

457

00:46:58,549 --> 00:47:02,152

Taylor, sharing her  
final thoughts on this season.

458

00:47:02,419 --> 00:47:05,005

Please welcome the activity lead for her.

459

00:47:05,189 --> 00:47:07,524

Miss Adria Brooks Davenport.

460

00:47:09,026 --> 00:47:11,361

I would like to congratulate  
our first place

461

00:47:11,361 --> 00:47:17,484

overall high school winner is Parish  
Episcopal School in Dallas, Texas.

462

00:47:18,952 --> 00:47:22,739

As another season of the NASA  
Human Exploration Rover

463

00:47:22,739 --> 00:47:28,078

Challenge comes to a close, I want to  
express our pride in your achievements.

464

00:47:28,262 --> 00:47:31,098

During another year  
full of question marks.

465

00:47:31,798 --> 00:47:36,653

You began the challenge, hoping  
for an in-person event, and you rose

466

00:47:36,653 --> 00:47:40,791

to the challenge of changing courses  
and competing virtually.

467

00:47:42,059 --> 00:47:45,062

You demonstrated

improvement in your project reviews,

468

00:47:45,295 --> 00:47:48,982

and you impressed us with your ingenuity  
and creativity.

469

00:47:50,717 --> 00:47:53,387

We offered you new challenges

470

00:47:53,387 --> 00:47:57,107

and conceived  
new construction, new solutions.

471

00:47:57,441 --> 00:48:03,063

We asked you to demonstrate your rover  
by creating homemade obstacles, withstand

472

00:48:03,063 --> 00:48:07,284

IT requirements, and you reveal creativity  
in your execution.

473

00:48:07,918 --> 00:48:11,004

Quite simply, you showed up and showed out

474

00:48:11,605 --> 00:48:16,159

Thank you for your for  
continuing with us on your heart journey.

475

00:48:16,610 --> 00:48:19,496

As we persist  
in innovating the competition,

476

00:48:19,880 --> 00:48:24,051

we are eager to hold an in-person  
event in 2023

477

00:48:24,468 --> 00:48:27,054

and hope to see your accomplishments  
face to face.

