ARAB UNITY SCHOOL

CURRICULUM OVERVIEW

YEAR 10

2019 – 2020

A guide for Parents and Students

SUBJECT: IGCSE D & T Year: 10

Syllabus aims

The Cambridge IGCSE Design and Technology syllabus aims to:

- develop creative thinking in areas relevant to design and technology
- apply problem solving skills to practical and technological problems
- develop the communication skills central to design, making and evaluation
- apply knowledge and understanding to the design and making of products, taking into consideration sustainability and the wider impact on society
- encourage candidates to apply learning to areas of personal interest
- develop a range of transferable skills and the attributes of the Cambridge learner
- develop the ability to make aesthetic, economic, moral and technical value judgements.

Term 1	1. Mechanisms Mechanisms,load effort fulcrum Class 1,class 2 and class 3 levers linkages,pulley,MA of pulleys internal assesmnt 1 levers and pulleys **BYOD LINK** http://www.technologystudent.com/forcmom/lever1.htm Mechanisms**,load effort fulcrum** Class 1,class 2 and class **3 levers** linkages**,pulley,MA of pulleys** internal **assesmnt 1 levers and pulleys** Efficiency,calculation,Types of motion CAMS **crank slider mechanism,screw jack wheel and axle,gears,velocity ratio** BYOD LINK http://www.technologystudent.com/cams/cam1.htm 2.Gears BYOD LINK http://www.technologystudent.com/gears1/gears1.htm Types of gears, rachet and pawl, rack and pinion belt drives, sprocket and chains, tension in belt drives pneumatic and hydraulic	**Quiz on mechanisms (self-managers/Effective organizers/team workers)** **Student teach on types of gears with examples (Reflective learning)**	Internal assessment 1 (levers and pulleys) Sept 25 Curricular test on mechanisms(Oct 20-24)

	systems		Winter assessment- Nov17-21(mechanisms all portions)
			Winter assessment- Nov17-21(mechanisms all portions)
		Winter break	
Term 2	3.Electronics Basic Electronics, current, voltage, potential difference BYOD LINK http://www.technologystudent.com/elec1/compn1.htm switches, capacitors power circuit questions, soldering, resistance, switches, capacitors 4. Basics of structures, members of structures	**Independent projects on mechanisms (creative thinking, self-organising and enquiring)** **Design competition March 25(creative thinking, self-organising)**	Feb(9-13) curricular tests based on electronics and structures Feb 23 internal assessment electronics and structures

			Spring Exam-March1-12)
Term 3	5. Basic Drawing techniques product design drawing	**Spring break** **Independent research project (March 26 to April 12)(Enquirers and reflective learning)** **working Project in electronics(Creative thinking and self-managing)**	Internal assessment – May 7 (Product Design)
			Final end of year exam - June (All units)