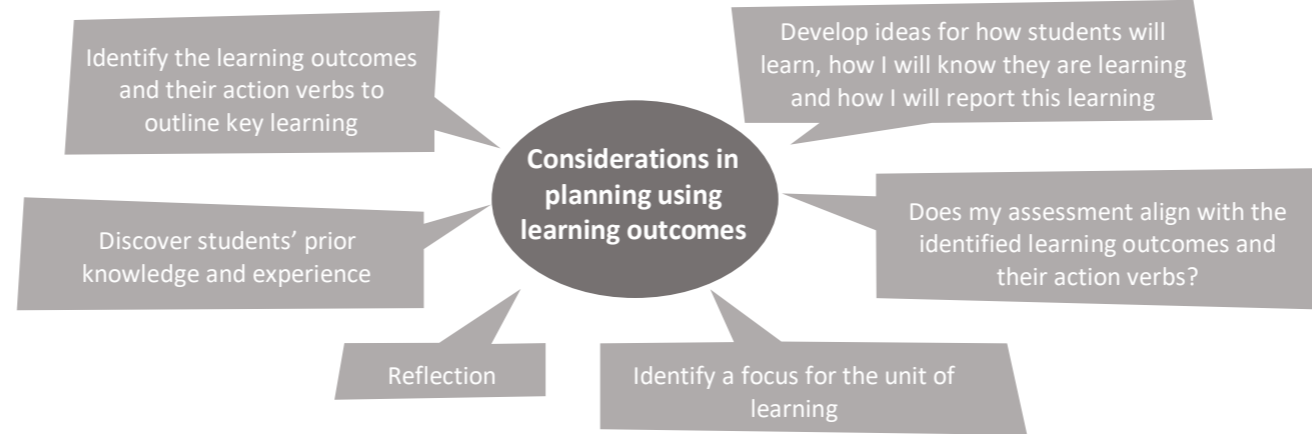
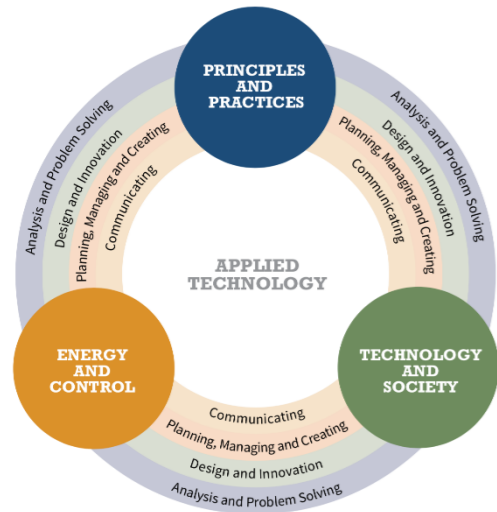


# Applied Technology Planning



**Evaluate:** (data) collect and examine data to make judgements and appraisals; describe how evidence supports or does not support a conclusion in an inquiry or investigation; identify the limitations of data in conclusions; make judgements about the ideas, solutions or methods

**Explain:** give a detailed account including reasons or causes

**Explore:** to think or talk about something in order to find out more about it

**Evaluate:** (ethical judgement) collect and examine evidence to make judgements and appraisals; describe how evidence supports or does not support a judgement; identify the limitations of evidence in conclusions; make judgements about the ideas, solutions or methods

**Identify:** recognise patterns, facts, or details; provide an answer from a number of possibilities; recognise and state briefly a distinguishing fact or feature

**Investigate:** observe, study, or make a detailed and systematic examination, to establish facts and reach new conclusions

**Justify:** give valid reasons or evidence to support an answer or conclusion

**Recognise:** identify facts, characteristics or concepts that are critical (relevant/appropriate) to the understanding of a situation, event, process or phenomenon

**Refine:** make minor changes so as to improve or clarify

**Review:** looking over or through material in order to correct, improve or revise

**Select:** carefully choose as being the best or most suitable based on judgement

**Understand:** have and apply a well-organised body of knowledge

**Analyse:** study or examine something in detail, break down in order to bring out the essential elements or structure; identify parts and relationships, and to interpret information to reach conclusions

**Apply:** select and use information and/or knowledge and understanding to explain a given situation or real circumstances

**Communicate:** use visual gestural, verbal or other signs to share meaning or exchange information; interaction between sender and recipient; both work together to understand

**Consider:** think carefully about something, typically before making a decision

**Create:** process and give form to the topic of what is to be created using selected methods and material and/or to give the material used a new form

**Demonstrate:** prove or make clear by reasoning or evidence, illustrating with examples or practical application

**Design:** planning the features of a solution that solves a perceived user problem

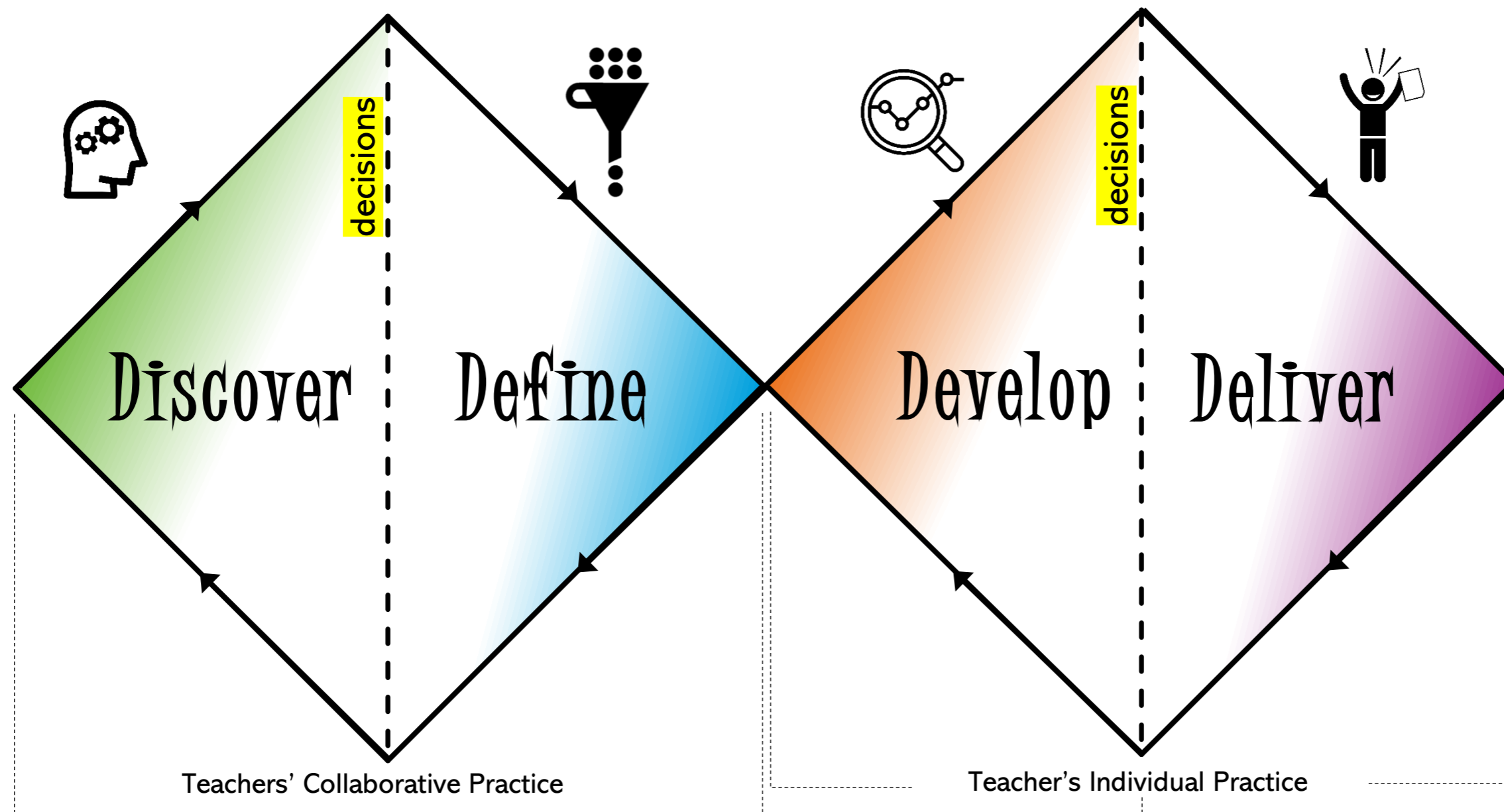
**Develop:** advance a piece of work or an idea from an initial state to a more advanced state

**Discuss:** offer a considered, balanced review that includes a range of arguments, factors or hypotheses; opinions or conclusions are supported by appropriate evidence

**Document:** a piece of written, printed, or electronic matter that provides information or evidence

**Execute:** to carry out fully, to put completely into effect

	Strand 1: Principles and practices	Strand 2: Energy and control	Strand 3: Technology and society
	In this strand, students will learn about and employ the fundamental principles and practices associated with the study of Applied Technology. Students will apply their knowledge of materials and equipment to create solutions that consider the end-user experience.  The study of principles and practices facilitates the application of knowledge of existing and emerging technologies which will help students to decide the best means to creatively solve a real-world problem and realise a solution.	In this strand, students explore sources of energy which, when changed or controlled, enable devices to perform tasks safely and efficiently. Students are encouraged to recognise the need for economic and sustainable use of energy and materials.  Students will create controlled solutions using the skills, knowledge, values and attitudes developed through the study of the other strands.	In this strand, students experience the interaction between technology and society. Students examine the environmental impacts of their design choices and consider user needs related to solutions. Students acquire a basic understanding of, and curiosity about, some of the issues which society faces as a result of technological developments and explore their potential use in society.
	<i>Students should be able to:</i>	<i>Students should be able to:</i>	<i>Students should be able to:</i>
<b>Analysis and problem solving</b>	1.1 <b>develop</b> a design solution drawing on experience and using evidence, reasoning, and decision making 1.2 <b>analyse</b> problems using a systematic approach 1.3 <b>refine</b> ideas through the use of prototyping 1.4 <b>review</b> planning decisions throughout	2.1 <b>investigate</b> relationships between the inputs, transformations, and outputs occurring within simple control systems 2.2 <b>evaluate</b> ideas through the use of simulation <sup>1</sup>  <sup>1</sup> (such as mechanical, electrical or digital modelling)	3.1 <b>analyse</b> the impact of constraints on the design of solutions 3.2 <b>evaluate</b> the effectiveness of solutions
<b>Design and innovation</b>	1.5 <b>consider</b> the end-user experience at each stage of the design process 1.6 <b>understand</b> the role, impact and potential of existing and emerging technologies 1.7 <b>apply</b> innovative approaches in design solutions	2.3 <b>recognise</b> the principles of control systems when developing their solution 2.4 <b>design</b> a logical sequence of instructions to control a device or system 2.5 <b>apply</b> innovative approaches to designing control system solutions	3.3 <b>explain</b> how human, societal and environmental considerations affect solutions and outcomes 3.4 <b>explore</b> applications of technology in local contexts
<b>Planning, managing, and creating</b>	1.8 <b>develop</b> a plan for the realisation of a solution 1.9 <b>select</b> appropriate materials, equipment and processes in solving a problem 1.10 <b>execute</b> a plan using appropriate tools, materials and processes 1.11 <b>demonstrate</b> adherence to recognised health and safety standards	2.6 <b>explore</b> energy conservation and efficiency 2.7 <b>identify</b> appropriate energy and control systems for design solutions 2.8 <b>create</b> control solutions to identified problems	3.5 <b>justify</b> their selection of materials and processes based on factors such as environmental, economic and ethical considerations 3.6 <b>consider</b> user needs at all stages of design 3.7 <b>recognise</b> their responsibility for ensuring security and privacy of personal data
<b>Communicating</b>	1.12 <b>document</b> progression from concept to realisation 1.13 <b>communicate</b> evidence of the iterative process of design	2.9 <b>communicate</b> technical information in appropriate forms 2.10 <b>explain</b> the transformation of inputs and outputs	3.8 <b>evaluate</b> the impact of technologies on their lives, society and the environment 3.9 <b>discuss</b> the potential of technology to affect society and the environment



Consider the age, stage and prior learning of the students.

What learning do we want to focus on?

Explore both the strands and elements when choosing learning outcomes.

Identify the learning outcomes for the unit of learning.

Identify the key learning for students using action verbs to support your thinking.

Consider how we will assess and report evidence of learning.



Develop ideas for how students could experience this learning.

How will I know they are learning?

Using your own classroom context, what methodologies and resources will support students in experiencing the learning outcomes?

Ensure assessment aligns with the learning outcomes and their action verbs.

