The 2017 Victorian Schools Games and Apps Challenge

By Mary Manning

"What do our kids need to be digitally literate? And how can we help them?"

These questions were asked by Sandy Phillips, Digital Learning Practice, Victorian Department of Education and Training, during her address at the recent School Library Association of Victoria Conference, *Making the most of data: collecting, visualising, applying* (**http://fuse.education.vic.gov.au/Resource/ByPin?Pin=YD5YPP&SearchScope=All**).

The objective of the Victorian Curriculum's Digital Technologies (DigiTech) Learning Area is to empower students to move from being confident users and consumers of digital systems to being discerning and creative problem solvers. Teacher-librarians have a major responsibility here.

It was a wonderful opportunity for our members, therefore, when the association was appointed to manage the 2017 Victorian Schools Games and Apps Challenge that is an initiative of the Victorian Department of Education and Training in partnership with Microsoft – not only an opportunity in relation to supporting digital literacy, but a recognition of the central role of the library in integrating a number of learning areas for real problem solving and creating digital solutions.

So what's it all about? How does the Games and Apps Challenge help us to help our students?

Students are challenged to identify a real world problem or issue, and then to create a game or app to increase awareness, provide strategies and solutions, create empathy or make things better. It's about the design process and computational thinking. It's also about identifying an audience and pitching an idea (**http://gac.global2.vic.edu.au/what-is-the-challenge/**). The task therefore is to design, plan, create and submit to industry leaders at Microsoft.

The 2017 Victorian School Games and Apps Challenge is open to all Victorian schools and entries can be submitted in three year level categories, Years 4-6, Years 7-8 and Years 9-10.

The Games and Apps Challenge website, **http://gac.global2.vic.edu.au**, provides support along the way. It starts by asking students to 'get thinking'.

Using the Design Brief Template that suits them, (Powerpoint, Word or OneNote) – **http://gac.global2.vic.edu.au/create/** – students are asked:

- What is the problem, issue or challenge that you want to take on?
- Who is your audience?
- Can you come up with a plan and a design?
- Can you pitch and communicate your idea?

Students create their design brief template with all the planning, ideas and evidence and then they create the beginnings of a game or app.

The 2016 Challenge winners and finalists.

What the judges (games industry leaders) need to see is that the group has:

- Used the tools provided to present the computational thinking, coding or development,
- Presented evidence of their thinking, teacher and peer reviews and improvements made to the original idea, as well as evidence of collaboration and utilisation of the skills and talents of group members.

Needless to say, meeting the original brief is also very important, and rubrics for Years 4-6, Years 7-8 and Years 9-10 are provided to assist in this regard (**http://gac.global2.vic.edu.au/evaluation-criteria/**).

The following general guidance is also offered:

Relevance of the problem

- How well is the problem explained and defined?
- Are the influences and origins of the problem well investigated and understood?
- Does the game or app address the problem? If so, how creative is the solution?

Implementation of the idea

- How well was the user experience considered?
- How much thought was given to the visual design of the game or app?
- How creative is the game or app? How original is it?

Demonstrated excellence of coding and programming skill

- How well were the software development tools used?
- To what extent did the game or app demonstrate computational thinking?

Documentation of work

- To what extent has the template/portfolio been completed by the group or student?
- How well has the product and process been communicated through the template/portfolio?

Victorian schools have a range of software or games development tools available to them. These include Microsoft tools such as Touch Develop, Minecraft Education, Visual Studio and Tynker. Other tools such as Unity and Scratch are able to be used and all have tutorials available on the site (**http://gac.global2.vic.edu.au/**). For teachers to gain a more in-depth understanding of the tools, a series of webinars are offered by experts in the field.

Student e-safety is also addressed within the guidelines of the challenge and links to government advice are available (**https://www.esafety.gov.au/**) and a student webinar entitled 'Keeping safe in the Game' is available.

An area of the site of particular interest to teacher-librarians is that of integration across the curriculum. The Victorian Curriculum outlines learning areas that support students' development of a good game or app (**http://gac.global2.vic.edu.au/curriculum/**). Here it tells us that game and app development requires:

- Skills and understanding of digital technologies,
- Processes and understandings of design technologies,
- Use of critical and creative thinking, and
- Ethical considerations . . . and that is all before you get to the content or subject matter of the game or app.

If it's an historical game or app, it has to be historically accurate. A scientific or mathematical game or app needs to be factually correct.

The rubrics mentioned earlier are useful for mapping the criteria and the curriculum, however this page – **http://gac.global2.vic.edu.au/curriculum/** – links across the expectations identified in digital technologies, design technology, critical and creative thinking and ethics that are vital elements of game and app development.

Although designed to support the annual Victorian Schools Games and Apps Challenge, this website offers an extremely valuable learning activity tool for all teachers whenever they wish to use it. The range of information and resources brought together for this challenge provides ongoing assistance and support for those wishing to incorporate these creative and digital thinking projects that can be tailored to issues and problems that the students themselves identify and therefore are motivated to solve. The 'how-to' combined with the rubrics and identification of links to digital technologies curriculum outcomes means that planning and collaboration for digital literacy is easy.

The site also introduces teachers and students to the concept of Solution Fluency – a concept that I very much like. Solution Fluency is the ability to think creatively to solve problems in real time. The stages involve clearly defining the problem and designing an appropriate solution. It is defined by the 6Ds process: Define, Discover, Dream, Design, Deliver and Debrief. See https://globaldigitalcitizen.org.

Valuable as well is the opportunity that the site provides for teacher-librarians to set up similar activities alongside, and complimentary to, the makerspaces and STEM activities that are currently being rolled out in schools libraries across the state (**https://fuse.education.vic.gov.au/Resource/LandingPage?ObjectId=3eb7e60d-7bde-4417-abb9-efeb7e1bf474**). The School Library Association of Victoria has taken this on board and has been active in offering hands-on professional learning workshops around coding and this will continue in 2017/2018.

Independent student activities and clubs at lunchtimes in the library cross the entire range of resources that we as teacher-librarians offer – so it is important that we continue to extend our repertoire of offerings and therefore extend which students (and teachers) are attracted to the library.
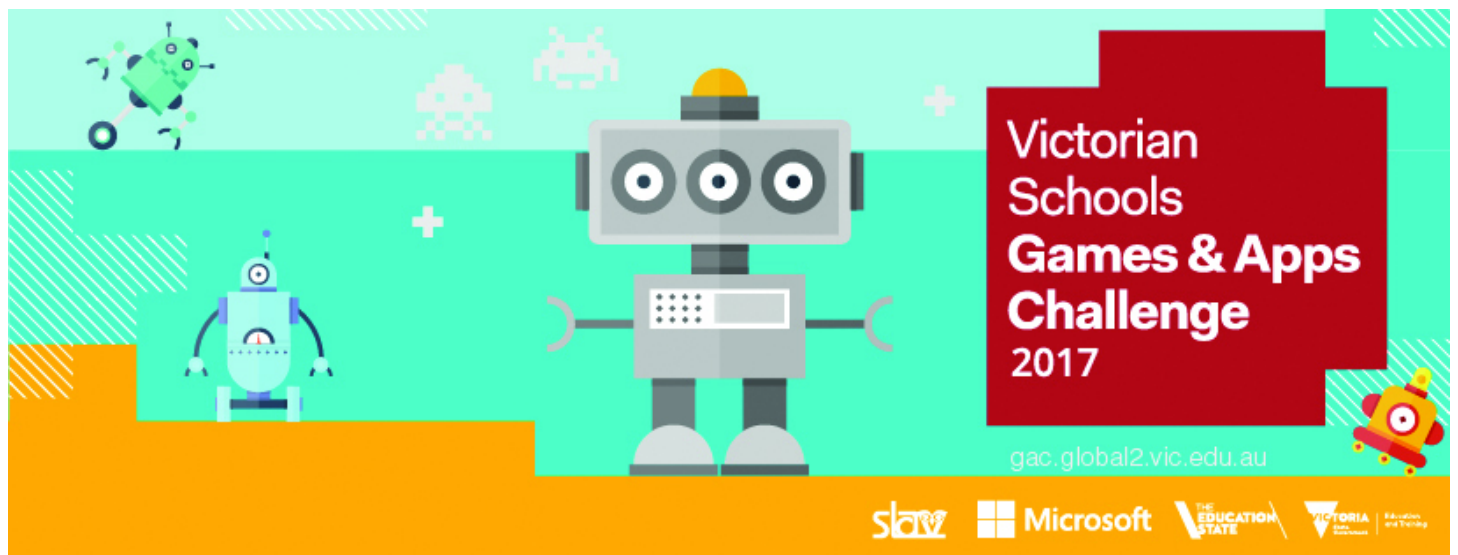
But back to the 2017 Victorian Schools Games and Apps Challenge!

Submitting entries has also been made as simple as possible, and to ensure cyber-security, entries must be submitted by teachers. A checklist certainly helps – and here is the reminder of what the judges will be looking for regarding the problem outline, the research, and the design thinking:

- Have you successfully identified your problem and explained how you are going to address it?
- Is there a clear description of your target audience?
- Are your app or game's features thoroughly listed and explained?
- Is all of your research submitted so the judges can follow your design thinking? Research can include sketches, website links and videos, screen clippings and other resources you have used.
- Have you described the knowledge and skills you will need to build this app or game?
- If you conducted any peer conferences and/or teacher conferences, is there evidence of them?

- Have you taken the time to reflect on your design process? What has changed about your app or game since you first began the project? Are these changes explained and justified?
- Have you prepared a pitch for your app or game?
- Have you completed an analysis and evaluation of your game or app and the challenge as a whole?

Once entries are submitted and shortlisted, finalists are offered the opportunity to pitch their game or app to the judges and spend a half-day with John Yeo (TedX) refining their pitch/presentation skills. Winners are announced as part of a much bigger event in the Victorian Education in Games Summit (**https://www.acmi.net.au/events/education-games-summit-2017/**). Previous winners can be seen at: **http://gac.global2.vic.edu.au/2016-challenge-finalists-and-winners/**.

Congratulations to the Victorian Department of Education and Training on this well-planned initiative that supports real learning and takes us all on an ongoing, valuable journey that truly does support digital literacy.

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