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# HaritaDhara Research Development and Education Foundation

(Established under Section 8 of the Indian Companies Act, 2013)

Ref. No. : HRDEF/UNGC/NB/COE2020

Dated : 20-01-2020

## COMMUNICATION ON ENGAGEMENT (COE)

Period Covered by this Communication on Engagement

From: January 2018 to January 2020

To our Stakeholders:

I am pleased to confirm that HaritaDhara Research Development and Education Foundation (HRDEF) reaffirms its support to the United Nations Global Compact and its Ten Principles in the areas of Human Rights, Labour, Environment and Anti-Corruption. This is our Communication on Engagement with the United Nations Global Compact. We welcome feedback on its contents.

In this Communication on Engagement, we describe the actions that our organization has taken to support the UN Global Compact and its Principles as suggested for an organization like ours. We also commit to sharing this information with our stakeholders using our primary channels of communication.

Yours Sincerely,

Vijay Kumar  
President



PROTECT PRITHVI.






HARITIMA IT.



ALANKRIT IT.

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# HaritaDhara Research Development and Education Foundation

## हरितधरा रिसर्च डेवलपमेंट एंड एजुकेशन फाउंडेशन (HRDEF)

Website: <https://www.hrdef.org>

### About HRDEF

HaritaDhara Research Development and Education Foundation (HRDEF) established as non-profit social enterprise under the Companies Act 2013 as section 8 company in 2014 and in Special Consultative status with the United Nations Economic and Social Council since 2018 (UN ECOSOC). HRDEF inculcate and motivates students for science, technology, engineering, arts and design, mathematics (STEAM) for 21st Century sustainable living through intelligent interactive learning systems. HRDEF committed to establish processes aimed at educating for sustainable development (SDGs), management of environment, water, energy, waste, climate change, and transport issues through involving children, youth, and elders using ICT. HRDEF promotes natural, land resource management, sustainable agriculture, biodiversity enrichment, and disaster management using educational inventiveness for smart cities and villages.

We conduct teachers, student's development programs for capacity building on ICT, SDGs, climate change, disasters, STEAM, and work towards Sustainability, SDGs, Green, Swachh, and Sustainable Living. We are addressing issue of quality learning and sustainable development through ICT, hands-on activities in a curriculum based way supported by research inputs and driven by new learning paradigm based on cognitive science, neuroscience, AI, makers approach,

### Why Us

As per data from various studies and our experience we witnessed that quality education and life skills (21<sup>st</sup> century skills) are ignored in mainstream education. To bridge this gap, we are providing quality skillful education, problem solving, creativity, communication, design and computing. Building capacity for citizenship, values and Sustainable Development Goals (SDGs) among school students and youth so that they will be able to tackle future challenges. We are using games, project, and hands-on approached for interactive learning. We took alternative education as drive for betterment, and counseled low-income mothers to provide education to their children especially daughters for better life under our GOAL program. We hold sessions for mothers, daughters in the slum areas about digital literacy as new avenues for future.

- To empower girls trained in our GOAL program, we started learning center in under-served community so that they teach kids from class 1 to 8 and soon able to earn livelihood.
- We organized workshops, lectures to spearhead education, climate change, SDGs, citizenship, values, STEAM, sustainability for students, teachers, and community.
- Through our initiatives such as Hands-on Learning, Game based learning we are teaching learners in an interactive way to understand complex concepts.
- Through GOAL, our students, youth become motivated, equipped with self-confidence to excel in life and will be able to create sustainable future.
- We visit to community of low-income group, schools and spreading message through workshops and talks.
- Mentoring opportunities from Experts, Youth become trainer for their community, Create more Change Makers,

### Our Impact

Students, Teachers, Parents, youth, and Community members are direct impact holders, Government departments, professionals, policy makers, and businesses are indirect impacted.

## **Awards, Achievements, External Assessment, Evaluation, and Partnerships**

- Selected as not-profit partner for Online Volunteering with United Nations Volunteering (UNV)
- Accredited as organization having Special Consultative status with United Nations Economic and Social Council (UN ECOSOC) in 2018
- MoU with Department of School Education, Govt. of Uttarakhand in 2019
- Since 2016, HRDEF has been committed to the United Nations (UN) Global Compact
- Registered, verified with GuideStar India GSN Number - 6573 and Certified with Transparency key in 2018
- Gold Award (2019), Silver (2017, 2018) to NavUrja Sanchar, a unit of HRDEF **for VIPNET Science Clubs (Vigyan Prasar), Dept. of Science and Technology, Govt. of India**
- Er. Anant Bhaskar Garg, Director selected as Mentor of Change, Niti Aayog, GoI | Microsoft Innovative Educator Expert (MIEE) 2018, 2019
- Dr. Manisha Agarwal, Director got Matre Shakti Manroma Dobriyal Sharma award in 2016 for her efforts for women, girls' empowerment, and digital literacy
- Fellowship from UNESCO MGIEP for TECH 2017, 2018 for Research Work Presentation and written blogs for SDSN-Youth, Together 2030
- Member of Sustainable Development and Solutions Network -Youth (SDSN-Youth) an organization supported by United Nations
- Member of international professional bodies IUCN CEC, UNEP DHI, The Climate Reality Project, Together 2030,
- Partner of Technovation, Designathon, Global Goals Jam, TED-Ed Club, Google CS First – Global Organizations
- HUNDRED Ambassador 2019, Finland | Sustainability in Science Centers Fellowship, ASU, USA, 2017
- Dr. Manisha Agarwal Paper selected in NCSTC 9th National Teachers Congress, DST, GoI
- Principals Conclave on SDGs and Climate change education training with **TCPF and UNESCO, New Delhi in 2017**
- The Climate Reality Project Leaders 2015 – Trained by **Former Vice-President Al Gore, USA**
- Sustainable Smart Earth through Harita Week – Month project is building awareness and motivation among school, college students, community, professionals through organizing various activities in the April month celebrated as Earth month, and Harita week spread around the year comprising workshop, training and other events based on Education, Technology, and Sustainability.
- Workshops on Role of Cultural and Traditional Knowledge for Sustainable Development, Energy Conservation, Best Practices in Waste Management and Climate Change, Medicinal plants in our daily life, Disaster Risk Reduction
- Programs on Fun way of Learning through Hands-on, Game based approach on STEAM
- Organized various competitions for school students, and lectures to promote UN themes on Science for Environmental and Climate Literacy, Importance of Medicinal Plants in our Daily Life, Forest Fire, Climate Change, **Sustainable Development Goals (SDGs)**, Renewable energy, water, waste management, effects of climate change on biodiversity, role of engineering in sustainable development, and energy conservation. Students from Uttarakhand, U.P., H.P., M.P., Haryana, Punjab, Chhattisgarh, actively participated in various competitions.
- **Pledge drive for Green, Clean Smart Dehradun 4220 people** undertook the same
- Plantation drives and **distributed around 1065** Tulsi, meetha neem, guava, mango sapling to community members
- GOAL learning Centres for alternative education and computer training programme to under-served women and children to empower them with technology
- Our workshops were replicated by our participants in their respective institutions for larger learning and impact
- Our GOAL program students earning their livelihood, enrolled in colleges, and doing jobs
- We feel very motivated that we are able to initiate some change in our community

## Description of Actions

HaritaDhara Research Development and Education Foundation (HRDEF) during the past two year participated and organized several events. In events and actions supported the 10 key principles of commitment to the UN Global Compact. We are creating awareness through organizing workshops, lectures and interacting with stakeholders such as policy makers, professionals, teachers, students. We cover topics such as SDGs, Climate Change, Sustainable living-water, energy and forest management, Sustainable lifestyle, plantation drive and associated with other institutions. We partnered with UNEP-DHI for Eco Challenge for IWRM on River Basin.

We partnered with The Climate Project Foundation, Climate Reality Project, SDSN Youth, VIPNET, IUCN CEC #NatureforAll for Teachers and youth training program. We are spreading message of climate change, biodiversity, energy, water, waste, and pollution through STEAM in different schools. HRDEF GyanTree TED-Ed club and NavUrja Sanchar facilities are helping students and youth towards skills development. We impart computer training to underserved women and children to empower them with technology so that they understand present system and be part of it. Under this program, we are teaching them at their places, home for effective learning besides teaching students at our facility. Acquaint stakeholders about their rights; inform them about SDG and techniques to improve their understanding of local issues. We also ask business to actively address environmental risks and opportunities, and have efforts underway with business in the areas of climate, water and food; focus on social dimension of corporate sustainability mainly women's empowerment, children, indigenous peoples, people with special needs through education and in implementing the SDGs.

### Publications:

**Published online Article:** <https://medium.com/digitalsocietyschool/global-goals-jam-2018-hrdef-for-smart-city-dehradun-3e00c2857f8b>

**Published a Blog:** <http://www.teachsdgs.org/blog/water-management-in-hilly-region-for-sustainable-development>

### 15-01-2020: Winter Camp on Fun with Science, Math through Maker Way

HaritaDhara Research Development and Education Foundation (HRDEF) organized free Fifteen days winter maker camp on Fun with Science, Technology, Engineering, Arts, Design, and Mathematics (STEAM) which was coordinated by Dr. Manisha, and Er Anant Bhaskar Garg. On the occasion of New Year, HRDEF GOAL program students and Parents took Oath for Clean, Green Smart community, city, Sustainable Development Goals (SDGs), and not to use single use plastics.

Er. Anant Bhaskar Garg taught about Artificial Intelligence (AI), its applications in daily life in various sessions. Dr. Manisha Agarwal coordinated the camp through project and problem based learning. **Parents applauded efforts of coordinator and praised this hands-on way of learning of science, math, and current technology developments.** HRDEF celebrated its Fifth Annual Day on 30<sup>th</sup> Nov. and conducted sessions on ICT, Sustainability, SDGs, STEAM, maker approach, and 21<sup>st</sup> Century learning. To develop innovation, 21<sup>st</sup> Century skills in youth are main driver in the camp that motivate youth towards entrepreneurship. Science and math learning through maker and game based made difficult concepts easier to learn. Students aged 10 to 17 years from low-income background participated in the winter camp and enjoyed fun way of learning science and math.

### 21-12-2019: Food Waste Film Show Workshop

Dr. Manisha and Er. Anant conducted a series of sessions on food, waste, making of basket from newspaper, SDGs in a local government school. Also discussed various projects through film show as a part of solutions towards above and role of school students from class VI to class VIII,

### **9-12-2019: Making and Building of Math Activity Kits**

Students of GOAL program participated in the making and building Math activity kits. They participated in making workshop and showcased their creativity and learning through developing models for learning math for primary students.

### **30-11-2019: Showcase: Making of Projects**

Earlier in the week students of GOAL program worked on technology, human, education linkage and benefits. They learned about effectiveness of technology in education by using computing methods, computational, design thinking. They participated in making workshop and showcased their creativity and learning through developing models for learning math in front of their parents.

### **25-11-2019: Technology Human and its Benefits**

Dr. Manisha and Er. Anant conducted first a sessions on Technology, Human, and its Benefits for students of GOAL program. Then students participated in essay and painting competition. Especially, technology application in education demonstrated and further a hands-on sessions in next 4 days.

### **21-11-2019: 24 Hours of Reality: Truth into Action Workshop**

Er. Anant, Dr. Manisha delivered sessions on Disasters Reduction, Climate Actions, and SDGs at GGIC, Rajpur road.

### **16-11-2019: Workshop on Food, Sustainability, and Climate Action**

HRDEF jointly with Designathon, Netherlands organized workshop to provide wings to imagination of youth during Children's day. They learned, worked on various issues related to food, climate change. Children's designed, developed models on topics such as terrace gardening, roof garden, vertical garden, transportation of food, composting in waste plastic bottles, renewable energy and food. Young scientists share their viewpoint on how food will be available to all in future.

### **5-8 Nov., 2019: India International Science Festival (IISF), Kolkata**

A small group comprising of Anant, Manisha, Prayanshi from HRDEF selected for the IISF at the Kolkata in three different events NSTC, Nav Bharat Nirman, NSOIM.

**01-11-2019: Tenth "Harita Week" from 24 Oct. – 01 Nov., 2019** -conducted workshops, TechFest on AI and Sustainability using maker approach during the week. In these events students from under-served background learned about artificial intelligence (AI), computational, design thinking, and how to use Smartphone effectively for better learning, safety through sensors and apps.

**3-4 Oct., 2019: STEAM Session** Dr. Manisha and Er. Anant conducted a series of sessions on STEAM sessions explaining disasters risk reduction, climate action in a local school. Also discussed various projects based on science, technology as a part of solutions towards above and role of school students from class VI to class XII



### **14-18 Sep., 2019: SDGs Disasters Risk Reduction Climate Action at local schools**

Dr. Manisha and Er. Anant conducted a series of sessions on sustainable development goals, disasters risk reduction, climate action in a local school. Also discussed various projects based on science, technology as a part of solutions towards above and role of school students from class VI to class XII,



**06-09-2019: Science Communication, Harita Innovations, 21<sup>st</sup> Century Skills in Schools during Green Earth Month**

HRDEF organized its 6<sup>th</sup> Green month from 6 Aug., 2019 to 6 Sep., 2019. Various events, workshops, training organized during this month with an objective to popularize science, math, environment, and sustainable development among students, youth, and community members. HRDEF visited following schools GIC Patelnagar, Khurbura, Dobhalwala, GGHS, Majra, GJHS Kandoli, Rajpur road, Panditwari during this harita month.

NavUrja Sanchar registered with VIPNET, VigyanPrasar, awarded Gold category in 2019 for its Science Popularization, and Silver category in 2018 during National Felicitation ceremony at Rajkot from 12 – 13 Aug., 2019. HRDEF jointly organized workshop in Madhya Pradesh's school on Climate change, Disasters, SDGs from 6 – 8 Aug., 2019.

**28-08-2019: SDGs Disasters Risk Reduction Climate Action**

**24-08-2019: STEAM and 21<sup>st</sup> Century Skills** Dr. Manisha and Er. Anant conducted a series of sessions on STEAM and 21<sup>st</sup> Century Skills, disasters risk reduction, climate action in a local school. Also discussed various projects based on science, technology as a part of solutions towards above and role of school students from class VI to class XII,

**25-26 July 2019: Water Stress Scarcity, Harela,** - Students learned about water scarcity problem, various states, its geography. We talked about water problems, issues in India, water sources also. Then students played a game on water allocation to industries, agriculture, and household. They role played various jobs, allocated water for different needs.

**22-6-2019: World Environment Day and Beat Air Pollution Campaign** Dr. Manisha delivered a session on Indoor and Outdoor air pollution on the theme #BeatAirPollution. She talked about health effects of air pollution especially for ladies and children. She was invited by local community event. She explained climate change and global warming to audience.

**17-5-2019: Technology, ICT for Disasters Risk Reduction**

We conducted a session on Technology, ICT for Disasters Risk Reduction in a school on the occasion of World Telecommunication and Information Society Day. We used some experiments from VIPNET disaster kit and also told about how ICT can save lives and loss of property with recent examples of Fani in Orissa.

**07-5-2019: Technology Enabled Learning** Our GOAL program students learned and developing their computing skills and also learning through technology supported lessons on various topics

**04-5-2019: Three R, Waste Management, and Product Life Cycle** We conducted a session on 3 R, Waste Management, and Product Life Cycle in a school, and discussed various ways to reduce waste and how one product can be transformed into another product. Students suggested some steps and enquired about life cycle and carbon footprints.

#### **04-05-2019: Quiz Competitions, Consultation on Climate Change, SDGs during Harita (Green) Earth Month**

HRDEF finished its 5<sup>th</sup> Harita (Green) month, organized national level competitions for School students, and lectures to promote 49<sup>th</sup> UN Earth Day theme on Education and Climate Change, Protecting Species. 1340 Students from Dehradun, Mussoorie, Ratlam, Gurugram, Hazaribag, Bokaro, Roorkee, Ambala, and Devaldhar from 22 schools actively participated in “Importance of Protecting Species in our Life”, and “Role of Education for Mitigation and Adaptation to Climate Change” through Painting, Essay, Quiz competitions.

Following schools actively provided their support for month long events – The Shriram School, Aravali, Gurugram, Wynberg Allen, Unison, MKP, CNI, DAV, DPS, RPS, GIC, KV, GGUPS, Dehra PIC, GJHS Lacchiwala, kuaawala, Bhaniyawala, Banjarawala. Shikhar Gairola, Manisha Kumari specially contributed towards successful activities, and further efforts from Suman, Prayanshi, Sushma, Nisha, Shivani, Rohit, Kajal, Saloni, and efforts from all students made these events memorable.

#### **01-5-2019: Session on Biodiversity, Climate Change, and SDGs**

We conducted a Quiz in a school and a session on Biodiversity with VIPNET kits, climate change, and Sustainable Development Goals (SDGs). Students interacted and enjoyed the session.

**25-4-2019: Girls in ICT Coding Session Unplugged** We conducted Earth day quiz and a session on coding unplugged in a school and with students of GOAL program of HRDEF. Students learned about pixel, algorithm, flowchart with examples from their daily life such as tea making, coming to market etc.

#### **23-4-2019: Unplugged way to Teach Computational Thinking**

A session during ATL, NITI Aayog, Community Development event conducted for GOAL students.

#### **22-04-2019: Workshops on Role of Education for Mitigation and Adaptation to Climate Change**

On the occasion of the 49<sup>th</sup> United Nations (UN) Earth Day, HaritaDhara Research Development and Education Foundation (HRDEF) organized several workshops, activities. HRDEF celebrating April month as Harita (Green) month for couple of years in which this year HRDEF organized National Level Painting, Essay, Quiz competitions and delivered lectures. Dr. Manisha spoke about Earth Day importance, effects of global warming, pollution on Biodiversity, why we need tree plantation, reduction in plastic use. HRDEF celebrated Dr. Amedekar Anniversary and Baishakhi through promotion of planation of trees.

#### **12 - 15 Mar., 2019: Workshop on Water and Holi**

We conducted 3 days series on WATER AND HOLI, demonstration of water conservation efforts, film shows, water quality, pollution and discussed how we can save water through playing with only gulals, students took oath for the same. Students presented some stories also, and learned from videos on water conservation, water cycle. Students learned about Holika dahan, playing with colors and how to save water through playing with gulal and promoting peace and harmony in the society.

**28-2-2019: Science Day Celebration** - Lecture and film show about science in daily life and its importance with students from our Alternative education project students at the urban under-served area

**8-2-2019: Model making** - Young students explored various ways of model making thus learned about real-life objects

**5 - 6 Feb., 2019: Internet Safety Day** - Told about various measures of internet safety through playing game in pair, asking questions and checking understanding with students

**11-01-2019: Fun with STEAM** Winter Camp on Fun with Science, Math through Maker Way - HRDEF organized **free ten days maker camp on Fun with Science, Technology, Engineering, Arts, Design, and Mathematics (STEAM)** The objective of this program was to encourage and motivate students to learn science and mathematical concepts through hands-on, play, games, films, and project based activities.



**01-01-2019: Sustainable Development Goals (SDGs) Oath Ceremony, New Year Celebration, and Science Winter Camp** - On the occasion of New Year, HaritaDhara Research Development and Education Foundation organized the New Year Celebration program, Sustainable Development Goals Oath Ceremony, and **inauguration of 10 days free winter science camp**. In this everyone present take oath to save water, energy, paper and go for clean waste management using 4R – Reduce, Reuse, Recycle, Rethink, and plant tree for better environment and sustainable consumption and production. Dr. Manisha and Prayanshi conducted a session on how to reuse newspaper for designing and creating various box, and useful science games.

**14-16, Dec., 2018: 9<sup>th</sup> National Science Teachers Congress, NCSTC, CEE, Ahmedabad**  
Paper Selected for presentation in the above congress supported by NCSTC, DST, Govt. of India

**07-12-2018: Hour of Code Computing** - We conducted a Hour of Code session with our students to understand concepts behind computing and programming.

**04-05 Dec., 2018: MIEE Edu Days Meet, Gurugram** - Er. Anant Bhaskar Garg, Director, HRDEF selected as **Microsoft Innovative Educator Expert (MIEE) 2018** in August and further invited in Microsoft Edu Days as top 120 experts from India. These is helpful to provide 21<sup>st</sup> Century new way of training and learning to teachers and students

**04-12-2018: Watch Parties: 24 Hours of Reality** - Partnered with the Climate Reality Project, USA for climate change awareness

**29-30 Nov., 2018: Paper Presentation on Solar Power** - Presented paper on Solar Power Trends and Challenges for Uttarakhand in the All India Seminar on Development and Challenges in Solar Power at The Institution of Engineers (India), Uttarakhand State Centre supported by ONGC

**Ninth Harita week from 23 - 29 Nov., 2018** - HRDEF conducted sessions on SDGs, STEAM, and maker approach. Students participated in the quiz on environment. Program is coordinated by Dr. Manisha and GyanDhara's student's active involvement made this event memorable for everyone.

**23-11-2018: Fourth Foundation Day and Guru Nanak Birthday Celebration**

**13 – 20 Nov., 2018: UNESCO MGIEP TECH 2018** - Dr. Manisha and Er. Anant selected and invited to present their research work on sustainability and educational games with a Fellowship. Er. Anant Bhaskar, Director, HRDEF presented



organization's research on Game based Learning during UNESCO MGIEP TECH 2018 Global Education conference at Vizag supported by AP govt., MHRD, GoI, and several companies in educational sector.

### 06-11-2018: Sustainable and Personality Development with Eco-Deepwali

HRDEF organized events from 04 Nov. – 06 Nov., 2018 on Sustainable and Personality development during Deepawali week. Dr. Minal, CA Apoorve, Mrs. Suman Lata, Shri Krishna Kumar, Mrs. Sushma, and Shri Vijay Kumar, Retd. Chief Engineer mentored students. Er. Anant Bhaskar Garg, Director, HRDEF talked about sustainable development goals (SDGs), and role of youth towards them. Then, Manisha, Neetu, and Sita GOAL students presented their project on SDG 1, 3, 5, 7, 11, Health and well-being, No Poverty, Affordable and Clean Energy, Gender Equality, and Sustainable cities and Communities. These projects were developed during Global Goals Jam in Sep., 2018. Students performed dance, role play, and speech on eco-friendly Deepawali, Air pollution.

Dr. Minal from Lucknow University talked about exams fear, and how to get better marks in the exams. Thereafter, CA Apoorve talked about successful and unsuccessful habits mainly ownership, responsibility, time management, and goals setting. Parents of our students from GOAL and Alternative Education program expressed happiness, performance, and behavior improvement in their ward. Students enjoyed hands-on and game based learning in the HRDEF related to science, math, computing (STEAM). Dr. Manisha Agarwal, Director, HRDEF conducted and coordinated these events. This program was successful due to efforts from Prayanshi, Pranya, and GyanDhara's (GOAL) students who undertook oath for celebrating Eco-friendly Diwali. We would be very much thankful to all for their kind consideration and support in making our Dehradun Clean Green Smart.



### 5-11-2018: Science Fest and Sustainability

**26-10-2018: Math Fraction percentage Hands-on** - A session on mathematics was conducted to develop proficiency in solving fraction, percentage, decimal and other related problems through hands-on way. Previously, students prepared these cards from waste material and used in this session for play.

**13-10-2018: Disaster Awareness Session** - On the occasion of World DRR day organized a session on disaster awareness, withVIPNET Earthquake kit to explain various related issues. Essay writing on the above topic was also conducted.

### 05-08 Oct., 2018: IISF National Teachers Educators Meet and NSOIM

**02-10-2018: Cleanliness and Waste Recycle** - Students from our GOAL program with underserved background celebrated Swachhata Fortnight and Gandhi Jayanti, students actively participated in the Cleanliness and Waste recycle workshop. They prepared some artifacts, and cards for math related activities. They took pledge for cleanliness, green, and smart city.

**27-09-2018: Eight “Harita Week” from 20 Sep. – 27 Sep., 2018 and SDG Pulse: Workshops on Global Goals Jam 2018, Science, Math through Maker Approach** through conducting Mini jam, Global Goals Jam, Science and math sessions with maker approach during the week. On 20<sup>th</sup> students of GOAL program participated in mini jam and discussed about clean green smart city Dehradun. They raised issues of road, waste, pollution and emphasized to plant more trees, waste segregation. From 21-23 Sep., **HRDEF conducted Global Goals Jam 2018 which was organized by UNDP, DSS, Netherlands in 70 cities around the world.** Er. Anant Bhaskar Garg, Director, HRDEF talked about themes for this year SDG 1, 3, 5, 7, 11, Health and well-being, No Poverty, Affordable and Clean Energy, Gender Equality, and Sustainable cities and Communities. Participants worked on challenges such as Migration problem of Hills, and rural areas and possible solution through sustainable tourism. Another group worked on challenges related to waste for which solutions can be composting, creation of new products. Other group addressed the issue of air pollution for which they suggested green spaces and renewable energy. They build models, presented their ideas in a maker way. Students enjoyed hands-on, game based sessions, were able to learn complex topics. This program was successful due to efforts from GOAL GyanDhara’s students.



**26-9-2018: Material Life Cycle** - Discussed about materials, food life cycle, demonstrated various steps in between stages, also how one material is recycled to other material. Students able to know local and other transportation issues

**20-9-2018: Sustainable Development Goals – Discussed SDGs, problems of a city especially with respect to smart city Dehradun through a film show.** Students from our Alternative education project students at the urban under-served area actively participated and point out problems and some solutions also.

### **15-8-18: Expression of Freedom and Tree Plantation**

On the occasion of Independence Day on 15 August, we celebrated it with an Expression of Freedom event in which GOAL- GyanDhara students spoke about what they want such as freedom from pollution, gender inequality, cleanliness as in “Swachh Bharat and Swastha Bharat”. To signify the event and for clean air they planted Mango tree saplings with students from our Alternative education project students at the urban under-served area



**6-7-2018: SDG Session** - Workshop with Teachers

**30-6-2018: Plants Distribution and Interaction with Kids** - Mrs. Prabha Saluja recorded a video on environment

**30-6-2018: Summer Camp: Fun with STEAM -** HRDEF organized **one month free Summer Camp on “Learn and Transform in a Fun Way” June 2018 for underprivileged kids.** Students learned computer skills, climate change, science, math, English, and geography. They also learned about disasters and various problems due to climate change. Dr. Manisha Agarwal introduced biodiversity to them. The objective of this summer camp is to improve child communication skill, develop creativity, writing, critical thinking skills, imagination, encourage Out-of-the-Box thinking and project based learning among participants. Students were actively participated and enjoyed the camp.

**21-6-2018: International Yoga Day -** Participated in the Yoga Session at the Forest Research Institute (FRI) with Hon'ble Prime Minister Shri Narendra Modi

Er. Anant Bhaskar Garg, Director, HRDEF **selected as #MentorofChange, Atal Tinkering Lab, AIM, NITI Aayog, GoI**

**17-19 June, 2018: Study Tour for Waste Management and Sustainable Clean City -** Visited Chandigarh city, studied techniques for waste management in Rock Garden and Sustainable building through architecture view of Capitol Complex

**5-6 June, 2018: SDG Pulse: Workshop on Rainwater Harvesting and Environment for SDGs 6, 13, 14, 15**

HRDEF organized two days' workshop on SDGs 6, 13, 14, 15 on 5-6 June, 2018. This marked the celebration of World Environment Day (WED), Er. Anant Bhaskar Garg talked about this year WED theme of **#Beat Plastic Pollution** and its effects on us and our environment. India is the host country for current year WED events, activities, and pledged for reducing single-use plastic by 2022. During hands-on session students learned about making paper bags from newspaper to reduce use of plastic bags. All students were very happy after they made paper bags and pledge to minimize use of polythene bags. This way, they understand and enjoyed paper making for the betterment of environment by heart. Students also enjoyed film show on plastic pollution and water.

**22-5-2018: Learning Biodiversity -** Celebrated United Nations International Biodiversity Day and explained various hands-on activities from VIPNET biodiversity kit. Discussed ecosystem, food pyramid, food web with students from our Alternative education project students at the urban under-served area

**18-5-2018: Learning with Arduino Technology -** During World Telecommunication and Information Society Day, we demonstrated Traffic Light signal working to students using Arduino. Also, taught various applications of computer and information communication technology to them,

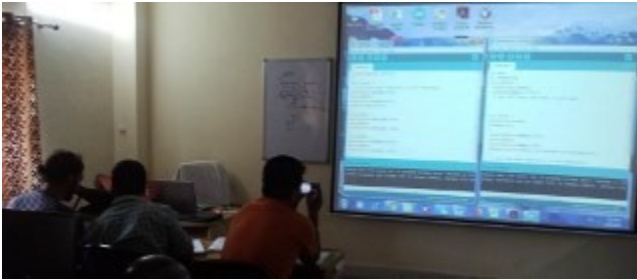
**3-5-2018: Earth month as Harita (Green) month 2018:** No Plastic, Climate Change, and SDGs programs, activities HaritaDhara Research Development and Education Foundation (HRDEF) concluded its Harita month on 3<sup>rd</sup> May. HRDEF is celebrating April month as Harita (Green) month for couple of years. This year, HRDEF organized various programs, activities, and lectures to promote UN 48<sup>th</sup> Earth Day theme on No Plastic, Sustainable Development Goals (SDGs) with objective to create awareness among people on Environmental Sustainability, Climate Change, and Role of Science and Technology for better opportunities. Students actively participated in various competitions and activities.

**On 26<sup>th</sup> April, Girls in ICT Counseling** event was organized in which Career opportunities for Girls in ICT sector was discussed. On 22<sup>nd</sup> April, Dr. Manisha spoke about Earth Day importance during a meeting organized by the Saksham. During Earth day, Creativity and Innovation Day Sketching, Quiz, Essay competitions were conducted on 20<sup>th</sup> April. Several Dignitaries visited during this Harita month and discussed issues on Education, Climate Change, Sustainable Development, Organic Pesticides, Forest, and IT. Shakuntla, Shekhar, Indra President, Principal from J.S. Public School, Morena, M.P., Meenakshi Agarwal, IPFT, Gurugram, Divya, Accenture, Bangalore, Abhishek, Shobita, Forest Dept.,

Gujrat visited HRDEF. SDSN Youth, a Global initiative features HRDEF efforts on #KnowYourGoals report released in the April, 2018.

### **March, 2018: Interactive Hands-on Learning and Digital Literacy Skill**

Under our GOAL program we taught subjects concepts at two learning centers one at its campus and other at Brahmawala Khala for school students who are finding difficulties in understanding subject's concepts and having fewer opportunities, **free for students from low income background.** Training program linked with curriculum of science, math, English, geography, disaster management through different tasks and teaching with hands-on, game, and multimedia approach made concepts learning easier and understandable to students. Further, training is provided on Microsoft technologies to students new batch started in March, 2018,



### **Jan. – Feb., 2018: Award and Game Development**

NavUrja Sanchar a unit of HRDEF and registered with **VIPNET, Vigyanprasar, DST, Govt. of India** upgraded to Silver category. Dr. Manisha Agarwal, Director and Coordinator received award for hands-on learning during Two day event at the NCERT, New Delhi on 28th Feb., 2018 on the occasion of National Technology Day. We are grateful to Dr. Arvind C. Ranede, VIPNET

HRDEF designed and developed a card game for learning about medicinal plants, sustainable food and health relationship in a joint project with Walton Sustainability Centre, **Arizona State University (ASU), USA.**

**8-1-2018: Fun with STEAM: One week Science camp** - We introduced to our students from our Alternative education project students at the urban under-served area periscope, kaleidoscope, and newton disc. They played with them and we explained principles behind them. They enjoyed problem solving session through puzzle building.

**H R D E F**

### **Measurement of Outcomes**

The Programs, projects, events, and actions taken by HaritaDhara Research Development and Education Foundation are mentioned in our actions where through capacity building programs, trainings, workshops, lectures to school students, youth, teachers, professionals, and community members created awareness on Sustainable Development Goals (SDGs), Climate Change, STEAM, Disasters Risk Reduction, corporate social responsibility, and principles of the UN Global Compact.

Advancing and promoting UN Global Compact principles among our collaborators and stakeholders focusing sustainability and in implementing the SDGs through education.