

GOVERNMENT OF KARNATAKA

GOVERNMENT HIGH SCHOOL, NELAGETHANAHATTY

ATAL TINKERING LAB

ACTION PLAN

2022-23



NELAGETHANAHATTY, CHALLAKERE (TQ) , CHITRADURGA (DIST)

INTRODUCTION

With a vision to ‘Cultivate one Million children in India as Neoteric Innovators’, Atal Innovation Mission is establishing Atal Tinkering Laboratories (ATLs) in schools across India. The objective of this scheme is to foster curiosity, creativity, and imagination in young minds; and inculcate skills such as design mindset, computational thinking, adaptive learning, physical computing etc.

ATL is a workspace where young minds can give shape to their ideas through hands on do-it-yourself mode; and learn innovation skills. Young children will get a chance to work with tools and equipment to understand the concepts of STEM (Science, Technology, Engineering and Math). ATL would contain educational and learning ‘do it yourself’ kits and equipment on – science, electronics, robotics, open-source microcontroller boards, sensors and 3D printers and computers. Other desirable facilities include meeting rooms and video conferencing facility.

In order to foster inventiveness among students, ATL can conduct different activities ranging from regional and national level competitions, exhibitions, workshops on problem solving, designing and fabrication of products, lecture series etc. at periodic intervals.

ATL OBJECTIVES

1. To create workspaces where young minds can learn innovation skills, sculpt ideas through hands-on activities, work and learn in a flexible environment.
2. To empower our youth with the 21 century skills of creativity, innovation, critical thinking, design thinking, social and cross-cultural collaboration, ethical leadership and so on.
3. To help build innovative solutions for India’s unique problems and thereby support India’s efforts to grow as a knowledge economy.



ATL AT OUR SCHOOL

Our Government High School, Nelagethanahatty is located at Nelagethanahatty, Nayakanahatty (Hobli) Challakere (Tq) , Chitradurga (Dist). In the year 2021 our School has been selected for establishment of ATL lab from NITI Aayog central government of India . They had given economic support and direction to set up this lab . Hence we are able to set up our ATL Lab and inaugurated on 1 March 2022 by Gram panchayat member of Nelagethanahatty Gram Panchayat , Nelagethanahatty

In our school 220 students are studying and they are from countryside , from Scheduled Castes and Scheduled Tribes and most of them are girls . ATL has so many electronic and mechanical equipment these may build our students Knowledge and support to think towards new technology to solve so many basic problems facing in their daily life.

In the 2022-23 Academic year we have made the frame work to train students effectively and allow them for hands on working by conducting the 2 sessions in every week. Through this lab students may capable to do some activities, projects, making science models, allowing them to accessing learning materials, conducting workshop, interactive classes, and demonstration classes also.

The structured Action Plan 2022-23 helps to reach every milestones of ATL curriculum in the given period of time.

With this we also identify 5 Government/Aided Schools both High school , higher secondary school comes in the radius of 5 km of geographical area from our school as a Community schools. We are allocating the time to learn ATL basic concepts and hands on working for those school students once in a month to one among them.



METHODOLOGY OF STUDENT ENROLLMENT STEPS

1. Taking classes regarding Introduction to ATL and Build the pre-ideation and idea generating knowledge and allow the students to visit ATL.
2. Selecting the students depends on their creativity, interest, idea submission, innovative knowledge, pre-knowledge skills, problem handling skills.
3. Observing the students involvement in LAB.
4. Through conducting written tests to evaluate their knowledge.
5. Observing the students involvement in academic class.

LIST OF SELECTED STUDENTS

SL NO	NAME	CLASS	SL NO	NAME	CLASS
1	AMULYA	10	19	CHANDAN KUMAR	8
2	DIVYA	10	20	DINESHA B T	8
3	MANYA	10	21	JEEVAN K	8
4	NAGARAJA B	10	22	KESHAVA MURTHY	8
5	PRATHIBHA	10	23	LANCHANA M C	8
6	POOJA	10	24	MANASA K S	8
7	PAVAN KUMAR	10	25	MANSOOR	8
8	RUDRAMUNI	10	26	MANUGOWDA	8
9	SHASHIKALA	10	27	PREM KUMAR K T	8
10	AMULYA	9	28	RADHIKA M P	8
11	BORAMMA K B	9	29	SHREYASSU K B	8
12	LAKSHMI C K	9	30	SHYAMALA	8
13	PRAJWAL	9			
14	RUHINA BHANU	9			
15	SHIVAMMA	9			
16	SUFIYA	9			
17	SRIPATHI	9			
18	AISHWARYA M	8			

ATL TINKERING YEAR PLAN

MONTH	NO OF SESSIONS OF ONE HOUR	STUDENTS ENROLLED	OBJECTIVE	CONTENT ANALYSIS	MENTORS
JUNE 2022	16	All students from Class 6 th -12 th	Introduction to tinkering, pre-ideation, idea generation and ATL visits	Introduction to ATL What is STEEM Education?	ATL INCHARGE
JULY 2022	12	Open to interested students, teachers can nominate, students supported by mentors, collaborative team work	Introduction to design thinking, digital literacy.	Introduction to design thinking, digital literacy.	ATL INCHARGE
AUGUST 2022	12	Open to interested students, teachers can nominate, students supported by mentors, collaborative team work	Computational thinking with Do-It Yourself activities, make students Tinkerers	<ol style="list-style-type: none"> 1 Introduction to Computational Thinking. 2 Understanding Flow Charts and Algorithms. 3 Understanding Sensors and Actuators. 4 Understanding Circuits. 5 Activity Card 1 - LDR Sensor. 6 Activity Card 2 - Flex Sensor. 7 Activity Card 3 - Water Level Sensor. 8 Activity Card 4 - Soil Moisture Sensor. 9 Activity Card 5 - Gas Sensor 10 Introduction to Coding <ul style="list-style-type: none"> • Free Courses for Coding • Python & Matlab • Java, C, C++ • HTML, SQL, CSS • Free Courses for Coding 	ATL INCHARGE
SEPTEMBER 2022	12	Open to interested and selected student Tinkerers, teachers can nominate, students supported by mentors, collaborative team work	Introduction to physical computing.	<ol style="list-style-type: none"> 1 Introduction to Physical Computing 2 Different types of Microelectronic boards 3 Part 1 - Connect your Arduino with your computer using IDE 4 Part 2 - Connecting Basic electronic components and coding 5 Part 3 - Exercises 	ATL INCHARGE
OCTOBER 2022	ACCADEMIC TESTS AND EXAMS AND DASARA HOLIDAY PERIOD				

MONTH	NO OF SESSIONS OF ONE HOUR	STUDENTS ENROLLED	OBJECTIVE	CONTENT ANALYSIS	MENTORS
NOVEMBER 2022	16	Open to interested and selected student Tinkerers, teachers can nominate, students supported by mentors, collaborative team work	Building real time projects, make students Makers	<ol style="list-style-type: none"> 1 Alcohol Detection using MQ sensor. 2 Earthquake Detection using inbuilt accelerometer and gyroscope. 3 Heart Monitor using a pulse sensor. 4 Smart Irrigation Pump using water pump and relay. 5 Water Quality Test using pH sensor and display. 6 Internet of Things (IoT) <ul style="list-style-type: none"> • Arduino Official Website • Arduino • Arduino (In Vernacular Languages) • Raspberry Pi • Raspberry Pi (Hindi) 7 Circuit Design and CAD <ul style="list-style-type: none"> • ECAD & MCAD 8 Space module 9 Drone module 	ATL INCHARGE
DECEMBER 2022	16	Open to interested and selected student Tinkerers, teachers can nominate, students supported by mentors, collaborative team work	Building real time projects, make students Makers	<ol style="list-style-type: none"> 1 Artificial Intelligence 2 Python Learning Module 3 Gaming Module 4 App Development Module 5 WCF CyberSmart Portal 6 3D Design and Printing Module 	ATL INCHARGE
JANUARY 2023	16	Self-driven students interested in working on real life projects with guidance from mentors, collaborative team work	Encourage motivated students continue to solve real world problems, ATL Incharge and mentors guide, make them Innovators	<ol style="list-style-type: none"> 1 Intellectual Property Module 2 Creating a Business Pitch 3 Ethical Leadership in Tinkering and Innovation (ELTI) Module 	ATL INCHARGE
FEBRUARY 2023	16	Self-driven students interested in working on real life projects with guidance from mentors, collaborative team work	Encourage motivated students continue to solve real world problems, ATL Incharge and mentors guide, make them Innovators	Encourage motivated students continue to solve real world problems	ATL INCHARGE

LIST OF NEARBY COMMUNITY AND NON-ATAL TINKERING LAB SCHOOLS

SL NO	NAME OF THE SCHOOL	DISTANCE FROM OUR SCHOOL	HEAD MASTER DETAILS	REMARKS
1	GHPS, BOMMAKANAHALLI, CHITRADURGA (TQ)	3 KM	SHIVAKUMAR, H M , 6360662736	
2	GHPS N UPPARAHATTY, CHALLAKERE (TQ)	4 KM	SCIENCE TEACHER, HENRYMADHUKAR 8073258245	
3	GHPS , BOSEDEVARAHATTY, CHALLAKERE (TQ)	5 KM	RUDRA SWAMY 9945669860	
4	S T S R SCHOOL, NAYAKANAHATTY	10 KM	S R VIRESHA SCIENCE TEACHER 9611773053 9164440381	
5	SRI GURU THIPPERUDRASWAMY SCHOOL, NAYAKANAHATTY	10 KM	HEAD MASTER	



SCHEDULED PLAN TO COMMUNITY AND NON-ATL SCHOOLS

SL NO	DATE	TIME	VISITING SCHOOL	MENTORING BY
1	01/06/2022	10.00 AM TO 3.30 PM	G H P S, N UPPARAHATTY	SATHISHBABU R T
			G H P S , BOMMAKKANAHALLI	
			G H P S, BOSEDEVARAHATTY	
2	06/07/2022	10.00 AM TO 3.30 PM	S T S R HIGH SCHOOL, NAYAKANAHATTY	ABDUL MUZEEB
			SRI GURUTHIPPERUDRASWAMY HIGH SCHOOL, NAYAKANAHATTY	
3	03/08/2022	10.00 AM TO 3.30 PM	S T S R HIGH SCHOOL, NAYAKANAHATTY	ABDUL MUZEEB
			SRI GURUTHIPPERUDRASWAMY HIGH SCHOOL, NAYAKANAHATTY	
4	14/09/2022	10.00 AM TO 3.30 PM	G H P S, N UPPARAHATTY	SATHISHBABU R T
			G H P S , BOMMAKKANAHALLI	
			G H P S, BOSEDEVARAHATTY	
5	30/11/2022	10.00 AM TO 3.30 PM	G H P S, N UPPARAHATTY	SATHISHBABU R T
			G H P S , BOMMAKKANAHALLI	
			G H P S, BOSEDEVARAHATTY	
6	21/12/2022	10.00 AM TO 3.30 PM	S T S R HIGH SCHOOL, NAYAKANAHATTY	ABDUL MUZEEB
			SRI GURUTHIPPERUDRASWAMY HIGH SCHOOL, NAYAKANAHATTY	
7	18/01/2023	10.00 AM TO 3.30 PM	S T S R HIGH SCHOOL, NAYAKANAHATTY	ABDUL MUZEEB
			SRI GURUTHIPPERUDRASWAMY HIGH SCHOOL, NAYAKANAHATTY	
8	15/02/2023	10.00 AM TO 3.30 PM	G H P S, N UPPARAHATTY	SATHISHBABU R T
			G H P S , BOMMAKKANAHALLI	
			G H P S, BOSEDEVARAHATTY	

ATAL TINKERING LAB 2022-23

ATL ADVISORY COMMITTEE

SL. NO	NAME OF THE MEMBER	DESIGNATION	MOBILE	REMARKS
1	B V NATHA	HEAD MASTER	9448964735	
2	JAYACHITRA K P	SCIENCE TEACHER	9480625357	
3	UMESHA B S	ASSISTANT MASTER	9902779990	
4	JAGANNATHA	CRP	9900219453	
5	MUTTAIAH P N	GRAMA PANCHAYAT	9880587833	
6	NINGARAJU	SDMC MEMBER	7760267468	
7	SARVESH NAIK	ATL INSTRUCTOR	8722078196	
8	CHANDAN KUMAR	8 th STANDARD	7760736684	
9	MANU GOWDA G C	8 th STANDARD	9591263945	



**HEAD MASTER OFFICE, GOVERNMENT HIGH SCHOOL, NELAGETHANAHATTY,
CHALLAKERE TALUKU, CHITRADURGA DISTRICT -577536.**

SCHOOL DISE CODE :29130203802

SCHOOL EXAM CODE:II0128

ADDRESS:ghsnghschool@gmail.com

MAIL

MOBILE NO:9448964735

ESTIMATED BUDGET ACTION PLAN FOR THE YEAR OF 2022-23 TO ATAL TINKERING LAB

SN	PARTICULARS FOR ATL GRANT EXPENDETURES		ESTIMATED COST AMOUNT	REMARKS
1	Opening Balance of ATL grant at 31/07/2022	1,98,460.00	-	
2	Token Honorarium An Amount of Rs 5000 for 10 months	5000*10	50,000.00	
3	Repair & Maintenance of ATL equipment	-	20,000.00	
4	Purchase of consumable and spares for ATL instruments	-	64,000.00	
5	Teachers and students training and travel,accommodation for attend events/meetings/training /programes	-	48,000.00	
6	Misllaneous amount (interest)	-	16,460.00	
7	Total expenditure amount		1,98,460.00	

ATL incharge teacher signature

Head Master signature