

Information for mentors:

Course structure

To cater for different prior experience, we will offer flexibility in the activities the participants do. All participants will start together, with an introduction to the Pytch platform and a starter activity. After Session 1, participants can self-select between two streams (beginner or advanced) depending on their comfort level and ambition, and flexibility within each stream will allow all participants to achieve meaningful outputs. Breakout rooms will allow focused mentoring.

Session 1 Monday (12:00-14:00)

12:00-12:10 – Welcome and overview of the week

A mentor summarises what we will be doing:

- Learning about Python coding by making a project or two.
- Participants will use follow-along “tutorials” to get some ideas.
- As they work, participants should be thinking about customising what they make or even making something completely their own.
- On Friday there will be an in-person event in Trinity and participants will present what they have made and give some thoughts on their experiences. There will be some time allocated in the week to prepare this.

12:10-12:30 – Introduction to the Pytch platform and its IDE

All participants together. A mentor explains:

- Overview of Scratch IDE and its “Sprites and scripts” model; simple example.
- Rationale for creating the Pytch IDE and resources.
- How the Scratch model transfers to Pytch; same programming model (to extent possible); similar IDE layout; but code now Python not blocks; how same example looks.

12:30-13:00 – Guided introduction to the integrated follow-along tutorials

All participants together.

- A mentor guides participants through *Hello World* tutorial. Participants follow along on their own computers. ([Hello World tutorial](#))
- Participants given time to work on challenges at end of the tutorial. Breakout rooms available if participants need help, although we hope that these challenges will be done without too much difficulty.

13:00-13:55 – Self-directed work through next tutorial

- A mentor directs participants to the *Shoot the Fruit* tutorial, opening it to show the starting chapter, so participants know they have opened the right page. ([Shoot the Fruit tutorial](#))
- Participants divide into breakout rooms to work on this themselves but with peer support available. Mentors circulate to provide help where needed.
- Aim is to get this finished, but there are a few reasonable early stopping points if needed and at the other end, challenges for people who work more quickly.

13:55-14:00 – Wrap-up

- Brief recap of the session.
- Opportunity for questions.
- Outline of Tuesday's activities

Session 2 Tuesday (12:00-14:00)

After the first session, mentors and participants will have formed an idea of whether each participant would benefit more from the beginner or advanced track. Within each, there is flexibility, so all participants will create meaningful work output.

12:00-12:10 – Welcome and introduction to today's activities

12:10-13:55 – Tutorials and breakout activities

Beginner

Self-directed work through larger tutorial.

- A mentor demonstrates the finished *Catch the Apple* project. ([Catch the Apple tutorial](#))
- The mentor leads participants through first chapter or two, with participants following along on their own computer.

- Participants split into breakout rooms to continue through tutorial, working in a self-directed and peer-supported fashion. Mentors circulate providing help where needed.
- Aim is that participants finish the tutorial, although there are some early stopping points if needed and also challenges at the end.

Advanced

As “beginner”, but using the more advanced *Gardening* tutorial.

(In progress; no link yet)

13:55-14:00 – Wrap-up

- Questions and recap
- Outline of Wednesday's activities

Session 3 Wednesday (12:00-14:00)

12:00-12:10 – Introduction to today's goals

Participants begin thinking about how to personalise their projects.

12:10-13:55 – Tutorial work and project development

Beginner

Participants start thinking of how to make a project “their own” while working through reasonably advanced tutorial.

- A mentor demonstrates the finished *Blue Invaders* project ([Blue Invaders tutorial](#)), pointing out ways the game could be adapted to make more individual. Mentor shows how to use graphics found on web, including AI-powered background removal.
- The mentor leads participants through first chapter or two of tutorial; participants follow along.
- Participants work in breakout rooms through tutorial. Mentors circulate and offer help where needed, each time they visit a room asking participants what ideas they have for enhancements they would like to make.
- There are early stopping points and challenges.

Advanced

Continue with *Gardening* (including its additional challenges).

Alternatively:

- Use a less-scaffolded worksheet for a separate *Tamagotchi*-like game. (In progress)
- If there are particularly advanced participants, with good prior experience, they can work on the design and implementation of a completely new game, animation, etc., of their own; but time is tight so mentors will need to encourage a realistically achievable project if a participant wants to go this route.

All participants

Participants work in breakout rooms. Mentors continue circulating and supporting participants where needed. Mentors encourage participants who have finished the tutorial or worksheet to work on additional challenges.

13:55-14:00 – Wrap-up

- Participants briefly share progress.
- Preview of Thursday's activities.

Session 4 Thursday (12:00-14:00)

12:00-13:00 – Coding session

Note that the coding work is only the first half of this session, so participants can work on their presentations in the second half.

First half of session: Beginner

Participants implement their own enhancement to *Blue Invaders*, or work on a different, more self-directed design.

- A mentor explains the goals of the session.
- A mentor presents the “one location, two themes, three game mechanics” brainstorming prompt for those who want to make their own design, stressing that there is only an hour, so design will need to be quite simple.
- Participants separate into breakout rooms. Participants can work alone or in a small group, with the group having a breakout room to itself.
- Mentors circulate, offering help and guidance.

- Stronger mentor support likely to be needed, since participants' ideas might need concepts and help beyond what is explicitly covered in what they have done so far.

First half of session: Advanced

Participants continue their work from Session 3, either working through the design and implementation challenges in the *Gardening* tutorial or *Tamagotchi* worksheet, or working on the project they have come up with themselves.

13:00-13:55 – Preparing for Friday's showcase

Everyone gathered back into main room. Mentor outlines the showcase event timetable and slot within it for participants to present their work. (Total allocation to the project presentations is an hour, so time per presentation will depend on numbers, whether participants have worked solo or in small groups.) Participants go back into breakout rooms to write their presentation. Prompts on what to include:

- What did you make? Show us!
- How did you come up with your design?
- What part of it are you most proud of?
- What was difficult?
- What might you do extra or differently with more time?
- Feedback for the Pytch team? Any changes we should make to the system?

13:55-14:00 – Final reminders

- Reminder about Friday's event.
- Answer any final questions.
- Ensure everyone knows where and when to meet.

Session 5 Friday - Workshop and showcase in TCD

10:50: Pytch team meet students and teachers at Trinity Main Gate (College Green) and walk over together to the Large Conference Room in the O'Reilly Building

11:00: Welcome and overview of the Pytch workshops

11:15: Project showcase

12:15: Lunch

13:00: Micro:bit workshop



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14:00: Focus groups

14:20: Wrap up and thanks

14:25: The Pytch team will bring participants on a short campus tour

15:00: End of showcase event. The Pytch team accompany visitors back to the Trinity Main Gate