DTiF
Digital Technologies in focus
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acara
AUSTRALIAN CURRICULUM, ASSESSMENT AND REPORTING AUTHORITY

CLASSROOM IDEAS: YEARS F–2

Data collection and representation: what's in your lunchbox?

Figure 1: A fruit tally chart created by a teacher and students at Holy Family Parish School, ACT

Figure 2: Fruit with plastic stickers

Many schools are actively encouraging students to eat fresh fruits and vegetables.

The contents of lunchboxes or the types of fruit or vegetables eaten at crunch and sip/fruit break can provide a good source of data for students to collect, represent and interpret. Data can be recorded using digital technologies, or as an unplugged activity using tally marks (Figure 1), and then displayed in the classroom.

In Digital Technologies F–2, students could:
- record data on waste/plastic-free foods
- use the plastic stickers that are attached to fruits (Figure 2) to create a pictograph
- explore how the same data can be represented in different ways
  - Since data can be collected and represented as text, images or audio, how many ways can your data be represented?
- collect and present data using simple software
  - How could you present these data to an audience?
  - What are the best ways to show other people what you have discovered through your data collection, for example:
    - How much has been collected?
    - What items were most commonly collected?
  - What software could be used to represent these data? How could you highlight different findings such as by number of items, type or weight?
- discuss any ideas students have about the collected data. What do the data show?

Links to the Australian Curriculum

Table 1: Aspects of the Australian Curriculum: Digital Technologies F–2 which may be addressed depending upon the task.

Digital Technologies **Achievement standard**	By the end of Year 2, students identify how common digital systems (hardware and software) are used to meet specific purposes. ==They use digital systems to represent simple patterns in data in different ways.== Students design solutions to simple problems using a sequence of steps and decisions. ==They collect familiar data and display them to convey meaning.== They create and organise ideas and information using information systems and share information in safe online environments.
Strands	Digital Technologies knowledge and understanding • Representation of data Digital Technologies processes and production skills • Collecting, managing and analysing data
Content descriptions	• Recognise and explore patterns in data and represent data as pictures, symbols and diagrams (ACTDIK002) • Collect, explore and sort data, and use digital systems to present the data creatively* (ACTDIP003) ** If digital systems are not used only part of this content description is met.*

Key concepts	• data collection • data representation • data interpretation	**Key ideas**	Thinking in Technologies • computational thinking
Cross-curriculum priorities	• Sustainability† † *if waste-free options are explored*	**General capabilities**	• Information and Communication Technology (ICT) Capability • Literacy • Numeracy

Safety considerations: In implementing projects with a focus on food, care must be taken with regard to food safety and specific food allergies that may result in anaphylactic reactions. Some states and territories have their own specific guidelines that should be followed. For further information see: https://www.australiancurriculum.edu.au/resources/curriculum-connections/portfolios/food-and-wellbeing/

In what ways could a food-related data collection activity link to other subjects?

How could data collection and representation be integrated in Health and Physical Education, Mathematics or Design and Technologies?

Figure 3: Pizza school lunch – Laptop lunches for kindergarten bento box by Melissa CC BY 2.0 Source: https://www.flickr.com/photos/buzzymelibee/8719314950

Figure 4: A sandwich in a plastic bag

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