Youth training workshop on Robotics

STEM Workshop at Smart Education

STEM Workshop at Dexxys Cameroon

STEM Workshop at CFPE Douala

OVERVIEW	
Flying Labs	Cameroon Flying Labs
Location	Douala, Cameroon
Date	1) STEAM workshop at CFPE Douala (16-20 November 2020) 2) STEAM workshop at Smart Education(1-3 December 2020) 3) STEAM workshops at Smart Education (23-25 October 2020)

Length (number of days)	First workshop - 5 days Second workshop - 3 days Third workshop - 3 days
Sector program (optional)	YouthRobotics
Format	In-Person
Co-organizer if applicable	Robotsave, TME Education, Twinscience, Smart Education
SDGs	GOAL 4: Quality Education GOAL 5: Gender Equality GOAL 17: Partnerships to achieve the Goal

SCOPE & OUTCOMES	
Type of training	1. Youth/STEM training 2. Train the trainer
Goal of the training	1. Train and empower youth on STEAM EDUCATION and the workforce of the future
Expected outcome for participants	The participants were expected to learn how to build, program and use a robot truck, fostering their creativity and developing their problem-solving skills.
Confirmed outcome after training	At the end of our workshops on STEAM education, the children: 1. Learned how to mount robots 2. Improved their knowledge on how motor works 3. Fostered their creativity and problem solving skills through coding and programing exercises 4. Learned how to stay focused for a longer period of time.
Eventual next steps	Additional upcoming training on how to program and pilot mini drones

PARTICIPANTS	
Profiles and number of participants	1. Staff from Organizations: non-profit (1) 2. Professionals: teachers (3) 3. Members of other Flying Labs: 0 4. Students from vocational school (30) 5. Primary school children (to total 20+40+3)
Name of participants' organizations	University: CFPE DOUALA School: Ecole primaire Etoile Douala-Cameroon
Gender ratio	20% F 80% M
Who paid for the training?	Free training, sponsored by Robotsave, TME Education, Twinscience
Scholarships offered?	STEAM kit offered

CONTENT	
Training components	Day 1 - Introduction ● Introductory presentation on STEAM education ● Showing youth the kits to peak their interests - showed them inspiring videos (some from TwinScience and some from Cameroon FL) ● What they wanted to do in life when they grow up and present the different kits (with project examples). Day 2 - 2 hours ● Start with presenting the kit with all the components inside - with uses ● First project - Building the circuits (Robot Art Kit) Day 3 ● First painting experiment/ project ○ Youth created painting with the rotating device ○ Presentation - groups of two

	Day 4 Introduction to the curiosity kit ● Follow the guide to build a robot car ○ Build and program it to do maneuvers (specific path) ○ Used phone to program and control ○ Presentation - give output use case ○ Group work - 3 Day 5 Presentation of the car, painting and all experiments and projects. Showed and presented on the use cases as well.
Training resources used	● Robot youth robotic kits ● Computers ● Phone ● Projector ● Twinscience Steam kit, TME Education stem kit, Robotsave IOT kit
Approaches and methods used	● We tried to understand what they are passionate about first, then showed them a few inspiring videos, had a discussion around how technology will impact the world of tomorrow, and also showed the children how easy it is to master these technologies and use it in order to solve the problems that we face in our community. ● We did activities around mounting robots, programming and coding in small groups, respecting the sanitation rules. The participants were also able to test their codes and worked on improving it.