| **Plan: Daily Activity DetailsDay-by-day Project Schedule** |
| --- |
| This template includes common steps for running a Maker project. Customize it or combine it with a favorite planning template that you already use. The Gantt chart and blank calendars can be used for overall (at-a-glance) project planning.  |

| **Step 1** | **Learn about the Curiosity Rover (2011), how it landed, and the parts of the Rover.****This activity may be best to reserve for online events as it’s less hands-on and more discussion.** |
| --- | --- |
| **Activity -**  | **Notes/resources** |
| <https://accessmars.withgoogle.com/> | You can do this in two different ways. If you want to lead the discussion (recommended) you will need access to the internet and a way to display. (in a classroom, this would be on a projector, online, screen sharing) You could also create a worksheet (not included) and have the youth go through the site either on their own or in small groups. This could also be fun, but not as easy to control. |
| 1. Open and watch the introduction
 |  |
| 1. The first thing that comes up is the image of the rover. Highlight various parts and let her talk about them.
 | * + 1. Wheels move up to 4 cm a second.
		2. How fast is that? Can we estimate how fast the rover moves in relation to a car?
			1. On many highways, the speed limit is 60 miles per hour. That means that in an hour, I’ll travel 60 miles. That means each minute, a car travels 1 mile down the highway. How does that translate to centimeters per second?
			2. <https://www.checkyourmath.com/convert/speed/per_second_hour/cm_per_second_miles_per_hour.php>
			3. This website shows the conversion as well as how to calculate it yourself. Feel free to try the math.
			4. When you look at the conversion, you’ll notice that the rover travels at 0.08947745 miles per hour. So in 1 hour, the rover travels less than 1/10th of a mile. How big is Mars (13,263 mi)? How long would it take to travel around the entire planet? Did the Rover always go in a straight line or would things have gotten in the way, making the trip even longer?
		3. Analytic System
			1. Analyzes rock, soil and atmosphere. It determined that Mars was habitable at one point.
			2. What criteria have to be met for a planet to be habitable?
		4. Remote Sensing Mast
		5. UHF Antenna
			1. 50 megabytes of data daily. How much data is this?
		6. RTG
		7. Robotic Arm
		8. 3D imagery - What part of the rover creates this? How does it work?
 |
| Explore the map - This may not work on all browsers | 1. Parhump Hills
2. Marias Pass
3. Murray Buttes
4. Current Location
 |
| Reflection (students’ thoughts on the project) |  |

| **Step 2** | **Learn and Explore***Get familiar with essential questions, content and/or skills learning necessary for the project* |
| --- | --- |
| **Activity** | **Notes/resources** |
| Move on to make Lander and Rover |  |
|  |  |
|  |  |
|  |  |
| Reflection  |  |

| **Step 3**   | **Students share / explain their projects***Presentations can take many forms - displays, public event, gifts, online posts, press conference, posters, etc. Choose one that’s right for your students.**May or may not be tied to letter grades.* |
| --- | --- |
| **Activity** | **Notes/resources** |
| Share how you can use this tool | Can be used online |
|  | Can be used to introduce other things. I.e. creating a lander, creating a mars rover |
|  |  |
| Reflection  |  |