



BE A STEM LEADER

Invest in Design and Technologies: Years 3-4-5-6



Small primary and P-10/P-12 schools across Queensland can deliver the Australian Curriculum: Technologies to Years 3-4-5-6 students in 2022 in collaboration with the Department of Education's [IMPACT Centre](#).

Full curriculum, assessment and reporting service

Our highly skilled team provide a full service to your school. They teach, assess and report on the Technologies Learning Area as prescribed by the Australian Curriculum, QCAA and Department of Education.

Register for one or both subjects

- **Digital Technologies** is available in Semester 1 or 2, 2022 – [view outline](#).
- **Design and Technologies** is available in Semester 2, 2022 – as outlined in this document.

Expand your expert teaching team



John, Katie and Andrew are examples of the specialist teachers available to your school

- Specialist teachers from the IMPACT Centre become part of your expert teaching team.
- They login to work directly with your students for approximately one hour per week.
- You or a nominated staff member become the local coordinator, providing student details and liaising with our online teacher as required.
- You also have the option of logging in to lessons to build capability in Technologies.
- Your students will need initial support, but once they can login and manage lessons independently, your staff can focus on Prep and Year 1-2 students while your Years 3-4-5-6 students are online.

Curriculum summary

Content Descriptors: Design and Technologies Years 3-4

Knowledge and Understanding

- Recognise the role of people in design and technologies occupations and explore factors, including sustainability that impact on the design of products, services and environments to meet community needs ([ACTDEK010](#))
- Investigate how forces and the properties of materials affect the behaviour of a product or system ([ACTDEK011](#))
- Investigate food and fibre production and food technologies used in modern and traditional societies ([ACTDEK012](#))
- Investigate the suitability of materials, systems, components, tools and equipment for a range of purposes ([ACTDEK013](#))

Processes and Productions Skills

- Critique needs or opportunities for designing and explore and test a variety of materials, components, tools and equipment and the techniques needed to produce designed solutions ([ACTDEP014](#))
- Generate, develop, and communicate design ideas and decisions using appropriate technical terms and graphical representation techniques ([ACTDEP015](#))
- Select and use materials, components, tools, equipment and techniques and use safe work practices to make designed solutions ([ACTDEP016](#))
- Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment ([ACTDEP017](#))
- Plan a sequence of production steps when making designed solutions individually and collaboratively ([ACTDEP018](#))

Content Descriptors: Design and Technologies Years 5-6

Knowledge and Understanding

- Examine how people in design and technologies occupations address competing considerations, including sustainability in the design of products, services, and environments for current and future use ([ACTDEK019](#))
- Investigate how electrical energy can control movement, sound or light in a designed product or system ([ACTDEK020](#))
- Investigate how and why food and fibre are produced in managed environments and prepared to enable people to grow and be healthy ([ACTDEK021](#))
- Investigate characteristics and properties of a range of materials, systems, components, tools and equipment and evaluate the impact of their use ([ACTDEK023](#))

Processes and Productions Skills

- Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions ([ACTDEP024](#))
- Generate, develop and communicate design ideas and processes for audiences using appropriate technical terms and graphical representation techniques ([ACTDEP025](#))
- Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions ([ACTDEP026](#))
- Negotiate criteria for success that include sustainability to evaluate design ideas, processes and solutions ([ACTDEP027](#))
- Develop project plans that include consideration of resources when making designed solutions individually and collaboratively ([ACTDEP028](#))

Assessment and reporting

Students are assessed against the achievement standards from the Australian Curriculum.

- Students demonstrate learning through a variety of activities.
- Student work is marked on an A-E scale.
- Timely verbal and written feedback is given to students with regular updates sent to schools.

Schools receive:

- i. an interim check-in report describing student achievement and effort during the semester.
- ii. attendance data for the semester and access to digital examples of student work.
- iii. end of semester report including:
 - A-E grade for achievement and effort.
 - written report card comment reflecting student achievement and effort.

NB: Report card details will be emailed to your school. Your staff will need to copy and paste this information into OneSchool (we will not have access to OneSchool at your site). You can edit the report details if required.

Format

Year 3-4 Design and Technologies – Semester 2, 2022

- 1 x 60 minute web conference lesson each week of the semester delivered to a group of 15-18 students.
- Optional independent online activities are available each week - completed at a time that suits the school schedule.
- We ensure that students complete 20 hours of Design and Technologies activities, which is half of the 40 hours [recommended time allocation](#) per year for Year 4 Technologies (the other half is [Digital Technologies](#)).

Year 5-6 Design and Technologies – Semester 2, 2022

- 1 x 60 minute web conference lesson each week of the semester delivered to a group of 15-18 students.
- 1 x 30 minute set of independent online activities each week - available in an eLearn online classroom, completed at a time that suits the school schedule – teacher/teacher-aide support recommended.
- We ensure that students complete 30 hours of Design and Technologies activities, which is half of the 60 hours [recommended time allocation](#) per year for Year 5 Technologies (the other half is [Digital Technologies](#)).

Grouping models and bandwidth



Model 1: Years 3-4-5-6 students login at the same time each week, and work separately with the appropriate year level group

Model 2: Years 3-4-5-6 students login at different times across the week e.g. Year 3s and 4s on a Monday, Year 5s and 6s on a Tuesday– depending on availability of timeslots.

- Your online group of 15-18 students is likely to be an inter-school class, with from multiple small schools.
- Your school's [bandwidth](#) determines how many students from your school can login and successfully participate at one time. Contact us to organise a 20-30 minute test session which will help you decide if Model 1 or 2 is most suitable.

Timetabling

- We will publish timeslots for you to book into.

Equipment and Supervision

To successfully participate, each student requires:

- their own PC or Mac computer (desktop or laptop – PC or Mac – but not an iPad)
- reliable internet access (blue cord connection is preferable to wireless);
- a noise cancelling headset with microphone (approx. \$50-\$60 each);
- a suitable learning venue e.g. classroom computer, library area, or school computer lab/pod;
- supervisory support from a principal, teacher, teacher-aide or volunteer parent, e.g. help students to login and get started on time, regularly communicate with our online teacher.

Why is there a cost?

- There is a cost for all school staffing.
 - Your HR structure and staffing allocations are based on the number of enrolments at your school.
 - In addition, most schools invest in specialist staff as part of their improvement agenda – using FTE or cash budgets to fund targeted leadership, coaching, teacher and teacher-aid roles.
 - In a similar way, your school can invest in specialist staff from the IMPACT Centre.
 - Our highly teachers can join your expert teaching team.



John, Katie and Andrew are examples of the specialist teachers available to your school

Cost-recovery model

- The IMPACT Centre operates on a cost-recovery model, with salaries and operational costs fully-funded by investing schools.
- As background, Department of Education leaders asked us to create a school-funded model so that each school can match its improvement agenda to our initiatives and invest accordingly.

Option 1: Invest FTE

- To invest FTE, simply transfer a small fraction of FTE to the IMPACT Centre via School Budgeting Solution (SBS).
- Estimate your student numbers for now, then we will confirm the exact FTE fraction with you once the program is underway. You will be charged for *actual numbers*.
- The FTE cost is 0.01 FTE per student per subject – see table on next page.
- Call us on 3634 1888 and we will work out your estimated FTE fraction together.

Option 2: Invest cash

- To invest cash, simply budget for the amount and we invoice your school during the program.
- Estimate your student numbers for now, then we will send your school an invoice once actual numbers can be confirmed in February, 2022. You will be charged for *actual numbers*.
- Many schools use funds from [Investing for Success \(I4S\)](#), [RREAP](#) funding **or** internal budget allocations.
- Some schools offer parents or community organisations the opportunity to partially or fully contribute.
- The cash costs are:
 - \$495 per student per subject (either Digital Technologies **or** Design and Technologies)
 - \$990 per student for both subjects (Digital Technologies **and** Design and Technologies)

Additional costs

- Each participating student must use a headset with microphone (\$50-\$60 per headset).

NB: We supply each student with an electronics kit, posted to your school. This is included in the price of \$495 per student and the prices listed on the next page – no extra charge.

Participation costs

- Design and Technologies (one subject) = \$495 per student **or** 0.01 FTE per student for the semester
- Digital Technologies and Design and Technologies (both subjects) = \$990 per student for both semesters **or** 0.01 FTE per student for the full year

Total number of students in Yrs 3-4-5-6	Digital Technologies Semester 1 or 2	Design and Technologies Semester 2 only	Both subjects Semester 1 <u>and</u> 2
1 student	\$495 for the semester OR 0.01 FTE for the semester	\$495 for the semester OR 0.01 FTE for the semester	\$990 for the year OR 0.01 FTE all year
2 students	\$990 for the semester OR 0.02 FTE for the semester	\$990 for the semester OR 0.02 FTE for the semester	\$1980 for the year OR 0.02 FTE all year
3 students	\$1485 for the semester OR 0.03 FTE for the semester	\$1485 for the semester OR 0.03 FTE for the semester	\$2970 for the year OR 0.03 FTE all year
4 students	\$1980 for the semester OR 0.04 FTE for the semester	\$1980 for the semester OR 0.04 FTE for the semester	\$3960 for the year OR 0.04 FTE all year
5 students	\$2475 for the semester OR 0.05 FTE for the semester	\$2475 for the semester OR 0.05 FTE for the semester	\$4950 for the year OR 0.05 FTE all year
6 students	\$2970 for the semester OR 0.06 FTE for the semester	\$2970 for the semester OR 0.06 FTE for the semester	\$5940 or 0.06 FTE all year
7 students	\$3465 for the semester OR 0.07 FTE for the semester	\$3465 for the semester OR 0.07 FTE for the semester	\$6930 or 0.07 FTE all year
8 students	\$3960 for the semester OR 0.08 FTE for the semester	\$3960 for the semester OR 0.08 FTE for the semester	\$7920 or 0.08 FTE all year
9 students	\$4455 for the semester OR 0.09 FTE for the semester	\$4455 for the semester OR 0.09 FTE for the semester	\$8910 or 0.09 FTE all year
10 students	\$4950 for the semester OR 0.1 FTE for the semester	\$4950 for the semester OR 0.1 FTE for the semester	\$9900 or 0.1 FTE all year
11 students	\$5445 for the semester OR 0.11 FTE for the semester	\$5445 for the semester OR 0.11 FTE for the semester	\$10890 or 0.11 FTE all year
12 students	\$5940 for the semester OR 0.12 FTE for the semester	\$5940 for the semester OR 0.12 FTE for the semester	\$11880 or 0.12 FTE all year
13 students	\$6435 for the semester OR 0.13 FTE for the semester	\$6435 for the semester OR 0.13 FTE for the semester	\$12870 or 0.13 FTE all year
14 students	\$6930 for the semester OR 0.14 FTE for the semester	\$6930 for the semester OR 0.14 FTE for the semester	\$13860 or 0.14 FTE all year
15 students	\$7425 for the semester OR 0.15 FTE for the semester	\$7425 for the semester OR 0.15 FTE for the semester	\$14850 or 0.15 FTE all year
16 students	\$7920 for the semester OR 0.16 FTE for the semester	\$7920 for the semester OR 0.16 FTE for the semester	\$15840 or 0.16 FTE all year
17 students	\$8415 for the semester OR 0.17 FTE for the semester	\$8415 for the semester OR 0.17 FTE for the semester	\$16830 or 0.17 FTE all year
18 students	\$8910 for the semester OR 0.18 FTE for the semester	\$8910 for the semester OR 0.18 FTE for the semester	\$17820 or 0.18 FTE all year
19 students	\$9405 for the semester OR 0.19 FTE for the semester	\$9405 for the semester OR 0.19 FTE for the semester	\$18810 or 0.19 FTE all year
20 students	\$9900 for the semester OR 0.2 FTE for the semester	\$9900 for the semester OR 0.2 FTE for the semester	\$19 800 or 0.2 FTE all year

NB: Contact us to work out the amount for your school – phone **3634 1888** or email admin@impact.edu.au.