C3

Year 8

Syllabus

(2019)

Version 2.0 (Final)

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Contents

Attainment Levels

	Level 3	Level 2	Level 1
1	I can break down a real-world object in parts and attributes.	I know that different parts which make up an object have a parent/child relationship.	I know that real-world objects are made of different parts.
2	I can create a hierarchical structure for a given scenario.	I can create a hierarchical structure with parents and children.	I can point out a hierarchical structure.
3	I can show understanding of the impact of social networking on everyday life.	I can mention different social networks and give examples of them.	I know what is a social network.
4	I can create a game using multiple objects, triggers and a scoring mechanism.	I can create a game using multiple objects with triggers with limited supervision.	I can work in a group with supervision to create a simple game.
5	I know what IoT is, where it is used and what are the advantages of IoT for the world.	I know what IoT means and where it is used.	I know what IoT means.
6	I know different job roles in the IT industry and what their respective role entails.	I can pinpoint different job roles which are required for the IT industry.	I know that the IT industry requires a lot of different people.
7	I can create an animation using multiple objects and backgrounds.	I can create an animation using multiple objects with limited supervision.	I can work in a group with supervision to create a simple animation.

Topics in C3.2

Topic	LO	
Objective World	1	I can determine, classify, describe, differentiate and use objects in the same way as a computer does. I can look at the world in an objective manner.
Computational Thinking	2	I can create a hierarchical structure for a given scenario, for example: "My favourite fictional character".
Social Networking	3	I can show understanding of the impact of social networking on everyday life.
Game Development	4	I can work in a group to plan and create a game that utilises objects, triggers and scoring, by using a visual programming language e.g. Scratch™.
IoT	5	I can describe how IoT (Internet of Things) works and how it will affect my life.
Roles in IT	6	I can identify specific roles in technology and computer related fields e.g. game-creators, sound and video producers, hackers and security specialists, digital entertainers and robotics engineers.
Animation	7	I can create a short animation using freeware online animation tools.

The Objective World

1. I can determine, classify, describe, differentiate and use objects in the same way as a computer does. I can look at the world in an objective manner.

Topics to be covered /Skill Set	Sub-topics
1.1 Define an Object through its components	Define an object in terms of its components using a hierarchical structure design.
1.2 Define the term attribute of an object through observation of everyday objects.	Identify the attributes of an object.
	Identify common attributes to compare similar objects.
	Relate objects using their attributes.

Computational Thinking

2. I can create a hierarchical structure for a given scenario, for example: "My favourite fictional character".

Topics to be covered /Skill Set	Sub-topics
2.1 Define the term Hierarchical Structure	Relate items together into a Hierarchical Structure
2.2 Understand the use of a Hierarchical Structure	List examples of hierarchical Structures for different scenario.

Social Networking

3. I can identify a social network and list positive and negative aspects.

Topics to be covered /Skill Set	Sub-topics
3.1 Identify social networking activities.	*Refer to social networking video in video list.*
3.2 List positive and negative implications of social media.	*Refer to social networking video in video list.*

Game Development

4. I can work in a group to plan and create a game that utilises objects, triggers and scoring, by using a visual programming language e.g. Scratch™

Coding with a Visual Programming Language (Scratch)

Topics to be covered /Skill Set	Sub-topics
4.1 Through simple Scratch projects, I can identify basic computational concepts.	Read a simple program and identify the following constructs: • sequence • iteration • conditionals
4.2 I can identify the main components of Scratch™ studio	Identify toolbars, programming area, output area, command blocks area, sprites and backdrop area.
4.3 I can animate a sprite by making it move and play a sound.	Insert a sprite from a library of clipart. Control the animation of a sprite using a sequence of commands, including that of playing a sound.
4.4 I can control a sprite using the keyboard	Control a sprite using a set of keys from the keyboard using conditional and iteration constructs.
4.5 I can program a sprite to trigger an event.	When a sprite senses a colour or touches other sprites, it triggers an event.
4.6 I can use a variable to store values in it.	Data processing using variables within a program. Variables can hold player names, score, coordinates, etc.
4.7 I can use variables to manipulate data	Perform simple arithmetic operations on variables using: $+$, $-$, $*$, $/$

Internet of Things

5. I can describe what is IoT

Topics to be covered /Skill Set	Sub-topics
5.1 Understand what IoT means.	*Refer to IoT video in video list.*
5.2 Understand how IoT effects our lives.	*Refer to IoT video in video list.*

Roles in IT

6. I can identify roles in the IT industry

Topics to be covered /Skill Set	Sub-topics
6.1 List different roles in IT	*Refer to Roles in IT video in video list.*

Animation

7. I can create a short animation using free animation tools e.g. Pivot Sickfigure™, Stykz™, Anim8or™, Synfig™, Animation-ish™, Flip Boom Classic™, Storyboard™, ALice™, Blender™, Aniboom™.

Topics to be covered /Skill Set	Sub-topics
7.1 Defining an animation	Differentiate between a still image and an animation (set of still images). Define: frames per second; stop-animation; keyframe; layer; timeline
7.2 Outlining a theme/story	
7.3 Designing the storyboard	Using pencil and paper to represent various stages of the animation.
7.4 Create clipart from simple shapes	Draw the main character using basic coloured shapes.
7.5 Modify shape size and colour	
7.6 Group shapes	
7.7 Create simple movement for the created clipart.	This can be done by using motion paths and more complex movement using **keyframing** in the animation software.
7.8 Combining an animation.	Set the background and animate the main character and other objects/cliparts.