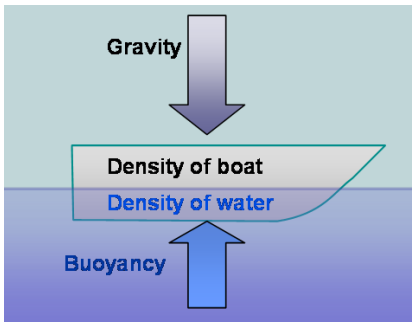
B20
Hands-on Workshops –
SDG 7 Affordable & Clean Energy

Workshop title:	Elastic band paddle boat
Workshop owner: (Name of School/ Institution/University/Organization)	Lee Kong Chian Faculty of Engineering & Science (Department of Mechanical & Material Engineering)
Description of workshop: (objective, content, etc)	Working as engineering teams, students design and create an elastic band paddle boat using ice cream sticks, ping pong balls, glu and rubberband as their construction materials. Their goal is to build the strongest & fastest paddle boat with a truss pattern of their own design, while meeting the design criteria and constraints. They experiment with different geometric shapes and determine how shapes affect the stability & speed of the paddle boat. They develop a design on paper, build their paddle boat, present and test their paddle boat to the audience, evaluate their results and those of their teammates, and complete reflection sheets. Let competition begin! *Participant may bring home the constructed paddle boat. Objectives 1) Learn about engineering design, buoyancy and potential energy. 2) Learn how engineering can help solve society's challenges. 3) Learn about teamwork and problem solving.
Age group:	Primary school (10 years old or above) Secondary school (13 - 18 years old)
Group size:	4 to 8 person x 6 group
Number of session per day: **Duration per session** (eg. 30 minutes)**:** **Time** (eg. 9.00am – 9.30am)**:**	9 sessions per day 30 minutes per session 9.00 am – 9.30 am 10.00 am – 10.30 am 11.00 am – 11.30 am 12.00 pm – 12.30 pm 1.00 pm – 1.30 pm 2.00 pm – 2.30 pm 3.00 pm – 3.30 pm 4.00 pm – 4.30 pm 5.00 pm – 5.30 pm


Gravity
Density of boat
Density of water
Buoyancy