

Bowen’s ChANgeMakers and CFF (ALP/LLP)

Programme:	Bowen’s Changemakers and CFF	Level:	Sec 1/2
Theme / Challenge Statement:	Students are to identify gaps and solve real-life concerns that the people at the VWOs may face	(Program is still ongoing, currently 3 classes of the secondary 2 students are undergoing CFF program and their ChANgeMakers program will be starting in Term 2.)	

Summary

Bowen’s ChANgeMakers programme envisions all Bowenians as creative thinkers and future innovators who are able to use a spirit of enterprise to do good for others. Through this, Bowenians learn what it means to be a 21st century leader: empathetic, socially responsible and inventive individuals who will view problems as opportunities to engineer change. ChANgeMakers is an integration of Bowen’s Applied Learning and Lifelong Learning Programmes.

In Secondary 1 and 2, students undergo code for fun program to learn basic coding and introduction to micro:bits. During the code for fun program, students were asked to brain storm and solve a possible challenged faced by silver generations.

In secondary 2, programme broadens Bowenians’ perspective beyond the school. Students undergo a special 5-week programme which blends the twin processes of service learning and design thinking. Students get the chance to wear the hats of both community youth leader and social entrepreneur as they experience the Singapore Spirt, find joy in learning and Dare to Try. Bowenians serve weekly at partner VWOs – MINDS, AWWA (School or Elderly) and Bright Vision Hospital. These significant and sustained interactions between Bowenians and those they intend to serve, are thoughtfully curated such that Bowenians develop empathy, compassion, inclusivity and respect for those they serve over the course of their interaction. After each session of service, teachers facilitate student reflections so that values and life lessons can be crystallised and learnt effectively. When these values are internalised, the likelihood of nurturing a spirit of lifelong service is increased. Concurrently, they also undergo design thinking workshops which help them think deeper about their observations of the community they interacted with at the VWOs. Students are empowered to identify gaps and solve real-life concerns that the people at the VWOs may face. Students then are encouraged to use what they learn in CFF to build a prototype that aim to meet the needs of their respective beneficiaries. These prototypes are eventually pitched to a panel comprising teachers and staff from the respective VWOs.

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Prior Knowledge:	Students should already know: 1. The design thinking process. 2. 3.
Learning Objectives:	By the end of the lesson, students should be able to: 1. Empathise on needs of beneficiaries 2. Use design thinking process for problem solving 3. Use micro:bits as one of the tool to build a working prototype

Lesson Plan

Time	Teacher Activities	Purpose	Resources Needed
Introduction/Pre-activity			
CFF Program in Sec 1 or 2 (20 hours)	Students learn about micro:bits and programming and they also had the opportunity to solve a potential challenge faced by silver generation	To allow students to learn basic programming using micro:bits to explore its functionalities.	CFF program (intermediate and advance)
Lesson development/Main activities			
Session 1 (1.5 hour)	Visits to BVH, MINDs and AWWA. LLP session 1 - First interaction	To create opportunities for students to interact with beneficiaries from BVH, MINDs and AWWA.	
Session 2 (1.5 hour)	The Design Thinking Process ALP session 1 – “Empathy” and “Define”.	To help students to have a deeper understanding of empathy towards their beneficiaries.	ALP Lesson package on Design Thinking
Session 3 (1.5 hour)	Visits to BVH, MINDs and AWWA. LLP session 2 – Re-visit beneficiaries.	To allow students to interact with beneficiaries with an intention to improve a certain aspect of their lives.	
Session 4 (1.5 hour)	The Design Thinking Process ALP session 2 – “Define” and “Ideate”.	Students to define a meaningful need and generate ideas to help the beneficiaries.	ALP Lesson package on Design Thinking
Session 5 (1.5 hour)	Visits to BVH, MINDs and AWWA. LLP session 3 – Service to the beneficiaries.	Interaction with the beneficiaries and helping to facilitate learning a skill. (games, sports etc.)	
Session 6 (1.5 hour)	The Design Thinking Process ALP session 3 – “Prototyping”.	Realising the idea in the form of a simple prototype (Students can choose to use the skills they learnt from CFF to make their prototype).	1. Materials for prototyping. 2. Microbit Kits 3. Laptops

Lesson Plan

		First Iteration and suggested improvement by fellow classmates.	
Session 7 (1.5 hour)	Visits to BVH, MINDs and AWWA. LLP session 4 – Service to the beneficiaries.	Testing of prototype with beneficiaries.	
Session 8 (1.5 hour)	The Design Thinking Process ALP session 4 – “Prototyping”.	2 nd – 3 rd iteration of testing to further improve the prototype.	1. Materials for prototyping. 2. Microbit Kits 3. Laptops
Closure and consolidation/Post-activity			
Session 9 (1.5 hour)	Visits to BVH, MINDs and AWWA. LLP session 5 – Service to the beneficiaries.	Students’ final farewell and conclusion to the visit.	
Session 10 (1.5 hour)	The Design Thinking Process ALP session 5 – First presentation to internal judging panel	Helps to sharpen students’ presentation.	Prototypes and presentation notes
Session 11 (2 hours)	2 nd presentation to external judges from AWWA, MINDs and BVH representatives.	The better projects will be presented to the invited guests.	Prototypes and presentation notes

List of Projects (5 – 10 projects if possible) created by Students

Project 1	On going and projects have not been completed.		
Project 2			

Please send this template, together with any additional resources, e.g. Powerpoint slides, worksheets and .hex file, to: digital_maker@imda.gov.sg.

Contributed by:

Name of School: Bowen Secondary School

Name of Teacher (Optional):

Date: 9/2/2018

Lesson Plan