

Year 8 Ways of Doing- Computing

Creative

Computational

Technical

Exceeding

- Students present their work in creative ways demonstrating a high degree of originality
- Students clearly demonstrate evidence of planning in their work, resulting in excellent programs and creative digital artefacts
- Presentation of student work shows a high level of ingenuity
- Students combine the use of hardware and software using CAD/CAM, which results in a professional looking product.
- Students are able to create projects, which can be used across multiple platforms and devices
- Students produce excellent designs when creating their webpages
- Students are able to employ their programming skills in a variety of ways, including physical and robotics programming

- Students understand how iteration and selection can increase the efficiency of their programs
- Students are able to expand on the functionality of their programs without support. They routinely demonstrate 'computational thinking' when writing their programs
- Students understand how programming techniques may affect computer hardware
- Students demonstrate a secure understanding of binary data and the importance of it in computer systems.
- Students understand the use of data storage in programming
- Students independently investigate programming procedures to control physical output
- Students develop their own techniques/algorithms to keep data secure and unreadable

- Students are able to create suitable folder structures using cloud storage
- Students are able to appropriately name files without being reminded by their teacher
- Students are fully aware of the risks of online communication methods and know to tell an appropriate adult if they are at risk.
- Students know how to, and advise others on, how to protect their online identity
- Students are able to recognise inappropriate content on the internet and how to report it
- Students are able to collect data, and understand how to interpret results to draw informed conclusions

Expected

- Students present their work in creative ways demonstrating a high degree of originality
- Students clearly demonstrate evidence of planning in their work, resulting in excellent programs and creative digital artefacts.
- Students produce work, which is innovative and select the most appropriate tool to present
- Combine the use of hardware and software using CAD/CAM, which results in a professional looking product.
- Students are able to create projects, which are used across multiple platforms and devices

- Students are able to use iteration and selection in their programs
- Students are able to expand on the functionality of their programs without support
- Students routinely break problems down independently and methodically
- Students demonstrate a secure understanding of binary data and the importance of it in computer systems
- Students understand the use of data storage in programming
- Students independently investigate programming procedures to control physical output
- With guidance, students develop techniques/algorithms to keep data secure and unreadable to others

- Students are able to create suitable folder structures using cloud storage
- Students are able to appropriately name files without being reminded by their teacher
- Students are fully aware of the risks of online communication methods and know to tell an appropriate adult if they are at risk
- Students know how to, and advise others on, how to protect their online identity
- Students are able to recognise inappropriate content on the internet and how to report it
- Students are able to collect data, and understand how to interpret results to draw informed conclusions

Developing

- Students present their work in creative ways with originality
- Students often demonstrate evidence of planning in their work, resulting in excellent programs and creative digital artefacts
- Students often produce work which is innovative and can select appropriate tools, sometimes with teacher guidance
- Students are able to recognise a variety of CAD/CAM methods and can utilise them in projects.
- Students are able to create projects, which can be used across multiple devices

- Students can demonstrate some debugging methods but may require peer/teacher support
- Students are able to expand on the functionality of their programs with prompts
- Students usually break problems down into smaller problems
- Students understand how to manipulate binary data
- Students understand the use of data storage in programming
- With teacher guidance, students are able to investigate programming procedures to control physical output
- Students are able to follow algorithms to produce a program which encrypts data

- Students are able to create suitable folder structures using cloud storage
- Students are able to appropriately name files with guidance
- Students are mostly aware of the risks of online communication methods and know to tell an appropriate adult if they are at risk.
- Students know how to protect their online identity
- Students are able to recognise inappropriate content
- Students are able to collect data, and understand how to interpret results to draw conclusions

Supported

- Students mostly present their work in creative ways
- Students plan their work but it is sometimes lacking details
- Students often produce work which is innovative and can select appropriate tools, sometimes with teacher guidance
- Students recognise some benefits of CAD/CAM
- Students are able to create projects, which can be used across multiple devices

- Students can demonstrate some debugging methods but require peer/teacher support
- Students are able to expand on the functionality of their programs with prompts
- Students usually break problems down into smaller problems
- Students understand how to manipulate binary data
- Students understand the use of data storage in programming
- With teacher guidance, students are able to investigate programming procedures to control physical output
- With support, students are able to follow algorithms to produce a program which encrypts data

- Students create folder structures but do not always use them correctly
- Students often correctly name files with guidance
- Students are mostly aware of the risks of online communication methods and know to tell an appropriate adult if they are at risk
- Students know some ways to protect their online identity
- Students are able to recognise inappropriate content
- Students are able to collect data, and present it in different ways