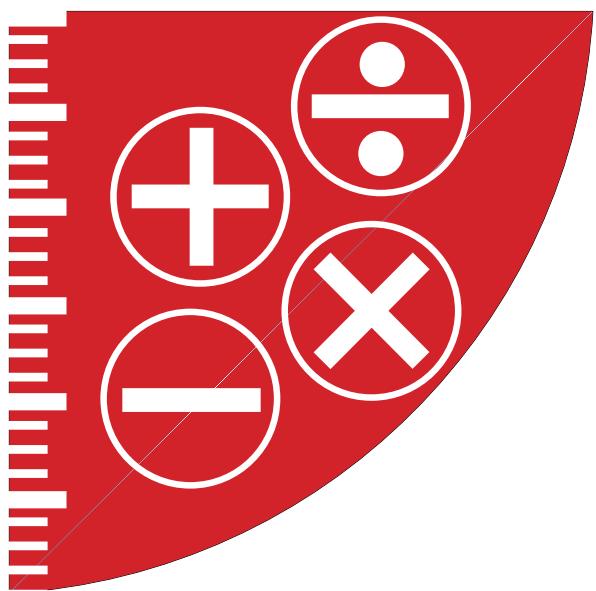
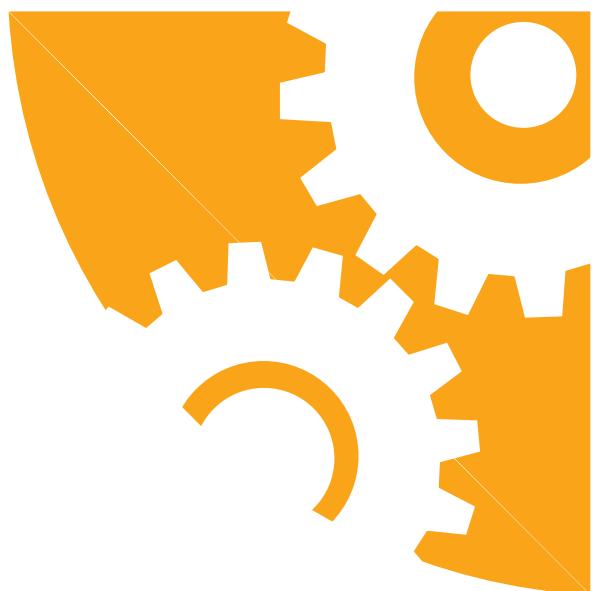
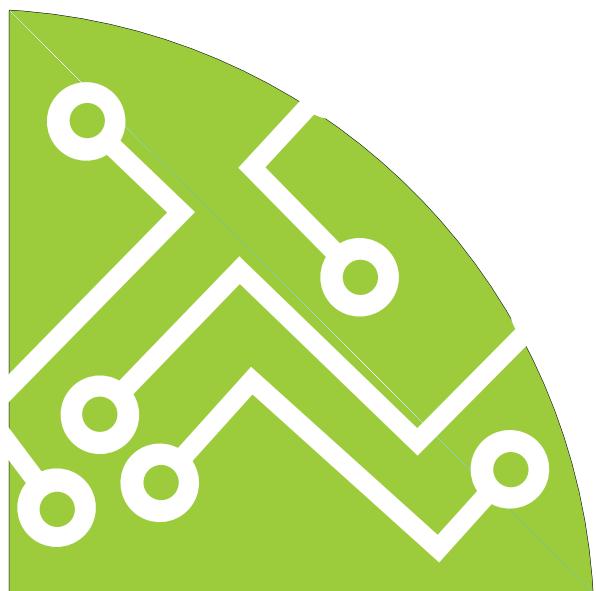
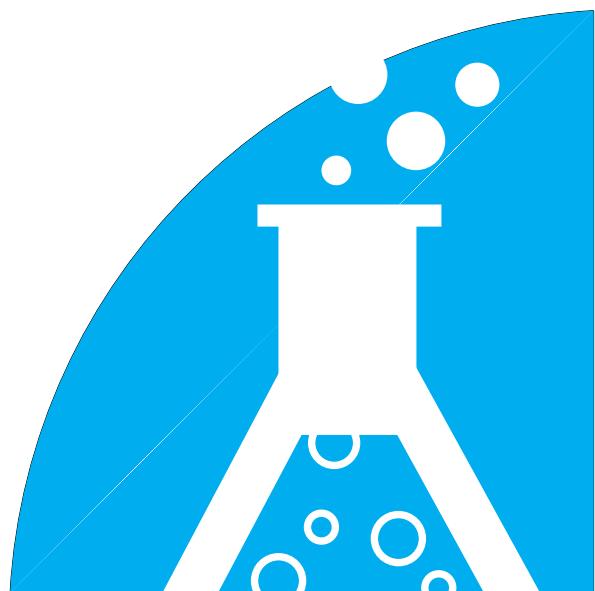
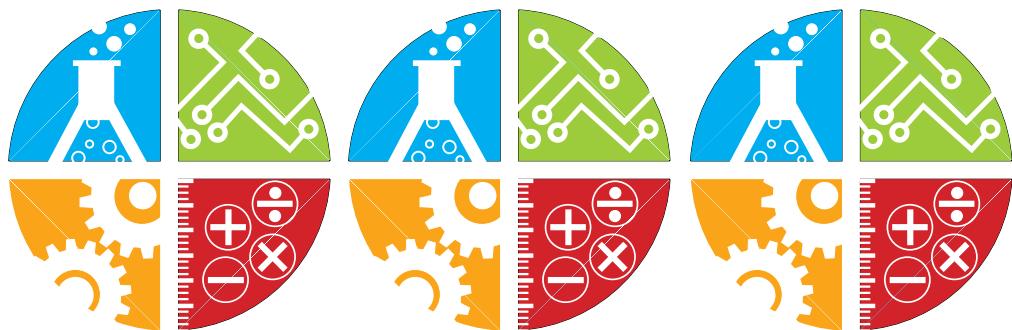




INTRODUCTION TO DIGITAL TECHNOLOGIES



INTRODUCTION TO DIGITAL TECHNOLOGIES



COURSE OVERVIEW

Authority	Professional Teachers Council
Accreditation level	Proficient
Course duration	1.5 hours
Content focus	Digital Technologies
Professional Standards	1.1.2, 1.5.2, 2.1.2, 2.3.2, 2.6.2, 6.3.2, 6.4.2

OBJECTIVE

To provide an overview of the Digital Technologies curriculum for K-6 teachers, identify the rationale and stage descriptors for the curriculum, identify where DT fits into the revised K-6 Science and Technology syllabus, introduce participants to Computational Thinking as a strategy for problem solving, and identify algorithms as a process.

CALL TO ACTION

Building capacity for teaching Digital Technologies within Science and Technology.

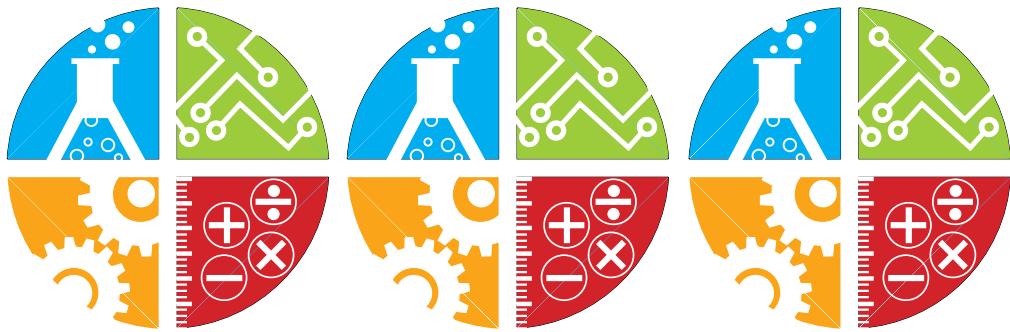
WHAT IS THE DESIRED OUTCOME?

Participants identify the role of the Digital Technologies curriculum within the K-6 Science and Technology syllabus, can identify where and how to use a range of digital technologies, and understand that computational thinking as a problem solving strategy.

COST PER PARTICIPANT

PTCplus members \$110 & Non members \$150

INTRODUCTION TO DIGITAL TECHNOLOGIES



COURSE OUTLINE

INTRODUCTION

Overview of the Digital Technologies syllabus for the Australian Curriculum as background for the development of the revised K-6 Science and Technology syllabus.

DIGITAL TECHNOLOGIES IN THE NSW K-6 SCIENCE AND TECHNOLOGY SYLLABUS

Describe where and how DT outcomes are fulfilled within the revised syllabus.

COMPUTATIONAL THINKING

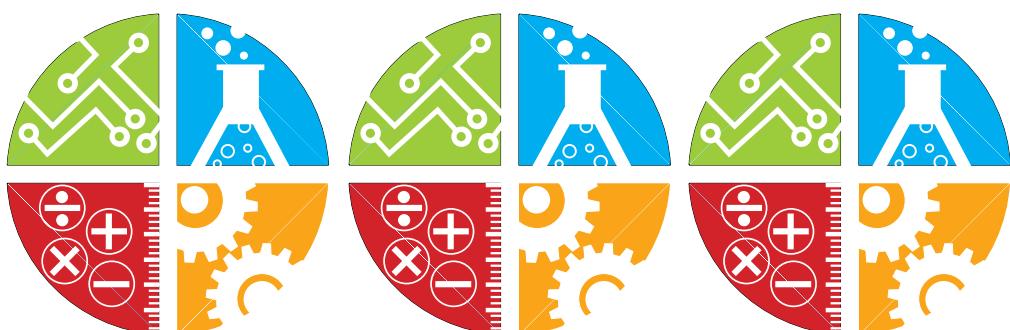
Plan to use Computational Thinking as a problem solving strategy

ALGORITHMS AND FLOWCHARTS

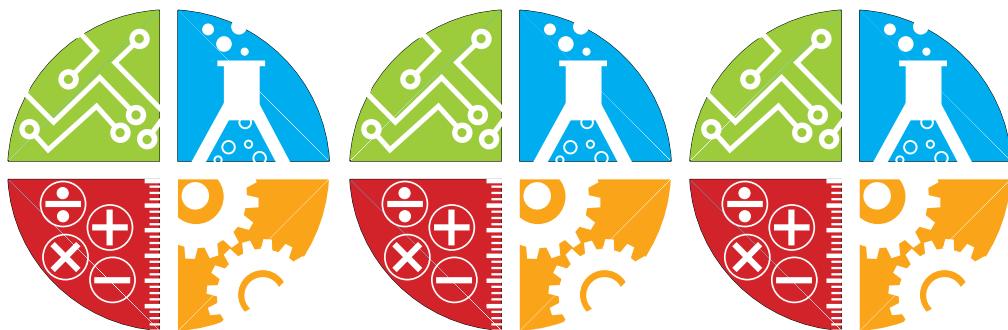
Use algorithms and flowcharts to describe some everyday procedures.

EVALUATION

SWOC analysis and course evaluation.



INTRODUCTION TO DIGITAL TECHNOLOGIES



SESSION DETAILS AND DELIVERY

PRE-COURSE PREPARATION

Participants should be familiar with the current NSW syllabus for K-6 Science and Technology, and should bring a copy of a unit of work that they have taught.

ORGANISATION

Participants should be grouped by learning Stage.

INTRODUCTION

Discuss participant familiarity with using DT in current practice. Identify strengths and weaknesses in DT (especially with respect to scientific devices such as data loggers and probes). Demonstrate the use of a pH probe. Discuss participant understanding of the DT curriculum with respect to the NSW K-6 Science and Technology syllabus.

Identify the Digital Technologies curriculum within the AC syllabus for Technologies. Discuss the structure of the AC DT curriculum, identifying where it is currently taught in Science and Technology as well as in other subjects. Touch briefly on the difference between Digital Technologies and Design Technologies, and their place in the NSW K-6 Science and Technologies syllabus.

DIGITAL TECHNOLOGIES IN THE NSW K-6 SCIENCE AND TECHNOLOGY SYLLABUS

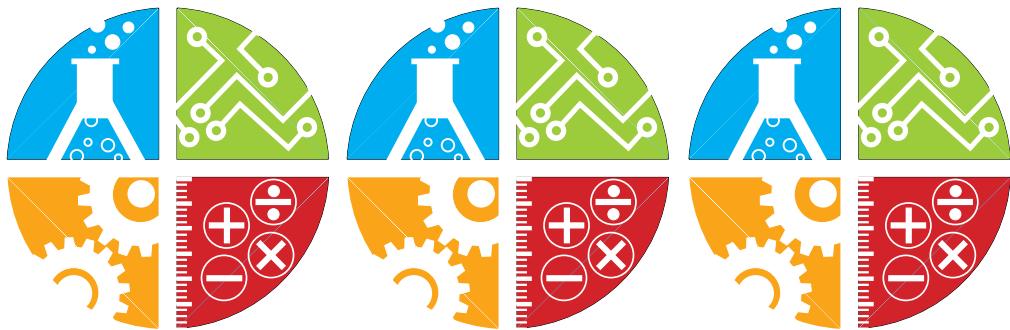
Introduce the revised NSW K-6 Science and Technology syllabus and compare with the current syllabus, highlighting where and how the DT components are specified. Compare the NSW K-6 Science and Technology syllabus (DT component) with the AC Technologies syllabus.

COMPUTATIONAL THINKING

Identify Computational Thinking as a problem solving strategy and compare this with Scientific Thinking, Design Thinking and Critical Thinking as problem-solving strategies.

Ask participants to identify how Computational Thinking could be embedded into their example unit of work by drawing up a comparison chart or table that parallels Computational Thinking with another problem-solving strategy, then share/explain/discuss this.

INTRODUCTION TO DIGITAL TECHNOLOGIES



ALGORITHMS AND FLOWCHARTS

Identify an algorithm as a logical procedure. Compare algorithms with other types of procedures such as recipes, methods, protocols and Standard Operating Procedures.

Ask participants to identify and role-play an everyday task. Then write this as an algorithm. Swap with another participant. Repeat role-play and identify/discuss/explain problematic points.

Identify a flowchart as a visual representation of an algorithm.

Demonstrate a flowchart. Discuss the features and purpose of flowcharts.

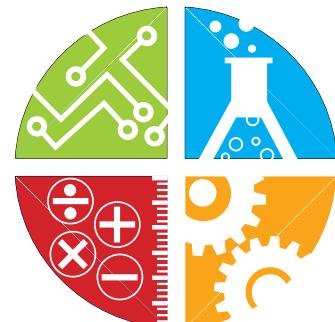
Ask participants to design a flowchart based on a procedure within their example unit of work.

EVALUATION

SWOC analysis and course evaluation.

MATERIALS

- Digital data logger
- pH probe
- Video introduction to AC DT curriculum
- Video – What is an algorithm?
- Powerpoint slide set
- Flowchart stencil template
- Copy of AC Technologies curriculum
- Copy of NSW K–6 Science and Technology syllabus
- Copy of revised NSW K–6 Science and Technology syllabus
- Poster paper/Disposable white board per group
- Projector/SMART board
- Markers per group





A new approach to Professional Learning in schools

The Professional Teachers' Council of NSW (PTC NSW) is proud to present an new and innovative approach to Professional Learning called **PTCplus**; with many schools registering with **PTCplus** to participate in school-based professional learning during 2017.

The **PTCplus** professional learning model provides tailor-made professional learning experiences for schools, designed by teachers, presented by teachers to teachers in schools.

All member associations will be supported by this model as all curriculum delivered PL will be provided via member associations. **PTCplus** will actively promote the work of member associations; the value of teacher membership and the semester calendar of PL events available beyond the school.

Briefly **PTCplus** in partnership with each individual school will:

- establish a school based Professional Learning Centre/community which will host a wide range of NESA accredited courses across all three career stages: Proficient, Highly Accomplished and Lead.
- design and deliver specific curriculum PL experiences, in partnership with PTC NSW member associations, based on each individual school's needs.
- provide all secretariat support required to organise PL experiences.
- support your preferred casual teachers participating in PL events attracting NESA accreditation.
- provide access to a growing panel of professional consultants across a broad range of expertise including: Student Leadership, Governance, Compliance, Mindfulness, Thriving and Surviving in Education, Leadership and Digital Technologies (STEM).

The Professional Teachers' Council of NSW is very excited about the **PTCplus** model of NESA accredited professional learning and feel that the quality, range and suitability of professional learning events, at a sustainable level of fee for service, based in School is an attractive service. PL designed by teachers, presented by teachers to teachers in your school based on your school's needs.

Should you require additional information, or wish to book an information briefing to explore what **PTCplus** has to offer, please contact the PTC NSW office – admin@ptc.nsw.edu.au or 02 9716 0378.



NESA accredited Professional Learning