TY Scratch Computer Programming 2014/15

1. Title of Module

- TY Computer Programming

2. Duration of Module

- 1 year/33 weeks @ 1 period per week

3. Aims

1. To contribute to the student's preparation for life through encouraging the constructive and creative use of such knowledge and transferable skills as might be applicable to solving problems.

2. To contribute to the students development of qualities of self-reliance, self-confidence, resourcefulness and initiative.

3. To contribute to the students preparation for life by stimulating the students interest and confidence in working with computer programming.

4. To develop in the student such skills of logical reasoning and creativity as are involved in designing and creating computer programs.

5. To develop in the student the abilities to make a critical evaluation of a computer animation or game and to take appropriate action.

4. Objectives

Students will be able to:
- Demonstrate knowledge of computer programming through solving problems using Scratch programming software.

- Show awareness of the possibilities represented by developments in Information Technology and various computer programming languages.

- Produce either an original computer animation or computer game.

- Complete tasks to a standard of excellence.

- Appraise critically their work for quality of design, creativity and function and take any measures necessary to improve the work.

- Recognize the limitations of Scratch software for writing computer programs.

5. Teaching and Learning Strategies

a) Formal input by teacher.
b) Independent learning using video tutorials.
c) Demonstrations of sample programs.
d) Group work and brain storming.

6. Content
The course consists of the following:

- Completion of 4 Scratch Programming exercises.
  - Lip Sync Animation
  - Simple Pong Game
  - Platform or Scrolling Game
  - Original game or animation
- One of the exercises must be an original animation or game.
- Exercises are tailored to the specific ability and interests of the students.
- The exercises are outlined in the 'Exercises' worksheet in the 'TY Scratch Programming Course Info' Excel file.

7. Assessment

- 4 programming exercises weighted at 25% each.
- See 'TY Scratch Programming Course Info' Excel file for details.

8. Resources

- Scratch software.
- Various notes etc available on http://scratch.mit.edu/
- Various video tutorials as described on attached Excel file.

9. Links with other Subjects

- ECDL
- Mathematics

10. Evaluation

- Students will complete an online survey during assessment week.

Designed and delivered by Declan Askin, St. Gerald's College, Castlebar 2014/15