To commemorate the birth of Dr. B. R. Ambedkar and provide equal opportunity to all.
Atal Innovation Mission is proud to celebrate the #ATLCommunityDay at its Atal Tinkering Labs on the occasion of Ambedkar Jayanti. Children from nearby communities with no direct access to emerging technologies shall leverage the ATls and hone 21st century innovation skills with fellow students, teachers, #MentorsofChange and parents, working together to create an inclusive community of New India.

R. Ramanan
Mission Director,
Atal Innovation Mission, NITI Aayog
Foreword

Our former Prime Minister late Shri Atal Bihari Vajpayee Ji believed that the future of this country lies in the hands of youth and Atal Tinkering Labs, named after his legacy, are an effort towards translating his dreams into reality.

This 14th April, NITI Aayog will be launching a Nation Wide Community Day drive to commemorate Dr. B.R. Ambedkar's birth anniversary and to stay true to his philosophy of providing an equal opportunity to all and thereby, creating an inclusive society of young innovators.

Atal Tinkering Labs are encouraging innovation at the grassroots, and enabling and empowering students and teachers to develop a creative mindset, which will pave the way forward for transforming India. Young children are getting introduced to latest technologies of 3D printing, Internet of Things, robotics, drones, space innovation and so on. They are beginning to dream big, disrupt and innovate.

With initiatives such as the ATL community day, the goal is to provide an equal opportunity to all regions, to all children irrespective of the rural-urban divide, government-private divide, to explore, learn and experience innovation.

By providing equal opportunity, the Atal Tinkering Labs are taking a small step towards developing a ‘New India’. As an ATL school, are you taking your small step towards equally participating in this journey? Come, join us in celebrating curiosity, creativity, tinkering and innovation with the ATL Community day celebration drive.

Happy Tinkering 😊
Dr. Ayesha Chaudhary,
Atal Innovation Mission, NITI Aayog
ATAL TINKERING LAB

Community Day celebration during the month of April

Tinkering in schools has become a nationwide movement and NITI Aayog is pleased to announce the ‘ATAL Community Day celebration’, to provide an equal opportunity to all for innovation.

ATAL Community Day will be celebrated in Atal Tinkering Labs across the nation in the month of April, to commemorate the birth anniversary of Dr. B R Ambedkar.

Let us together unleash the innovator inside

ATALs shall open up their gates to the children from nearby non-ATAL schools, NGOs, social welfare organizations and local community to celebrate a fun filled day to tinker and innovate, by conducting open sessions on tinkering and innovation.

ATAL Community Day will introduce children who don’t have access to formal education, to the philosophy of Atal Tinkering Labs.

Schools may conduct a series of tinkering and ideation workshops, trainings and showcase events in their ATL premises.

Mentors of Change, Parents and Teachers are encouraged to support their respective ATLs to conduct the tinkering sessions.
Celebrating #ATLCommunityDay:

The #ATLCommunityDay shall be celebrated as a full day event, or series of events comprising of various parallel hands-on sessions, showcase exhibition and workshops.

Schools must:

1. Leverage ATL resources and equipment and conduct various sessions on tinkering and innovation by trained mentors, teachers and students.

2. Provide upcycling, basic tinkering, prototyping and DIY kits to conduct the event.

3. Conduct an innovation exhibition, showcasing key innovations created by students.

Venue:

Your school’s ATL

Sharing with AIM, NITI Aayog

Schools can conduct and share the Facebook Live, pictures and videos of the event on Facebook or Twitter using tags @atalinnovationmission @aimtoinnovate #ATLCommunityDay @NITIAayog. AIM will be sharing your videos from AIM/ NITI Aayog page.

The best stories shall be featured on the ATL Wall of Fame.
Sample Agenda:

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am to 9:15 am</td>
<td>Launch of #ATLCommunityDay</td>
</tr>
<tr>
<td>9:15 am to 9:45 am</td>
<td>Know your ATL*</td>
</tr>
<tr>
<td>9:45 am to 10:45 am</td>
<td>ATL Workshop/Session 1 (School can choose the theme)</td>
</tr>
<tr>
<td>10:45 am to 11:00 am</td>
<td>Take a Snack Break</td>
</tr>
<tr>
<td>11:00 am to 12:15 pm</td>
<td>ATL Workshop/Session 3 (School can choose the theme)</td>
</tr>
<tr>
<td>12:15 pm to 1:30 pm</td>
<td>ATL Workshop/Session 5 (School can choose the theme)</td>
</tr>
<tr>
<td>1:30 pm to 2:00 pm</td>
<td>Showcase Time!</td>
</tr>
</tbody>
</table>

ATL grant fund utilization:

- Schools may utilise Rs. 5000/- (Rupees Five Thousand Only) for every 100 community children attending the #ATLCommunityDay for preparation. Schools must adhere to the fund utilisation guideline as per the clause No. 2, point (d) of Grant-in-Aid Fund Utilization guideline, link: https://aim.gov.in/pdf/Grant-in-Aid_Fund_Utilization_Guideline.pdf*

- The ATL schools are not allowed to make any payment to any trainer/volunteer/mentor/vendor/professional to conduct any session related to the event from ATL grant amount.

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Sample activities for ATL Community day celebration

Following are some suggestive activities ATL schools can conduct during the #ATLCommunityDay. Schools are encouraged to innovate further and create unique events for their event.

Activity 1: Alchemy Fun

Converting chemical energy into electrical energy, and lighting an LED.

Material Required:
1. Salt
2. Water
3. 5 Cups
4. 5 Copper strips
5. 5 zinc strips
6. Wires
7. Crocodile clips
8. Stationery

Steps:
1. Take five paper cups and fill them with water.
2. Add a spoon of salt to each cup.
3. Connect two wires to the LED. Connect the copper strip to one wire, and the zinc strip to the other.
4. Make the arrangement for the rest of the circuit as shown in the figure.
5. The LED should light when all the wires are connected.

Learning outcomes:
1. Understanding energy conversion
2. Understanding basic chemistry of atoms, ions, charge

Reference link:
https://www.youtube.com/watch?v=AeJ7F7N084U
Activity 2: Tinkering with my family

Exploring DIY kits in the ATL with family members, to unleash the creativity

 altında>

Material Required:
1. DIY Kits
2. Robotics Kit
3. 3D printer

Steps:
1. Invite parents to team up with their children and participate in the hands-on session.
2. Issue one DIY/robotics kit to each team
3. Conduct an ideation session to identify a problem statement
4. Create a possible solution using the kits available

Learning outcomes:
1. Parent-child teamwork
2. Basic engineering skills
3. Ideation

Tips:
1. Allot 45 mintues to 1 hour for this session.
2. Invite teams to present their creation
3. Schools might give special recognition/awards to top performing teams.
Activity 3: Soldering champions

Learning the basics and safety norms of soldering

**Material Required:**
1. Small piece of FR2/PCB Board (4cmx4cm)
2. LEDs
3. Resistors
4. Button switch
5. Coin cell with case
6. Soldering iron with solder wire and paste
7. Safety pin

**Steps:**
1. Presentation on basic electronic components and their use – LEDs, resistors, button switch, coin cell and soldering system.
2. Safety first – share do’s and don’t’s of soldering.
3. Create a simple circuit diagram to light 1 LED via a button switch and share it with the participants.
4. Create a kit from material required and distribute to each participant.
5. Conduct hands-on session on soldering.
6. Ensure each participant gets their own soldered LED badge.

**Learning outcomes:**
1. Basics of electronics
2. Soldering
3. Safety
4. Electronic components and their use.

**Tips:**
1. Each soldering station must have 2 ATL students to assist participants.
2. Ensure all participants use the soldering iron in a safe manner.
3. Encourage participants to decorate their PCB board with stationery available.
Activity 4: I can make electrons move!

Create a working circuit using simple electronics resources and lighting an LED

نبيات مطلوبة:
1. LEDs
2. Coin/button cells
3. Single core wire
4. Copper Tape
5. Stationery
6. Coloured paper, foam board, card board

الخطوات:
1. Play videos about paper circuits and showcase some ideas.
2. Encourage students to use material from earlier activities and build from it.

المؤشرات التعليمية:
1. Basics of electronics
2. How circuits work
3. Components

المعلمة للإطار
https://stem.northeastern.edu/programs/ayp/fieldtrips/activities/paper-circuits/
**Activity 5: Fast and Curious**

Create a car powered by a balloon’s air pressure and race it to the finish.

**Material Required:**
1. Balloon
2. Cardboard
3. Straws
4. Spokes/wood sticks
5. Wheels
6. Rubber band
7. Stationery

**Steps:**
Follow the steps as per the following link: https://www.wikihow.com/Make-a-Balloon-Car.

**Learning outcomes:**
1. Newton’s law of motion
2. Friction
3. Conservation of energy

**Tips:**
1. Parents and their wards can work together to create the fastest balloon car.
2. Schools may conduct a balloon car race tournament.
Activity 6: Stepping into the 3rd dimension

Conduct an interactive session on 3D printing

Material Required:
1. 3D printer
2. 3D printed objects
3. Projector (for presentation and videos)

Steps:
1. Select expert students to conduct 3D printing hands on session.
2. A presentation with videos and demonstration for the 3D printing session shall be created and delivered.

Learning outcomes:
1. Additive manufacturing technology
2. 3D printing concepts
3. Basic understanding of machinery

Tips:
1. Keep the 3D printer ON and working at all the times.
2. Encourage more hands-on and demonstration time.
Activity 7: Can we build it? Yes we can!

Build a stable and strong bridge made out of newspaper

Material Required:
1. Stack of newspapers
2. Desired stationery items

Steps:
1. Form groups of 5-6 students each with the desired time of 20-30 minutes.
2. Build a newspaper structure which is able to support weight.
3. Strongest structure wins.

Learning outcomes:
1. Structures
2. Team building
3. Basic engineering
Activity 8: Balloon Train
Create the longest and strongest structure made of balloons

Material Required:
1. Pack of Balloons
2. Thread
3. Cello Tape
4. Stationery

Steps:
Open the floor for the children to create the best balloon structure within stipulated amount of time.

Learning outcomes:
1. Structures
2. Team work
3. Planning and leadership

Tips:
1. Create groups of 5-8 participants.
2. Mix them up well, encourage them to work with peers they are not familiar with.
3. Gift winning teams a 3D printed ATL souvenir.
4. Encourage participants to share their key learnings.