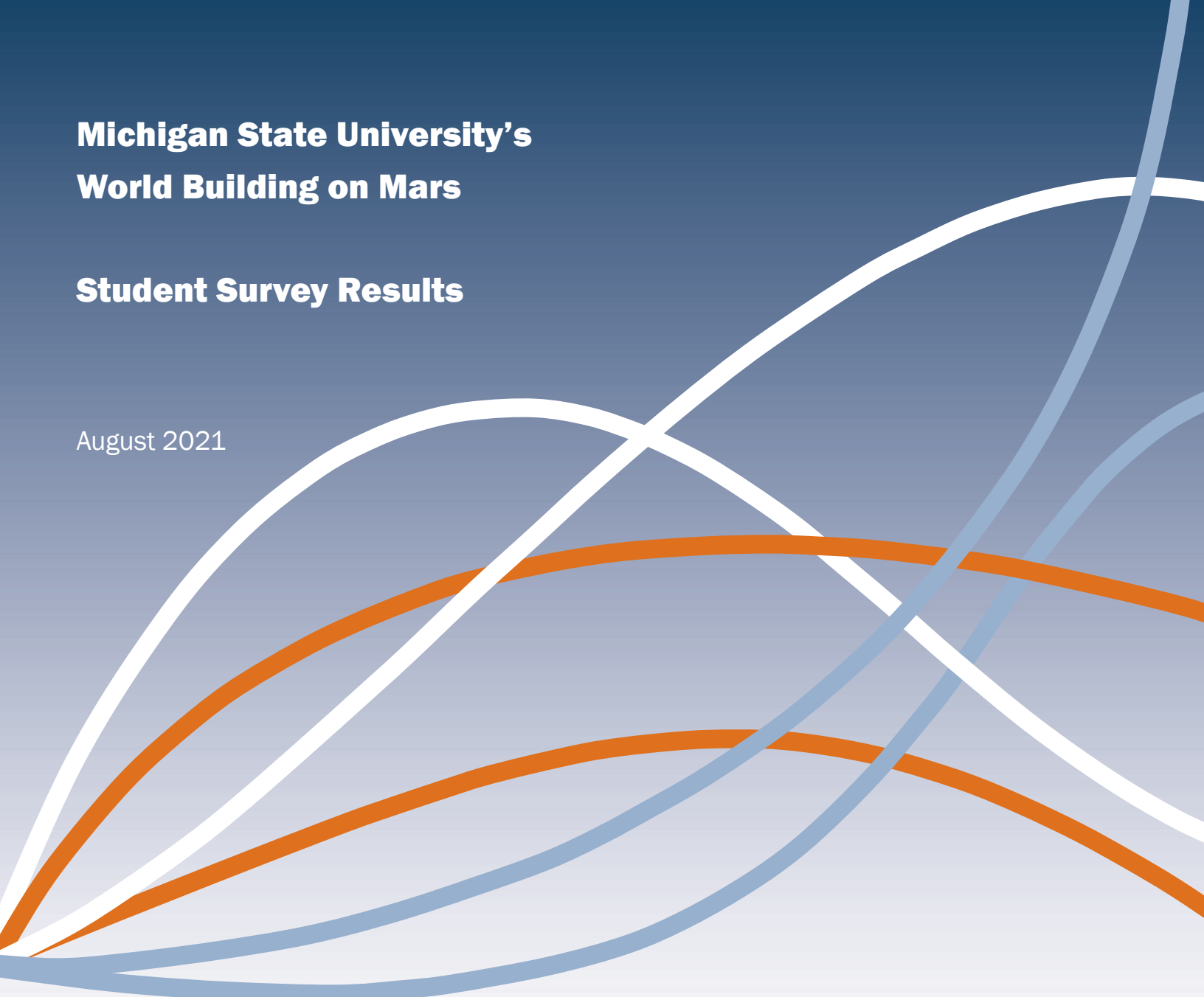


Michigan State University's World Building on Mars

Student Survey Results

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Michigan State University's World Building on Mars Student Survey Results

About: This document lists 16 data tables displaying the results from the 2020-2021 student survey for the World Building on Mars pilot curriculum. The list of 16 data tables includes 13 tables of results from the close-ended survey questions and 3 tables of verbatim responses from the open-ended survey questions. The document is broken up into 4 sections: 1) Overview of Participation, 2) Knowledge Question Results, 3) Satisfaction/Participation Rating Results, and 4) Verbatim Open-ended Responses.

Three teachers teaching grades spanning 5th-12th grade students participated in the implementation of the World Building on Mars pilot curriculum. Of those three teachers, two teachers were able to distribute the survey to their students. This resulted in three sets of completed surveys: one 5th-6th grade class, one 7th-8th grade class, and one 8th grade class. The 5th-6th grade class and the 7th-8th grade class were taught by the same teacher at a private school, with most of the classes being taught in-person (Holt Lutheran School). The students who completed the survey were from both sets of those classes. The 8th grade group of students were taught by a teacher who implemented six sessions of the class in a public school that consisted of all virtual classes (Eastern High School). The students who completed the survey were a mix of students from those six classes. The teacher of the 9-12th grade students who participated in the extracurricular science club was unable to distribute the surveys to the students due to time limitations. In total, 50 surveys were completed by the three groups of students, 5th-6th, 7th-8th, and 8th grade. The numbers of completed surveys were nearly evenly distributed among the three sets of classes (see Table 1).

The survey was provided to students at the end of the World Building on Mars pilot curriculum in order to assess knowledge, satisfaction, and participation levels of the students. The survey consisted of 12 questions. Of those questions, 4 questions assessed knowledge gained by students, 1 question assessed satisfaction with four aspects of the curriculum, 4 questions assessed student participation levels, and 3 questions were open-ended and assessed items such as the most challenging part of the curriculum and students' sense of pride (See Appendix for survey).

Below each table in blue font are brief text highlights of the student survey data. These data should be used and interpreted with caution due to methodological issues in the dissemination of the survey, the small sample size of the students, the exclusion of one set of students from the survey, and the limited involvement of the 8th grade students in the public school that was conducted virtually this semester.

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Overview of Participation

Table 1.

Participation Characteristics by Grade Level

School	Grade level of students	# of classes	# of students	# and % of students who attended 80% or more of the curriculum	# and % of students who completed the curriculum	# and % of students who completed a survey
Holt Lutheran School	5 th -6 th	1	18	100% (n=18)	100% (n=18)	94% (n=17)
Holt Lutheran School	7 th -8 th	1	18	72% (n=13)	72% (n=13)	83% (n=15)
Eastern High School	8 th	6	127	21% (n=27)	21% (n=27)	14% (n=18)
St. Johns High School* (Extracurricular science club)	9 th -12 th	1	14	71% (n=10)	100% (n=14)	n/a
Total	-	9	177	68	72	50

*St. Johns High School, comprised of one group of 9th-12th students in an extracurricular science club is excluded in the evaluation.

In total, nine classes participated in the World Building on Mars pilot curriculum. This report highlights three groups of classes that represent three sets of grade levels: 5th-6th, 7th-8th, and only 8th. There was nearly an even distribution of surveys disseminated and completed among the three sets of grade levels, with a total of 50 surveys completed for this evaluation. It should be noted that response rate for the 8th grade group of students was very low, only 14%. In addition, only 21% of these students attended at least 80% or more of the curriculum and only 21% of these students completed the curriculum overall. “Attended the curriculum” means the student participated in the instructional sessions and/or did project work designed to lead to a finished final project. “Completed the curriculum” means the student completed the work associated with the curriculum including the final project, either synchronously or asynchronously. As mentioned, caution must be taken when understanding the data for this group of students.

Knowledge Question Results: Questions 1 - 4

Table 2.

Number and Percentage of Students who Completed Knowledge Questions by Grade Level

Knowledge Question	Holt Grades 5-6 (n=17)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=50)	
	Count	%	Count	%	Count	%	Count	%
1. Which TWO resources to support human life already exist on Mars?	17	100%	15	100%	18	100%	50	100%
2. What is the LEAST important thing to think about when choosing where to build a community on Mars?	17	100%	15	100%	18	100%	50	100%
3. What is the MOST important thing to think about if you are making decisions that affect everyone in a community?	16	94%	15	100%	18	100%	49	98%
4. "Zoning" tells people how they are allowed to use land. What TWO zoning types did you learn about during this project?	15	88%	15	100%	18	100%	48	96%

The 7th-8th grade group of students and the 8th grade group of students completed all four knowledge questions. Three different 5th-6th grade students left blank two knowledge questions.

Table 3.

Number and Percentage of Correct Responses on the Four Knowledge Questions by Grade Level

Number of Correct Answers Out of 4	Holt Grades 5-6 (n=17)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=50)	
	Count	%	Count	%	Count	%	Count	%
0 correct answers	1	6%	0	0%	1	6%	2	4%
1 correct answer	0	0%	0	0%	4	22%	4	8%
2 correct answers	5	29%	2	13%	7	39%	14	28%
3 correct answers	7	41%	10	67%	6	33%	23	46%
4 correct answers	4	24%	3	20%	0	0%	7	14%

Only 14% of all students got all four of the knowledge questions correct. Overall, 60% of the students got at least 75% of the knowledge questions correct. Grades 5-6 had the highest percentage (24%) of all correct responses. No students in the 8th grade only class answered all four of the knowledge questions correctly.

Table 4.

Number and Percentage of Correct Responses for Questions 1 through 4 by Grade Level

Questions 1-4	Holt Grades 5-6 (n=15-17)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=48-50)	
	Count	%	Count	%	Count	%	Count	%
1. Which TWO resources to support human life already exist on Mars? [Answer: ice and volcanic rock]	15	88%	14	93%	4	22%	33	66%
2. What is the LEAST important thing to think about when choosing where to build a community on Mars? [Answer: Your view of earth]	16	94%	15	100%	16	89%	47	94%
3. What is the MOST important thing to think about if you are making decisions that affect everyone in a community? [Answer: How much power people have]	7	44%	12	80%	10	56%	29	59%
4. "Zoning" tells people how they are allowed to use land. What TWO zoning types did you learn about during this project? [Answer: residential and commercial]	9	60%	5	33%	6	33%	20	42%

The 7th-8th grade class outperformed the other groups of students when it came to correctly answering the knowledge questions. Overall, Question 2 was answered correctly most often by students, whereas Question 4 was answered incorrectly most often students.

Table 5.

Number and Percentage of Correct Responses to Question 1 by Grade Level

Question 1. Which TWO resources to support human life already exist on Mars?
[Answer: ice and volcanic rock]

Question 1	Holt Grades 5-6 (n=17)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=50)	
	Count	%	Count	%	Count	%	Count	%
Correct answer	15	88%	14	93%	4	22%	33	66%

Overall, only 66% of students correctly named which two resources to support human life already exist on Mars. The 8th grade group (with full virtual instruction) was incorrect on this question more often than the other two groups who had in-person instruction—that is, only 22% students in the 8th grade group answered Question 1 correctly. Grades 7-8 had the highest percentage (93%) of correct answers.

Table 6.

Number and Percentage of Specific Responses to Question 1 by Grade Level

Question 1. Which TWO resources to support human life already exist on Mars?
[Answer: ice and volcanic rock]

Question 1 Response Options	Holt Grades 5-6 (n=17)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=50)	
	Count	%	Count	%	Count	%	Count	%
Plants	1	6%	0	0%	6	33%	7	14%
Liquid Water	2	12%	0	0%	12	67%	14	28%
Ice	16	94%	15	100%	12	67%	43	86%
Volcanic Rocks	15	88%	14	93%	6	33%	35	70%

The majority (86%) of all students correctly selected “Ice” as one of the two resources that already exist on Mars. The majority (70%) of all students correctly selected “Volcanic Rocks” as the other one of the two resources that already exist on Mars. The majority (67%) of the students in the 8th grade group incorrectly chose “Liquid Water” instead of “Volcanic Rocks” for one of their two responses to the question.

Table 7.

Number and Percentage of Specific Responses to Question 2 by Grade Level

Question 2. What is the LEAST important thing to think about when choosing where to build a community on Mars?

[Answer: Your view of earth]

Question 2 Response Options	Holt Grades 5-6 (n=17)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=50)	
	Count	%	Count	%	Count	%	Count	%
Weather	1	6%	0	0%	0	0%	1	2%
Resources	0	0%	0	0%	2	11%	2	4%
Landscapes	0	0%	0	0%	0	0%	0	0%
Your view of Earth	16	94%	15	100%	16	89%	47	94%

Overall, 94% of students correctly answered the question, “What is the least important thing to think about when choosing where to build a community on Mars.” Again, the public school with fully virtual instruction (8th grade) was less likely to answer this question correctly compared to the in-person groups. Two of the 8th grade class students selected “Resources” instead of “Your view of Earth” as the correct answer. Similar to Question 1, Grades 7-8 had the highest percentage (100%) of correct answers among grade levels.

Table 8.

Number and Percentage of Specific Responses to Question 3 by Grade Level

Question 3. What is the MOST important thing to think about if you are making decisions that affect everyone in a community?

[Answer: How much power people have]

Question 3 Response Options	Holt Grades 5-6 (n=16)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=49)	
	Count	%	Count	%	Count	%	Count	%
How much power people have.	7	44%	12	80%	10	56%	29	59%
How much land people own.	7	44%	3	20%	6	33%	16	33%
How much you like certain people.	0	0%	0	0%	0	0%	0	0%
How similar people are to you.	2	13%	0	0%	2	11%	4	8%

Question 3 was answered incorrectly about 40% of the time by all students. The grade level of students most likely to answer this question incorrectly were 5th-6th grades. As in previous questions, the 7th-8th grade class had the highest percentage of correct answers (80%) for Question 3.

Table 9.

Number and Percentage of Correct Responses to Question 4 by Grade Level

Question 4. "Zoning" tells people how they are allowed to use land. What TWO zoning types did you learn about during this project?

[Answer: residential and commercial]

Question 4	Holt Grades 5-6 (n=15)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=48)	
	Count	%	Count	%	Count	%	Count	%
Correct answer	9	60%	5	33%	6	33%	20	42%

Only 42% of students correctly named the two zoning types. Out of all the questions, this question was answered incorrectly most often by the total number of students. Interestingly, grades 5th-6th had the highest percentage of correct answers (60%), whereas groups 7th-8th and 8th had the lowest percentage (33%) of correct answers for this question.

Table 10.

Number and Percentage of Specific Responses to Question 4 by Grade Level

Question 4. "Zoning" tells people how they are allowed to use land. What TWO zoning types did you learn about during this project?

[Answer: residential and commercial]

Question 4 Response Options	Holt Grades 5-6 (n=15)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=48)	
	Count	%	Count	%	Count	%	Count	%
Residential	12	80%	13	87%	15	83%	40	83%
Essential	3	20%	7	47%	9	50%	19	40%
Commercial	11	73%	7	47%	7	39%	25	52%
Provincial	4	27%	2	13%	3	17%	9	19%

The answer "Residential" was correctly selected by more than 80% of the students in each set of groups. Only about half (52%) of students correctly selected "Commercial" for the other one of their two responses. In total, 40% of students incorrectly selected "Essential" for one of their two responses.

Satisfaction/Participation Rating Results: Questions 7, 9, 10, 11, and 12

Table 11.

Satisfaction with Curriculum by Grade Level

Question 7. Please rate how much you liked each part of the Martian City Project.

Aspect of Curriculum and Response Option		Holt Grades 5-6 (n=12)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=45)	
		Count	%	Count	%	Count	%	Count	%
Learning about urban planning	Dislike a great deal	1	8%	1	7%	1	6%	3	7%
	Dislike somewhat	2	17%	2	13%	0	0%	4	9%
	Neither like nor dislike	8	67%	5	33%	8	44%	21	47%
	Like somewhat	1	8%	6	40%	5	28%	12	27%
	Like a great deal	0	0%	1	7%	4	22%	5	11%
Learning about the surface of Mars	Dislike a great deal	1	8%	3	20%	1	6%	5	11%
	Dislike somewhat	2	17%	0	0%	0	0%	2	4%
	Neither like nor dislike	6	50%	4	27%	2	11%	12	27%
	Like somewhat	2	17%	4	27%	9	50%	15	33%
	Like a great deal	1	8%	4	27%	6	33%	11	24%
Designing my Martian City	Dislike a great deal	0	0%	0	0%	0	0%	0	0%
	Dislike somewhat	1	8%	0	0%	1	6%	2	4%
	Neither like nor dislike	0	0%	1	7%	4	22%	5	11%
	Like somewhat	5	42%	2	13%	6	33%	13	29%
	Like a great deal	6	50%	12	80%	7	39%	25	56%
Seeing the 3D Model of my Martian City	Dislike a great deal	1	8%	0	0%	0	0%	1	2%
	Dislike somewhat	0	0%	0	0%	0	0%	0	0%
	Neither like nor dislike	1	8%	3	20%	7	39%	11	24%
	Like somewhat	2	17%	2	13%	4	22%	8	18%
	Like a great deal	8	67%	10	67%	7	39%	25	56%

Four aspects of the curriculum were rated for satisfaction (liking or disliking). Overall, designing their Martian City was liked best (85%), followed by seeing the 3D model of their Martian city (74%). Learning about urban planning was liked least by students. Interestingly, when breaking this down by school groups, the majority (83%) of students in the 8th grade class who participated in the survey liked learning about the surface of Mars, whereas the majority (more than 90%) of 5th-6th and 7th-8th grade students liked designing their Martian City.

Table 12.

Number and Percentage of Participation and Engagement Ratings by Grade Level

Responses of '6 or higher' on a scale from 0 to 10
for Questions 9, 10, and 12

Question and Response Option	Holt Grades 5-6 (n=12)		Holt Grades 7-8 (n=15)		Eastern Grade 8 (n=18)		Total (n=45)	
	Count	%	Count	%	Count	%	Count	%
9. How often did you think about your Martian City Project outside of the class? Choose from 0 (never!) to 10 (All the time!)	3	25%	7	47%	2	11%	12	27%
10. If my teacher rated me on a scale of 0 to 10 with how much I participated in the Martian City Project activities, my participation would be: Choose from 0 (not great!) to 10 (Great!)	11	92%	14	93%	13	72%	38	84%
12. On a scale of 0 (no Way!) to 10 (Absolutely!), how likely are you to want to participate in something like the Martian City Project again?	9	75%	11	73%	12	67%	32	71%

Engagement and participation were evaluated by three questions. In general, grades 7th-8th demonstrated an overall higher level of engagement on average. Between a quarter and a third of all students frequently thought about the curriculum outside of class. The majority (84%) of students felt their participation was high. More than 70% would participate in the curriculum again. The 8th grade only group of students (virtual instruction within public school) was the group least likely to think about their project outside of class. In fact, the 8th grade only group had the least levels of participation and engagement as indicated by questions 9-12.

Table 13.

Open-ended Responses for “Other” in Participation Question by Grade Level

Question 11. If you did not participate as much as you wanted, what was the reason?

Response Options	Holt Grades 5-6 (n=3)		Holt Grades 7-8 (n=5)		Eastern Grade 8 (n=8)		Total (n=16)	
	Count	%	Count	%	Count	%	Count	%
Not Interested	0	0%	2	40%	2	25%	4	25%
Did not get a chance to	0	0%	0	0%	1	13%	1	6%
I was sick	0	0%	0	0%	0	0%	0	0%
A family member was sick	0	0%	1	20%	0	0%	1	6%
Not sure	2	67%	2	40%	4	50%	8	50%
Poor internet connection	0	0%	0	0%	2	25%	2	13%
I did not like my group	1	33%	0	0%	0	0%	1	6%
Other	0	0%	0	0%	4	50%	4	25%

Sixteen out of seventeen students gave reasons as to why they did not participate as much as they wanted. Students could, and many did, select more than one answer. Half of the students said “not sure” as their reason, and a quarter of the students said they were “not interested.” The remaining selected “poor internet connection.” Four of the 8th grade only students selected “other” and included text descriptions such as, “group didn't really communicate” and “I had other work to do.”

Open-Ended Responses: Questions 5, 6, and 8

Table 14.

Verbatim Responses to Question 5 by Grade Level

Question 5. When it comes to human exploration on Mars and urban planning, describe how your thinking has changed because of what you learned in this Martian City project?

Before the Mars project, I <u>used to</u> think...	And <u>now</u> I think...
Holt Grades 5-6 (n=13)	
I don't want to live on Mars	I don't want to live on Mars
It was cool	It is cool
Mars had oxygen	It has no oxygen
Mars was bad	Mars is good
No 1 can live on Mars	We might be able to
No one would try to live on any planets	It's possible
Oh this is easy	This is easy
Roblox	Anime boys
That Mars was live Earth just red	It's not like the Earth at all
That we would never get to Mars	We can do it
There was oxygen there	We have enough on Earth, we don't need to move people over there.
We could not live on Mars	We can live on Mars
You can't live on Mars	It's cool you could support life on Mars
Holt Grades 7-8 (n=15)	
Going to Mars was pointless	It might be a good idea to go to Mars and build houses on Mars
I live a human	We are aliens to aliens
I thought there was potential	That we could live there
Living on Mars would be impossible	It is very possible
Mars was easily habitable	It is almost impossible
Mars was just a planet, something people just knew was there	You can actually do things with planets, you could live on other planets
That it would be easy to build anything on Mars	That there has to be many different things that have been realized
That Mar was just another planet that didn't really have any meaning.	That Mars is very important to create more land/living space.
That Mars is going to explode because of us.	Nothing
That Mars was a place we could never live on.	We can live on Mars but won't be good.
That Mars was warm and covered in stone	It's cold and dusty

Before the Mars project, I <u>used to</u> think...	And <u>now</u> I think...
That there was no water and that it was dry and hot	That it's cold, radioactive, and has ice
That you use wood to build on Mars	That you use 3D printing
There was no way that people were going to live on Mars.	We can do it with time and resources. It won't be too long until we colonize.
We need to land people to start	Robots are easier and more expendable
Eastern Grade 8 (n=18)	
About nothing	Still nothing
Are there any other planets with that same unique landscape	I don't know the only other different planet that we've seen so mars and that's it.
I didn't even know what martian city was	It's pretty cool to learn about
I didn't think you could build something on mars	Now I think you can and it would be cool to do it
I don't remember :(ngl i just don't know what to say for this :/
Idk	The same
It was not possible to have people on mars for a long period of time	It is possible and we can be capable of having people be on mars for a long period of time
Life on a different planet was far away	It may happen within the next 20 to 50 years
Mars was a red desert with a big volcano.	Mars has different landscapes and colors, and also has ice.
Mars was inhabitable.	We can live on mars.
No one has ever been on Mars before	People have been on Mars before
Nothing	Nothing
That it was super easy to collimate mars	That were gonna have to wait a long time until we do
That it wasn't possible to live on mars.	That if we try we can succeed in this project.
That it would be almost impossible or very hard to colonize mars (and if it were possible that it wouldn't happen in our generation).	That it might be possible to go to and live on mars sometime in my life (or at least other people will).
That the material didn't really matter	It does matter because of what its used for
That there was nothing but robots on mars	That soon like the next 20-30 years humans could possibly live on mars
That is cool	That is cool

Overall, many students in all grade levels noted that prior to the curriculum they thought living on Mars was impossible and after the curriculum they thought living on Mars could was possible.

Table 15.

Verbatim Responses to Question 6 by Grade Level

Question 6. I thought the hardest part of the Mars project was...

Holt Grades 5-6 (n=12)
Deciding what to do.
Designing
Designing a building
Designing building
Drawing it
Drawing the city
Everything
Making the buildings
Making the habitat
Thinking of a idea
Zoning
Zoning?
Holt Grades 7-8 (n=15)
Brainstorming about a way to impact Mars' atmosphere.
Choosing a land that is good.
Choosing the base design
Drawing
Finding where to put my house and design it to be all purpose.
I'm not sure
Living quarters and oxygen
Making ideas for the houses
Making the correct house
nothing
nothing
The drawing
Thinking
Trying to build a proper building that would work
Trying to survive without the proper atmosphere
Eastern Grade 8 (n=18)
All of it
Building up from the ground up
Designing what to use

Doing the work
Figuring out what style for the barn
Getting there
Getting to mars
Going to be designing the martian city because I seen that most of the current builds had unique structures.
I don't think much of it was hard. The hardest thing I had to do was choosing because I didn't know if I was picking a good choice or not
IDK
Nothing
Probably drawing because I don't draw good at all but luckily someone in our group was.
That half of my group didn't do anything.
The hardest part was trying to find what type of house we wanted and what was it going to look like
The researching
The start because I didn't know anything
There wasn't really anything hard but we did have to do lots of stuff and find information about mars.
Trying to think of what was most important for survival and how we would obtain it.

Overall, students in all grade levels noted a variety of answers for the hardest part of the curriculum— from “nothing” to “drawing.”

Table 16.

Verbatim Responses to Question 8 by Grade Level

Question 8. What did you do in this project that made you feel most proud of yourself?

Holt Grades 5-6 (n=11)
Building
Designing
Done with project
Drawing
Drawing the buildings in 3D
IDK
It made me feel good about my drawings.
Nothing
The final
The habitat
Zoning
Holt Grades 7-8 (n=15)
Building my own building
Designing
Designing my Martian city
Designing the community.
Designing/seeing my design live and 3D
Drawing a shelter
I was very proud that you featured my house in the 3D city.
I'm not sure
Making it hot pink
Making the houses
No
Seeing the product
The designing
Think
Working on the house
Eastern Grade 8 (n=18)
Designing the capsules
Design.
Designing
I did the designing part of the martian city and I turned out quite well that made me feel quite proud of it.

I don't remember this either :/
I feel like I did pretty good at planning at least that's what I was proud of
I work hard and can't wait for how the buildings we designed would look like.
made my own home
Me mainly doing the house and figuring out what it was going to look like and answering the questions
Nope
Not having to do much outside of class.
Not really
Not really
Space is cool and fascinating
Stuff
The designing
The fact that I had the motivation the do the work and actually listen to what's being talked about.
The outcome

Overall, many students in all grade levels noted that drawing and designing made them feel most proud of themselves.

Appendix: Survey Questions

**MSU NASA
WORLD BUILDING ON MARS
STUDENT INSTRUMENT**

We want to know what you learned and how you felt about this Martian City Project.

1. Choose TWO resources that already exist on Mars to support human life?
 - a. Plants
 - b. Liquid Water
 - c. Ice
 - d. Volcanic Rocks

2. Which one of these things is the LEAST important to think about when choosing where to build a community on Mars?
 - a. Weather
 - b. Resources
 - c. Landscape
 - d. Your view of Earth

3. What is one of the MOST important things to think about when making decisions that impact everyone in a community.
 - a. How much power people have
 - b. How much land people own
 - c. How much you like certain people
 - d. How similar people are to you

4. "Zoning" tells people how they are allowed to use land. There are 7 Zoning Categories. Select 2 of the 7 zoning categories from the options below:
 - a. Residential
 - b. Essential
 - c. Commercial
 - d. Provincial

5. When it comes to human exploration on Mars and urban planning, describe how your thinking has changed because of what you learned in this Martian City project?

Before the Mars project, I used to think...

and now I think....

6. I thought the hardest part of the Mars project was....

7. Please rate how much you liked each part of the Martian City Project.

	Dislike a great deal	Dislike somewhat	Neither like nor dislike	Like somewhat	Like a great deal
Learning about urban planning	o	o	o	o	o
Learning about the surface of Mars	o	o	o	o	o
Designing my Martian City	o	o	o	o	o
Seeing the 3D Model of my Martian City	o	o	o	o	o

8. What did you do in this project that made you feel most proud of yourself?

9. How often did you think about your Martian City project outside of the class?

Never! All the Time!

0 1 2 3 4 5 6 7 8 9 10

10. If my teacher rated me on a scale of 1 to 10 with how much I participated in the Martian City activities, my participation would be:

(If 6 or below then go to question 11; if 7 or higher, go to question 12)

Not great! Great!

0 1 2 3 4 5 6 7 8 9 10

11. If you didn't participate as much as you wanted, what was the reason? (check all that apply)

- Not interested
- Didn't get a chance to
- I was sick
- A family member was sick
- Not sure
- Poor internet connection
- I didn't like my group
- Other: _____

12. On a scale from 0 (no way!) to 10 (absolutely!), how likely are you to want to do participate in something like the Martian City Project again? Circle one number.

No way! Absolutely!

0 1 2 3 4 5 6 7 8 9 10