 Year 7 iSTEM Cessnock High School – Scope and Sequence

All outcomes referred to in this unit come from the Stage 4 iSTEM school based elective developed by the Cessnock Academy of STEM Excellence © Cessnock Academy of STEM Excellence, NSW Department of Education 2020
**Note:** To satisfy the requirements of this course, students must undertake a range of practical experiences that occupy the majority of course time.

**Year 7 iSTEM 2020 (4 periods per cycle)**

| Term 1 | Weeks 1-2 | Weeks 3 - 8 | Weeks 9 - 11 |
| --- | --- | --- | --- |
| **Unit** | Why STEM? | Engineering Principles - Exploring the E in STEM | Coding & Robotics -Tinkering with the T in STEM |
| **Outcomes** | 1.2, 3.2 |  1.1, 1.2, 1.3, 2.1, 2.3, 2.4, 3.2, 4.2, 4.3 | 1.2, 1.3, 2.1, 2.2, 2.4, 3.3, 4.3  |
| **Assessment** |  |  | **Assignment:** Jiggle or Roll Design Prototype & Isometric Drawing Challenges Portfolio  |

| Term 2 | Weeks 1 - 8 | Weeks 9 - 10 |
| --- | --- | --- |
| **Unit** | Coding & Robotics - Tinkering with the T in STEM | Minor Task - Show Time Shadow Puppets |
| **Outcomes** |  | 1.1, 1.2, 2.1, 2.4, 3.3, 4.1, 4.2 |
| **Assessment** |  | Assignment – Coding Log |

| Term 3 | Weeks 1 - 10 |
| --- | --- |
| **Unit** | Minor Task - Show Time Shadow Puppets* Light, shadow, simulating movement, biology, joints (Science)
* Construction techniques & modification of designs (TAS)
* Measurement, Scale, Proportion & Angles (Math)
* Storytelling & puppet performance (English)
* STEM Skills in Entertainment (HISE & Careers)
 |
| **Outcomes** | 1.1, 1.2, 2.1, 2.4, 3.3, 4.1, 4.2 |
| **Assessment** | Assignment – Show Time Puppet Performance |

| Term 4 | Weeks 1 - 10 |
| --- | --- |
| **Unit** | CAD - Making Connections with the M in STEM |
| **Outcomes** | 1.1, 1.2, 1.3, 2.1, \*2.2, 2.3, 2.4, 2.3, 2.4, 3.1, 3.2, 3.3, 4.1, 4.2, 4.3 (\*indicates optional extension) |
| **Assessment** | Assignment – Modified 3D printed products |