BMM Yuva Newsletter April 2021

NASA'S Mars helicopter, and the Perseverance Rover, nearly making history by: Krish Mehta

Ingenuity, NASA's small Mars helicopter, is nearly ready to make history with the first powered flight on a martian planet.

The group at NASA's Jet Propulsion Laboratory had announced on Friday that it had successfully completed the final reviews of systems integrating the copter with the Perseverance rover.

Alibay, one of the engineers who worked on the project, said the first thing her team has to do to prepare for the mission is to drop the debris shield, which protects the helicopter, its delivery system and the rover from rocks and other hazards.

Around 60 days after Perserverance's Feb. 18 landing, the Mars Helicopter Delivery System will deploy the chopper, rotating and releasing it about five inches above the surface of the Red planet.

After the helicopter is released, while getting charged by its own solar pannel, it has a month-long window for up to five test flights which are expected to begin no earlier than the first week of April.

Back on the surface of Mars, the rover will enable communication with mission controllers on Earth and provide environmental monitoring and imaging support.

Meanwhile, the rover itself has already started driving on Mars. On February 18th, the rover landed in the Jezero Crater on Mars. Over the next two years of its primary mission, this robotic mission wil carry on in the search for past life on Mars, obtaining soil and rock drill samples which will eventually be returned to Earth for analysis. And as of March 4th, the rover conducted its first drive, covering 6.5 meters across the Martian landscape.

The drive lasted about 33 minutes, and its primary goal was to do the mobility test, which was designed to check out and calibrate every system, subsystem, and instrument on Perseverance and marks an essential milestone in the deployment of the rover.

Once all the protocols are followed, the rover will be making regular commutes of 200 meters or more at a time. Since the first test drive, the mission controllers performed checks on the rover's Radar Imager for Mars' Subsurface Experiment (RIMFAX) and Mars Oxygen In-Situ Resource Utilization Experiment (MOXIE). These instruments will allow Perseverance to explore geological features beneath the surface with ground-penetrating radar and to convert atmospheric carbon dioxide into oxygen gas.

Throughout the process, the rover is cataloging its process by taking thousands of images using the most advanced suite of cameras ever sent to Mars. These include images of where the rover initially touched down. All told,

the rover has 23 cameras, which include a mix of engineering (9), science (7), Entry, Descent, and Landing cameras (7). These have taken around 7,000 images since the mission began descending to the surface, all of which have been sent back to Earth via the Deep Space Network (DSN).

Going forward, more checks and evaluations will happen, which will include more testing and calibration of the science instruments and taking longer test drives.

Overall, the rover will search for presence of water on its surface, and thicker and warmer atmosphere, and characterization of its past climate, the possibly the existence of life. As projected, sometime in the 2030s, the first crewed mission to Mars will take place, and break new barriers for future missions.

Time Management Samrudhi Joshi

What is your definition of Time Management?

Definition Controlling the amount of time you put into each activity, so you can ensure the greatest productivity

Importance of

- ❑ Improved Decision Making Ability
- ❑ Reduces Stress
- ❑ Ability to Accomplish A Lot More in A Short Amount of Time
- ❑ Self Discipline
- ❑ More Free Time

Time Management

How much time do we have?

- ❑ 60 seconds in a minute
- ❑ 60 minutes in a hour
- ❑ 24 hours in a day
- ❑ 365 days in a year

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How to Manage Your Time

1. Set your goals (assign priorities to all your tasks)
2. Balance your workload
3. Work during a time that works best for you
4. Combine tasks together
5. Take Breaks
6. Keep Track of Your Progress
7. Make sure to be realistic
8. Set aside time for yourself
9. Take care of yourself

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Set Your Goals

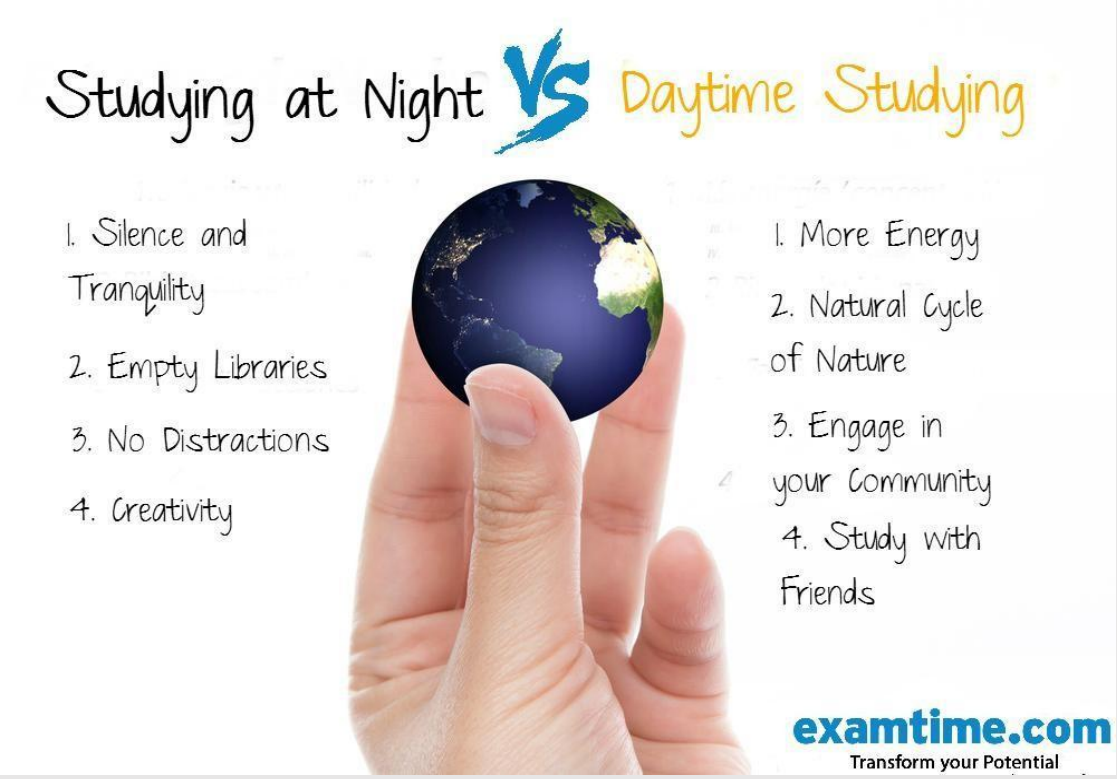
- ❑ Make sure you know what you want to accomplish
- ❑ Set priorities
- ❑ Create a To-Do list for the day

Balance Your Workload

- ❑ Make sure you are consistent
- ❑ Work in smaller increments toward a bigger end goal
- ❑ Diversify your workload

Work at a Time Best for You

- **Figure out when do you work best?**
- **Where do you work best?**
- **What is the surrounding environment you require?**



Combine Tasks

- Do not work on a single thing for a long time
- Try to change up your tasks
- Ex:
    - 20 minutes of English
    - 30 minutes of Math

Take Breaks!

- ❑ Take breaks every hour
- ❑ Give yourself rewards for hitting small milestones
- ❑ Eat a snack!
- ❑ Set a timer
- ❑ Stick to your decision

Keep Track of Your Progress

- ❑ See where you are at?
- ❑ Do you need to change any goals?
- ❑ Do you need to work on something more?

Be Realistic

- Do not set unachievable goals!

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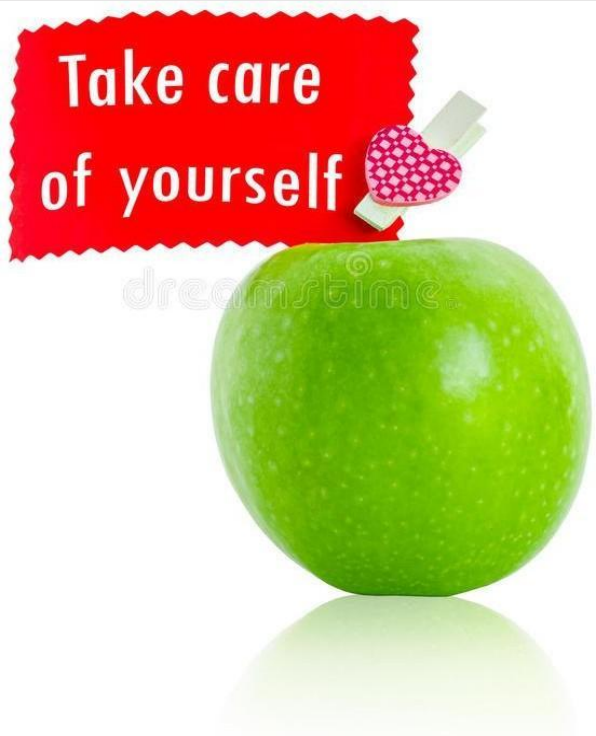
Set Aside Time for Yourself

- ❑ Do something fun
- ❑ Give yourself a reward

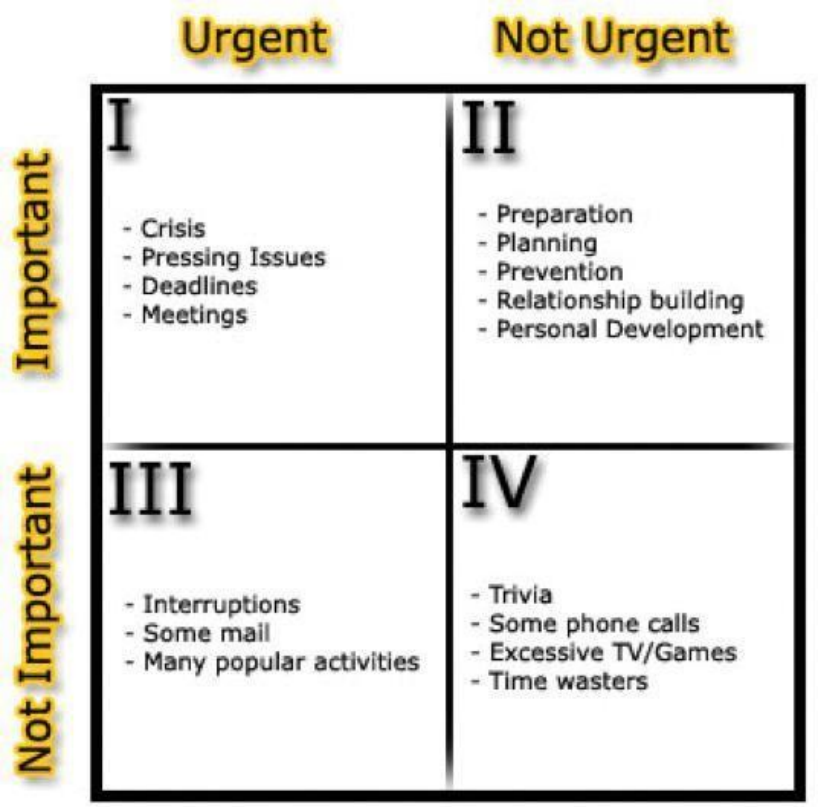
Take Care of Yourself

- ❑ Get enough sleep
- ❑ Eat properly
- ❑ Drink enough water



Useful Techniques

- Learn to say “no”
- Do the big things first
- Think SMART
- Prioritize wisely
- Plan ahead
- Delegate tasks more
- Eliminate distractions
- Start early
- Make a schedule and stick to it!



All I know about Madhubani Art- Part 2 ------Siyona Pawar

The hobby I love the most in my recent times is working on Madhubani Art which is also called as Mithila Art.The art which we got from Mithila, a region in the state of Bihar, northern India (and also stretching into Nepal), has an important tradition of knowledge in the form of paintings. Madhubani paintings have been practised by some women of the region through the centuries and today it is considered as a living tradition of Mithila.

Often characterized by complex geometrical patterns, these paintings are known for representing ritual content for particular occasions, including festivals, religious rituals, etc.The Madhubani Painting – Simple, Elegant and Meaningful.

Initially the paintings revolved around weddings, festivities and depiction of gods and goddesses and natural scenes. Today these paintings speak about social causes, objectives as well as traditions and folklores.

Today Madhubani art is used to not only adore as paintings in our homes or offices, but the designs and patterns are also used on mugs, bags, cushion cases, mouse pads, crockery and more. The designs have also been used by fashion designers as borders on different garments.

Madhubani paintings are an important traditional art because the paintings are simple, yet eye-catching. The involvement of the entire society, especially women make this art form a collective genius that is housed in the specific region or district of the state. The fact that this art has found a way to be meaningful in purpose makes it even more significant. At the same time, it has kept its essential elements, styles and themes in place as passed over generations. All of this perhaps make the Madhubani paintings a true legend.


Yuva Vani

Below are few of my recently made Madhubani Artwork collection:

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