



# STEM Teaching and Learning Model

## Launch

### What can it look like?

- Share the Learning Intention and Success Criteria – displayed and referred to throughout the lesson.
- Explicit teaching of the skills and strategies as determined by formative assessment and/or cohort needs.
- Codevelop anchor charts are display in the learning space to support learning.
- Exposure to consistent vocabulary.

## Independent / Collaborative Learning

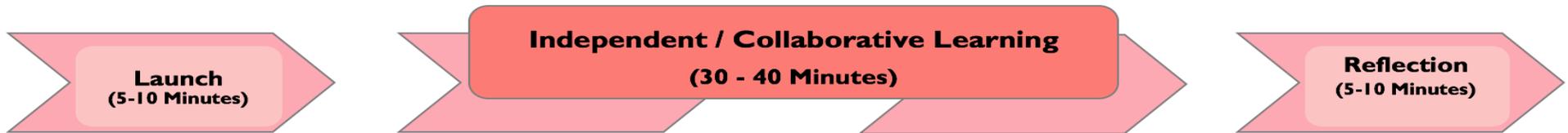
### What can it look like?

- The teacher facilitates and supports the learning process.
- Students independently or in small groups practise or apply the focus of the launch and/or their specific learning goals.
- Learning tasks and goals are differentiated and/or open ended to support learning needs.
- Students utilise a variety of resources within the classroom.
- Students learn the skills and then apply their knowledge to problem solving.

## Reflection

### What can it look like?

- Opportunity to self-assess against the Success Criteria and identify direction for future learning.
- Students articulate what they have learnt and the strategies/processes they used.
- Recognise and celebrate student learning.
- Reflection strategies vary from lesson to lesson e.g. partner, individual, thinking routines, exit pass etc.
- Discuss misconceptions observed during the session.



## Formative Assessment and Feedback

**Examples:** teacher questioning, observation notes during turn and talk tasks, conferencing and goals setting records, anecdotal records, collecting work samples, photographing or filming students, checklists, rubrics, journal entries, exit strategies such as an exit pass, peer and self-assessment tools etc.

## Givens

- Students engage in one STEM lesson each week.
- The CNPS STEM Curriculum includes at least one term of Digital and Design Technology and two terms of Visual Art and Media during the course of the school year.

## Science Science Understanding

Science understanding is evident when a student selects and integrates appropriate Science knowledge to explain and predict phenomena, and applies that knowledge to new situations.

## Science Inquiry Skills

- Questioning and Predicting
- Planning and Conducting
- Recording and Processing
- Analysing and Evaluating
- Communicating

## Technology

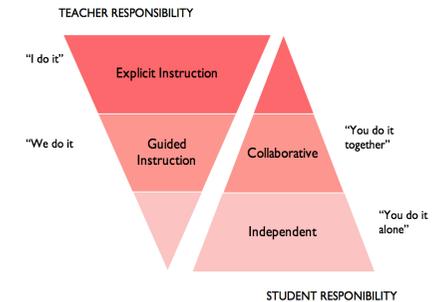
Design and Technologies aims to develop the knowledge, understanding and skills to ensure that students:

- become critical users of technologies, and designers and producers of designed solutions.
- use design and systems thinking to generate innovative and ethical designs and communicate these to a range of audiences.
- create designed solutions for a range of contexts by creatively selecting and safely manipulating a range of materials, systems, components, tools and equipment.
- Learn how to transfer knowledge and skills from design and technologies to new situations.

## Digital Technologies

The Design Technologies aims to ensure that students can:

- design create, manage and evaluate sustainable and innovative digital solutions to meet and redefine current and future needs.
- use computational thinking and the key concepts of abstraction; data collection, representation and interpretation; specification, algorithms and development to create digital solutions.
- confidently use digital systems to efficiently automate the transformation of data into information and to creatively communicate ideas in a range of settings.



At CNPS all staff acknowledge the importance of student voice and agency within their learning. Students are provided with opportunities to contribute to what they learn, how they learn and how they demonstrate their learning.

