

**launch notebook  
create a school  
on MARS**

# design challenges

You're going to make something amazing and you're going to start on it today. It's going to be something that has never existed before in the history of humanity.

You know how you typically turn in an assignment to your teacher and then you get it back and, well, that's pretty much it. This is different. Working with your design team, you're going to create something people will actually see!

# the launch process

Look all around you. Seriously. Glance around your classroom. You are surrounded by things that people created. Not only did they create these things but they also designed them. The fancy term for this is design thinking. It's the term professionals use. You're going to use the LAUNCH Process. It's a modified version of the design thinking cycle that artists and engineers use in the real world. Here's how it works:

Look, Listen, and Learn

Ask a Ton of Questions

Understand the Problem or Process

Navigate the Ideas

Create a Prototype

Highlight What's Working and Fix What's Failing

Ready to Launch!

**Phase One:  
Look, Listen, and Learn**



## look at the challenge

Watch the video and listen closely to the challenge.

*You're going to design and build a model school for people who colonize MARS.*

Consider the following:

1. *Where will this school be located on MARS? How will you keep the people safe, but also provide a place where learning is as challenging as life on the planet?*
2. *How will you accommodate each person's unique role in colonizing MARS with what they'll be learning?*
3. *What will look similar about school here on Earth? What will look new, different, and better?*
4. *What feature of school will you definitely get rid of from our current system?*
5. *What special features will this school have? What kinds of cool gadgets and technology will this school have?*
6. *What will the learning environment/school look like? What architectural style will you use?*
7. *What will you name the school?*

Your items will include:

Cardboard

Construction Paper

Duct Tape

Glue

Straws

*Don't forget to experiment and make tons of glorious mistakes. Ultimately, your design is going to be awesome, because it's yours and it's coming from your creative mind.*



## investigate the challenge

After watching the video, jot down some observations. This could be anything you notice about this project. It could be ideas of what you'd want to create, details that stuck out to you, etc.

Observations	Questions



## learn more about your items

Meet with your Launch Teams. Take some time to explore your items. You don't need to write anything here. Just play around with them. What are some of the possibilities that you see? What are some things that might come in handy?

*Note: This is optional space where you can add any observations, notes, or ideas of how you might want to use these items in a school on MARS. You might draw a picture, make a web, or make a list.*

**phase two:  
ask a ton of questions**

## Ask Questions

Individual: Now that you have a clear picture of the design challenge, you're going to create a set of questions you need to ask before planning out your school on MARS. These could be anything about how to design a school or about learning, or about MARS.

List your questions below:

1.

2.

3.

4.

5.





## **meet with your launch teams**

As a team, go round-robin and share your questions. As you add your questions to chart paper, individually add any additional questions that your group came up with below:

**phase three:  
understand the problem or  
process**



## meet with your launch teams

So, here's the problem: Go online and research MARS, space travel, and schools. Geek out on anything you find relevant here. Focus on answering questions.

Question	Answer	Source

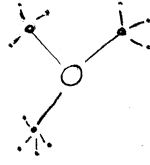


## **An Initial Sketch**

**Individual:**

Draw an initial sketch of what your MARS school will be like. Be creative. Take some risks.

**phase four:  
navigate the ideas**



## **Create a Web**

### **Individual:**

Create a web of ideas for your school on MARS. You might include themes, concepts, elements, architectural style, technology etc.



## **Launch Team: Brainstorm**

Share your ideas in one larger brainstorm. This could be a list or a web on chart paper. Make sure each group member gets a chance to add ideas. Next, work together to take the best ideas from each person and create one MARS school concept. You can describe it below or sketch it out below.

**phase five:  
create a prototype**





## **meet with your launch teams**

Create it! Use your supplies or technology to see if you can make it. Write any notes of observations you see.

**phase six:**  
**highlight what's working**  
**and fix what's failing**



## meet with your launch teams

Spend some time creating the school on MARS.

Jot down what's working and not working:

Stages	What's Working	What Needs to be Improved

**phase seven:  
launch it!**



## meet with your launch teams

### **Launch It!**

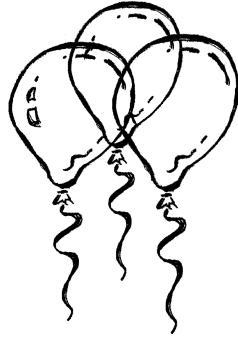
Now that you have finished with the MARS school model, you will launch the colonized learning environment to your classmates.

Option 1: Create a brochure inviting people going to MARS to join your school.

Option 2: Create a list of instructions with pictures showing how the school looks and functions. What are the key features?

Option 3: Create a video showing explaining the school on MARS

Option 4: Create an advertisement for the school on MARS



## **Celebrate what you learned!**

### **Individual: Self-Reflection Questions**

1. What did you learn from this experience? Would you want to do this again?
2. How well did you work with your group?
3. What were some creative risks that you took?
4. Which phase in the LAUNCH Cycle was the best for you and why?