INTRODUCTION TO ATAL TINKERING LAB
DO YOU KNOW WHAT IS HAPPENING HERE?

Simplest form of tinkering!
BUT WHAT IS ACTUALLY HAPPENING HERE?

Someone looked at a problem
Thought differently
Created a solution &
that is tinkering
WHAT IS TINKERING?

Tinkering is to find innovative and creative solutions to problems which may be local or global in nature. It develops the aptitude to explore, experiment and learn. Tinkering is an attempt to inculcate 'Let's Try Something New' attitude among students of all age groups. It motivates students to apply multiple new approaches to solve a single problem.

It is getting involved with technology i.e. experimenting with various technology tools like electronics and robotics to understand their potential and use them to find solutions for local and global problems.
LETS LOOK AT WHAT HAS BEEN HAPPENING SO FAR...

3500 BC
Somewhere in Mesopotamia someone cut out a slice of a log and chiseled a hole in the middle to create the first wheel.

2006
TWEEL, a kind of wheel that merges the tire and wheel together without needing air to deflect impacts. The Tweel is the start of a new age of wheels called “Morph wheels” because the wheels morph to fit their terrain.

WAS THIS ALSO TINKERING ... MAY BE!

Tinkering always leads to innovation - from the stone-age man tinkering with rocks to light a fire to inventing the first wheel. Intel
From Newton's apple

To digestible sensors

From 3D printers for organs

Steve Job's apple
**Smart Phones**
A smartphone is any mobile phone with advanced mobile operating system that combines features of a personal computer with other features useful for handheld use.

**Virtual Reality**
Virtual Reality is a technology marvel that allows the user to be in an imaginary setting using virtual reality headsets to generate realistic images, sounds and other sensations that replicate a real environment.
IRONMAN SUITS FROM COMICS TO REALITY
ALL THESE ARE RESULTS OF TINKERINGING

- Of thinking different
- Of trying new things
- Of looking for solutions to problems
WHAT IS ATAL TINKERING LAB?

A space or an area, within the schools, for young minds to

Think new
Think big
Think out of the box
Innovate
Be creative
Be Imaginative
Look for solutions for global and local issues
Become entrepreneurs
Use the latest technology tools & materials
Get Inspired
WHAT IS ATAL TINKERING LAB?

It is a space for converting ideas into reality - a space for thinking exponentially and not in a structured sequential manner.

It is a lab to encourage people to explore alternatives and create options that did not exist before.
MORE ABOUT ATAL TINKERING LABS

Atal Tinkering Labs is a national level program - by National Institution for Transforming India (NITI Aayog) - the premier policy ‘Think Tank’ of the Government of India.

The key objectives of the program are:

• To develop an eco-system that promotes innovation in India.
• To create a work space in schools where young minds can learn innovation skills and sculpt ideas through hands-on and do-it-yourself projects.
• To provide facilities to work with latest technologies & tools - electronics, sensors, open source micro-controller boards, 3D printers etc. to create technology innovations.
• To create opportunities for the young students to work and learn in a flexible environment & help build innovative solutions to India’s unique problems.

To know more about ATL – NITI Aayog please visit [http://niti.gov.in/](http://niti.gov.in/)
HOW DOES TINKERING WORK?

- Identifying a problem
- Thinking out of the box and generating multiple ideas
- Testing those ideas
- Zeroing on one idea
- Add technology to this idea and giving it a proper shape
- Have a real time solution as a project/prototype

From now on, you will call yourself a **Tinkerer!** With the ‘Do It Yourself’ approach, you can now start experimenting beyond your school curriculum.
EXPECTATIONS FROM YOU

- Consider this as a great opportunity
- Be ready and open to think over and above your regular school work
- Give sufficient time to these activities
- Think of new and exciting things that you can do/make in a Tinkering Lab
- Put these ideas into action
- Involve and include more and more students to work and benefit in these labs
THANK YOU