

Life in Space



BAYLOR COLLEGE OF MEDICINE
BIOTECH ACADEMY

AT

RUSK

PHYSICAL EDUCATION & HEALTH

COACH MUÑOZ

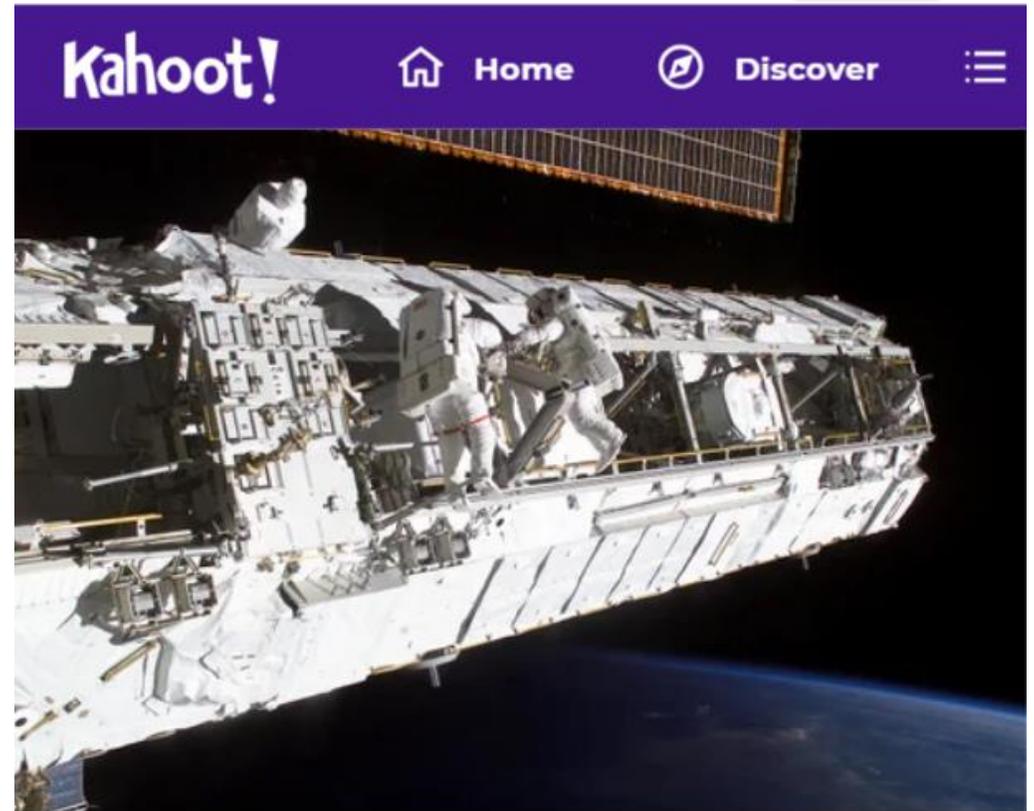
6TH&7TH GRADE

Project developed in partnership with SciArt Exchange



It's play time.

- ▶ <https://create.kahoot.it/share/living-in-space-review/5515a13a-e1a7-4022-9341-6acdc7d5c13f>



Living in Space

- Discussion:

What do we know prior to our research?

What do we want to learn about living in space?



What happens to an astronaut's body in Space?



What kind of challenges do astronauts face while living in space?



How do astronauts adjust to living back on Earth?



Make your own questions and share them with your classmates or friends

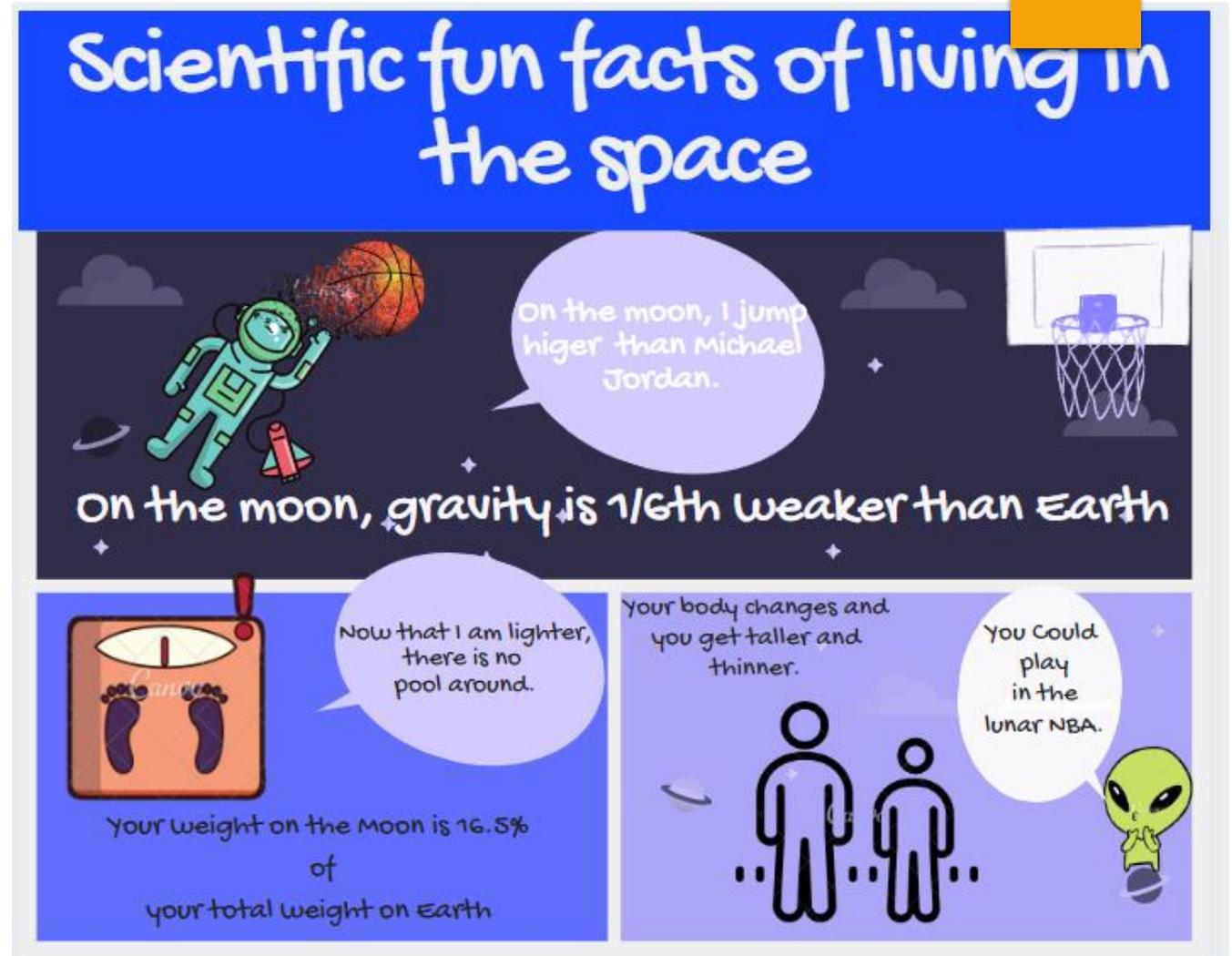
Choose your own adventure.

After discussing the previous guiding questions, now do some research:

You need at least **3 scientific facts about living in space**, and you need to represent them in a fun, artistic and creative way (making music, a video, a poster, a comic strip...)

Let your imagination soar!

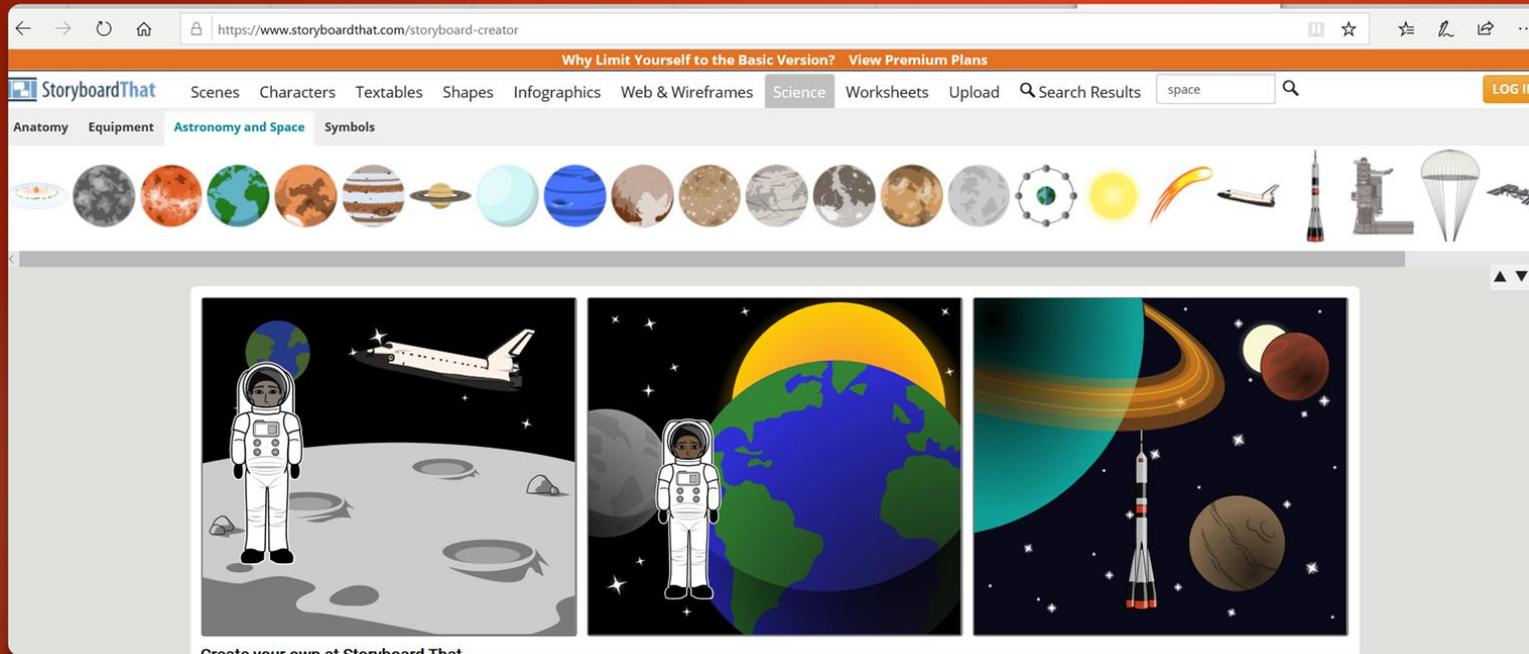
Check this example:



Submit your creations with us here:

https://contest.sciartexchange.org/XpandYourHorizon-2020-001-design-your-habitat/entry_form/

Hand draw or use a digital program to make a comic strip!



<https://www.storyboardthat.com/>

Here is an example of a video project: *Space Fitness Program*

To prevent losing muscle and bone mass, astronauts must exercise during the space expedition.

That is why exercising is crucial to astronauts before, during, and after the space expedition.

I created a Tabata workout that will get you ready for a space trip.

Let's work out!



Space Fitness program: video example.

▶ Following the example on the video, you could create your space workout program.

▶ Example

1. 60-90 seconds video format.

2. Tabata workout.

3. 8 exercises.

4. In your presentation do not forget to include 3 facts about living in space related to the importance of exercising:

For example: To prevent losing bone and muscle mass, astronauts work out in the spaceship

Check Slides 11-13 for our expert's presentations and more examples.

Be creative.

As we mentioned before, you will represent 3 scientific fun facts about living in space in different artistic ways (paint, music, video, creating a workout...)

However, if you are interested in creating a comic strip or a poster, you can use one of these free websites (remember you can draw and color your comic strip by hand too, if you want to):

<https://www.canva.com/create/comic-strips/> (I used this website to create the example provided in this powerpoint)

<https://www.storyboardthat.com/> Useful website to create a comic strip.

<https://www.venngage.com> Create a digital poster.

Getting ideas from the best.

- ▶ Projects awarded:
- ▶ <https://www.sciartex.net/moon-youth-art-competition-gallery.html>
- ▶ <https://www.sciartex.net/gallery---2010--2012-hisyac.html>



1st Place 3D & Grand Prize Overall Visual Art
Edastro: City of Our Future – Edwin Matika,
Age 11, UK/Croatia (click image for video)



1st Place 2D – A Reach for the Moon – Alisa
Egorova, Age 13, US/Russ. Fed.



2nd Place (Tied) 2D – Moon a Safe Abode –
Shiva M, Age 12, India



2nd Place (Tied) 2D – The Painter on Moon –
Deepshika De. Age 9, India



3rd Place 2D – City on the Moon – Shriya
Bindal, Age 12, US



1st Place Sequential Art – The Moon Saves the
Earth – Anna Poltoretskaya, Age 13, Russ. Fed.

Let's research



EXPERIENCE Our Speaker Series

- Learn what happens to the the human body in space and how astronauts stay healthy by exercising.

Featuring **Michael Barratt, NASA Astronaut and Medical Doctor**

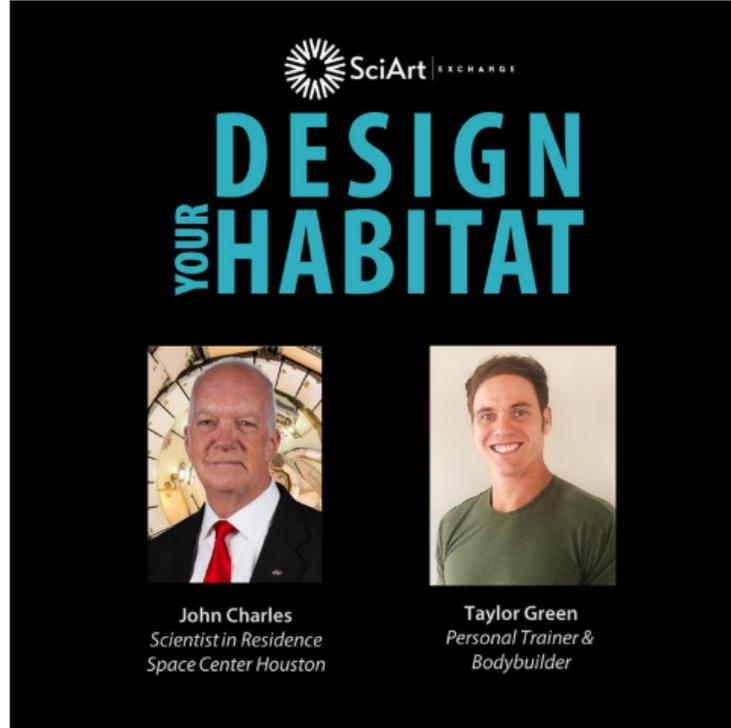
Space and physical health with Michael Barratt:

https://www.youtube.com/watch?v=g9phFfdly9U&feature=emb_title

Let's research

EXPERIENCE

- Exercise like an astronaut, using whatever you have at home. *USE A FILLED GALLON (about 4 Liters) JUG AND 2 CANS (about 0.5 kg each) or some light hand weights* to get the full experience. Featuring **Dr. John Charles, Scientist in Residence Space Center Houston and Former Chief Scientist of the NASA Human Research Program;** and **Taylor Green, Personal Trainer and Bodybuilder**
- Learn more about the exercises and the space-inspiration behind them [here](#).



John Charles
*Scientist in Residence
Space Center Houston*

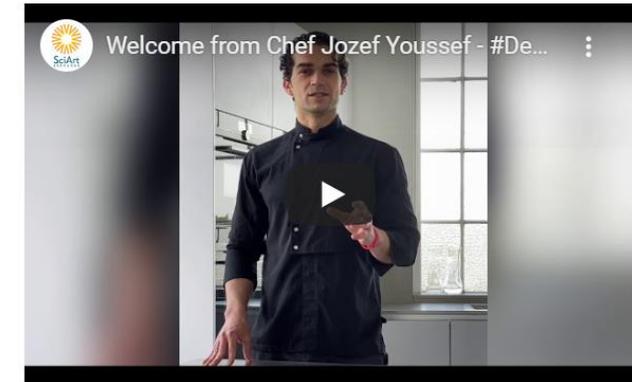
Taylor Green
*Personal Trainer &
Bodybuilder*

Exercise like an astronaut w John Charles & Taylor Green:
https://www.youtube.com/watch?v=n9PGDNkoF0k&feature=emb_title

FROM TRAINING YOUR BODY, TO EATING HEALTHY, LET'S EXPLORE HEALTH IN SPACE AND ON EARTH!

Check out the speakers'
series videos:

- ▶ <https://www.sciartex.net/space--physical-health.html>



Unit objectives for class lesson.

- ▶ Students will be able to present information about how living in space could affect the human body physiologically.
- ▶ Timeline 3 lessons. 90 minutes per lesson
- ▶ TEKS
 1. Describe physiological and emotional changes that occur during space expedition and how it influences decision-making.
 2. Relate practices and steps necessary for making health decisions.
 3. Discuss the risks and benefits of decision-making concerning personal health
 4. Demonstrate time-management skills plan such as organizing study/homework schedules.

Project timeline.

- ▶ 1st lesson: 90 minutes.
- ▶ Project introduction (Kahoot, guiding questions, discussion, present example, resources and introduce canvas website). (45 minutes aprox.)
- ▶ Research (45 minutes aprox):
 1. Watch the speaker's videos and look up fun facts about living in space.
 2. Check the awarded projects in the SciArt Exchange website.
 3. Decide the format of your project (music, video, comic strip, picture)

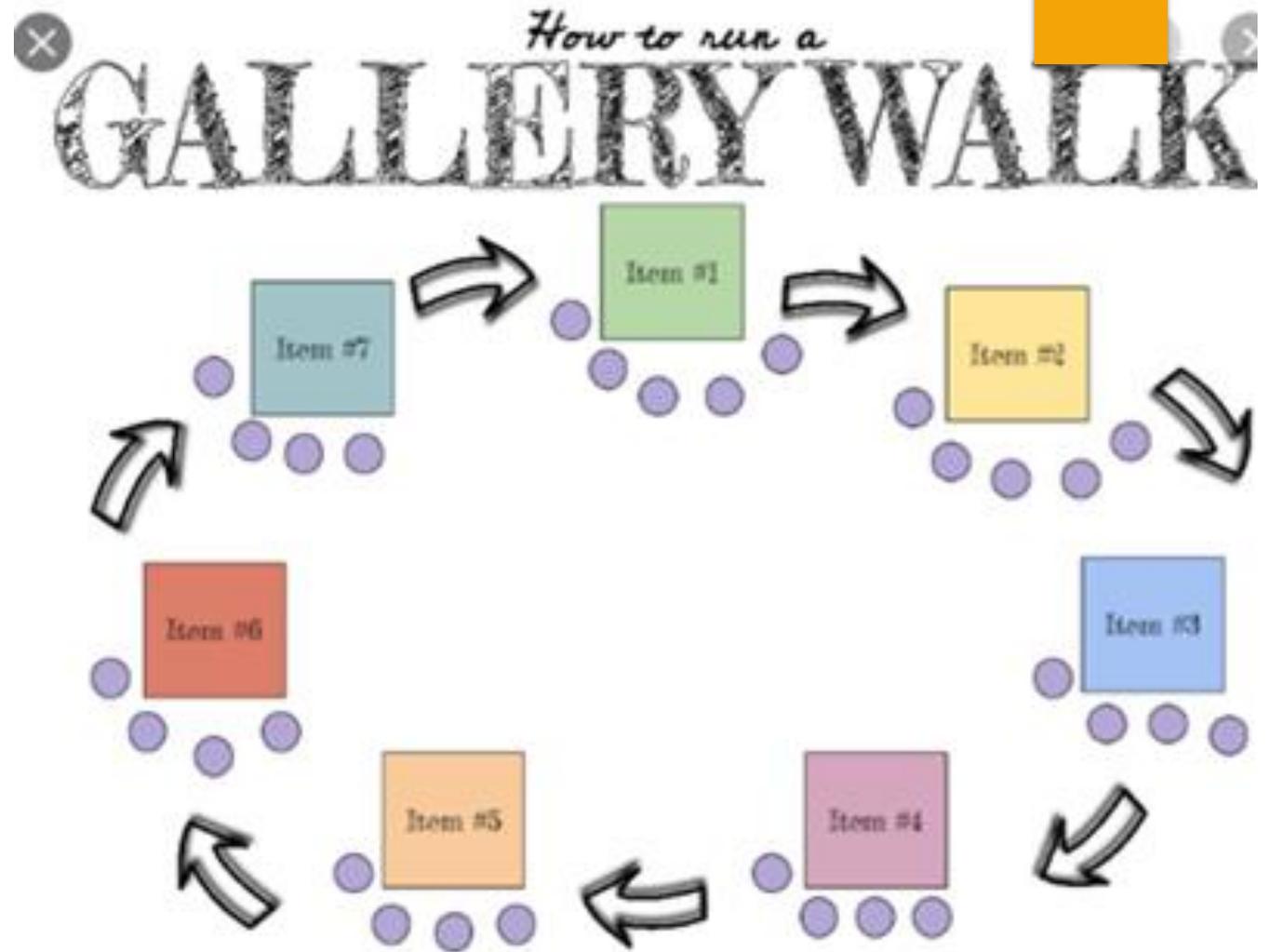
Keep in mind you need to include at least 3 scientific fun facts about living in space.

Project timeline.

- ▶ 2nd lesson: 90 minutes.
- ▶ Project approval by teacher.
- ▶ Project creation:
 1. Draft.
 2. Draft approval.
 3. Project commencement.

Project timeline.

- ▶ 3rd lesson: 90 minutes. Finishing touches + gallery walk.
- 1. 1st 30 minutes : finish your project and get ready for your presentation.
- 2. 2nd 60 minutes :Gallery walk.
- ▶ 24 students/4 rotations/ 6 stations.
- ▶ Time per rotation: 15 minutes.
- ▶ 1:30 min per presentation.
- ▶ Students will present their projects 6 times.
- ▶ Possibility to do a virtual gallery walk via zoom by creating rooms where students will present the project in small groups





DO YOU HAVE
QUESTIONS?



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