**Gulf English School**

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| TOPIC: Practical: Data Structures:  Theory: Data Representation – Data Storage | | | |
| Theme: Practical Data Structures  Theory: Data Representation | | Level: Year 10  Computer Science Term 3 | |
| Objectives:Pratical To be able to create and use Data Structues in programming using One-Dimensional Liosts/Arrays.  Theory: To be able to understand hoe data is captured and stored on a computer.. | | | |
| Focussing Questions | Key Words | | |
| **Practical**   1. **What are Data structures;** 2. **How are Data Structures used in Programming?** 3. **How can the use of one-dimensional arrays help with storing related/common datatypes**   **Theory**   * What are Analog and digital. * What is Multimedia and how can Multimedia files be stored on a computer. * How does a operating system stored MultiMedia files in a digital format? * What are Musical Instrument Digital Interface (MIDI) files, JPEG files, MP3 and MP4 files * What is data compression (lossless and lossy) as applied to music/video, photos and text files   Resources:   * PowerPoint * Past Papers * Google Gloo (QR Codes) * Worksheets   Revision of work done previous year inpreparation for exam | **Practical**  Data Structures  Constructs,  Indexing Iteration  FOR Loops  Variables  Count  Max  Min  Slicing  **Theory**  ASCII  Text  Compression  RAR  PDF  Images  Pixel  Colour Depth  Resolution  Bitrate  Sound  Sampling  Quantisation | | Explaining Words  It is more efficient because….  Explain the difference….  Sampling Rate is ……  Compression is the process of……..  Lossy is when …. by compressing ……..  Midi Files are formats ….that….. |