UNITED ARAB EMIRATES
MINISTRY OF EDUCATION

الإمارات العربية المتحدة
وزارة التربية والتعليم

Design and Technology

Grades 1-8

Term 1 Practical Summative Assessment Specifications

2019 / 2020 Academic Year

Academic Year 2019/2020: Term 1 Practical Summative Assessment Specifications

Grade 1			
Marks	**Time**	**Task Description**	**Domain/Skills**
20 marks	90 mins	***Teachers should prepare required materials during week 9.*** **UNIT 5 STREAM Project in the Activity Book:** • Students must build a basic car that moves forward when pushed. • Students should consider the shape of the car, its' weight, the shape of the tyres etc. to make sure the car travels as far as possible. • Students may use a balloon, rubber band or any other suitable method to propel the car forward.	**This task will ask students to demonstrate:** • An understanding of the project requirements • Awareness of material properties • Awareness of shapes • Their ability to create a model • An understanding of how to measure distance • An understanding of how to test a model • Knowledge of how to improve a model.

Grade 2			
Marks	**Time**	**Task Description**	**Domain/Skills**
20 marks	90 mins	***Teachers should prepare required materials during week 9.*** **UNIT 5 STREAM Project in the Activity Book:** • Students must build a basic car that moves forward when pushed. • Students should consider the shape of the car, its' weight, the shape of the tyres etc. to make sure the car travels as far as possible. • Students may use a balloon, rubber band or any other suitable method to propel the car forward.	**This task will ask students to demonstrate:** • An understanding of the project requirements. • Awareness of material properties. • Awareness of shapes. • Their ability to create a model. • An understanding of how to measure distance. • An understanding of how to test a model. • Knowledge of how to improve a model.

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Grade 3			
Marks	**Time**	**Task Description**	**Domain/Skills**
50 marks	90 mins	**Task based on Activity 5 in the Activity Book** **Theoretical & Planning (20 marks):** • Students should choose/specify a functional item to design. • Students will plan the features of their design. • Students will answer questions about the 3D printing process. • Students will sketch 3 different ideas. **Practical & Evaluation (30 marks):** • Students will create their design using 3D modelling software. • Students will evaluate their design.	**This task will ask students to demonstrate:** • Awareness of the design process. • Knowledge of different product features. • Awareness of 3D printing and size restrictions. • Knowledge of 3D modelling software. • Awareness of how to evaluate a design.

Grade 4				
Marks	**Time**	**Unit**	**Task Description**	**Domain/Skills**
50 marks	90 mins	**3&4**	**Practical (30 marks):** Students will use block-based programming to create an animation to include at least 2 objects and a backdrop. **Theoretical (20 marks):** Students will answer 5 fill in the blank and 5 matching about variables, conditional statements, animation, message and sensing blocks. Students will read a given code and answer 5 true/false questions related to it.	This task will ask students to demonstrate: • Ability to use and understand **'Loops.'** • Ability to use and understand **'sensing blocks'.** • Ability to use and understand **sounds.** • Ability to use and understand **'motion blocks'.** • Ability to use and understand **'message blocks'.** • Ability to use and understand **'conditional statements.'** • Ability to understand **'variables'.**

Academic Year 2019/2020: Term 1 Practical Summative Assessment Specifications

Grade 5				
Marks	**Time**	**Unit**	**Task Description**	**Domain/Skills**
50 marks	90 mins	**3 & 4**	**Practical (30 marks):** Students will design and make a 3D game with a scoring system. **Theoretical (20 marks):** Students will answer 5 questions identifying characters and actions. Students have to understand and identify programming commands.	This task will ask students to demonstrate: • How to create a new world with a terrain. • Modify and enhance the terrain to make it interesting. • Program a character to move, jump, bump and inspect objects in this terrain. • Allocate points for completing certain actions. • The game should display a message when a certain number of points are scored.

Grade 6				
Marks	**Time**	**Unit**	**Task Description**	**Domain/Skills**
50 marks	90 mins	**4**	**Practical (30 marks):** • Students will create a block-based program to display numbers and letters on the LED grid. • Students will change the colours of the NeoPixels lights. • Add suitable comments to the program **Theoretical (20 marks):** • Students will complete a flowchart for the program • Students will select and write the answers to the question about the block-based program they have used .	This task will ask students to program the microcontroller to: • Run loops. • Counting. • Change colours of NeoPixels lights. Apply flowchart skills.

Academic Year 2019/2020: Term 1 Practical Summative Assessment Specifications

Grade 7				
Marks	**Time**	**Unit**	**Task Description**	**Domain/Skills**
50 marks	90 mins	**3 & 4**	**Practical (30 marks):** Students will complete 2 programming tasks incorporating 'if' and 'for' commands. Students should be able to output a range of numbers. **Theoretical (20 marks):** • Students will complete a flowchart for the program. • Students will identify errors in given code.	This task will ask students to demonstrate: • Use of 'if' and 'for'. • Output a range of numbers. • Flowchart skills. • Identifying errors in code.

Grade 8 & Grade 8 ASP				
Marks	**Time**	**Units**	**Task Description**	**Domain/Skills**
50 marks	135 mins	**Unit 1** (pages 34-53 only) & **Unit 2**	**Practical – 90 mins (30 marks):** Students will design a functional product. They will draw isometric and orthographic views. Then, they will use a 3D modelling tool to create their design. **Theoretical – 45 mins (20 marks):** • Students will answer 10 multiple choice questions (MCQs) about a technical drawing. • Students will evaluate a design based on SWOT analysis.	This task will ask students to demonstrate: • Ability to sketch isometric view. • Ability to Sketch orthographic projections. • Use 3D modelling tool to create design. • Entrepreneurship. • Ability to extract information and answer question about a technical drawing. • Ability to evaluate a design based on SWOT analysis.