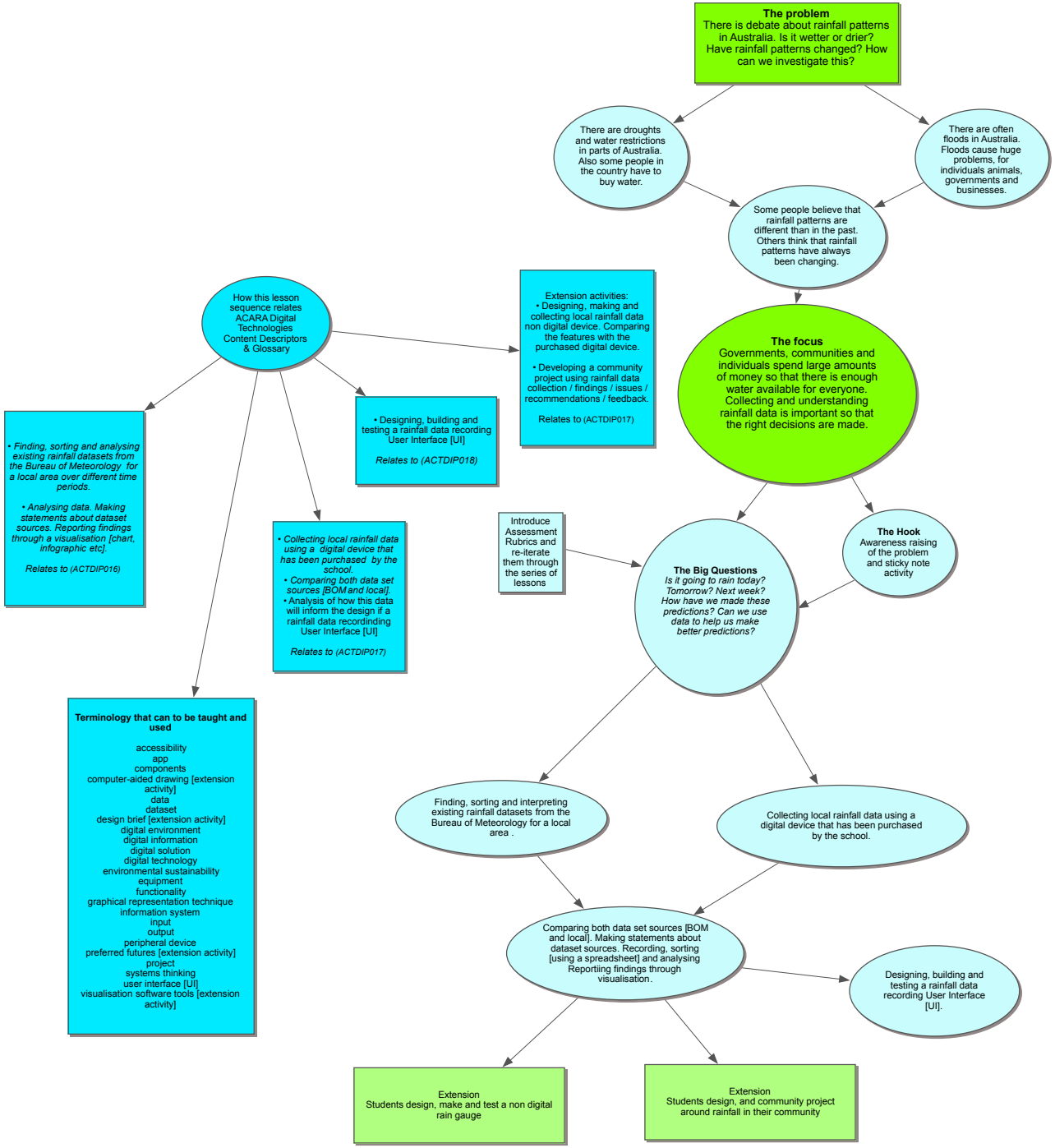
The problem
There is debate about rainfall patterns in Australia. Is it wetter or drier? Have rainfall patterns changed? How can we investigate this?
There are droughts and water restrictions in parts of Australia. Also some people in the country have to buy water.
There are often floods in Australia. Floods cause huge problems, for individuals animals, governments and businesses.
Some people believe that rainfall patterns are different than in the past. Others think that rainfall patterns have always been changing.
The focus
Governments, communities and individuals spend large amounts of money so that there is enough water available for everyone. Collecting and understanding rainfall data is important so that the right decisions are made.
The Hook
Awareness raising of the problem and sticky note activity
Introduce Assessment Rubrics and re-iterate them through the series of lessons
The Big Questions
Is it going to rain today? Tomorrow? Next week? How have we made these predictions? Can we use data to help us make better predictions?
Finding, sorting and interpreting existing rainfall datasets from the Bureau of Meteorology for a local area .
Collecting local rainfall data using a digital device that has been purchased by the school.
Comparing both data set sources [BOM and local]. Making statements about dataset sources. Recording, sorting [using a spreadsheet] and analysing Reportiing findings through visualisation.
Designing, building and testing a rainfall data recording User Interface [UI].
Extension
Students design, make and test a non digital rain gauge
Extension
Students design, and community project around rainfall in their community
How this lesson sequence relates ACARA Digital Technologies Content Descriptors & Glossary
Extension activities:
• Designing, making and collecting local rainfall data non digital device. Comparing the features with the purchased digital device.
• Developing a community project using rainfall data collection / findings / issues / recommendations / feedback.
Relates to (ACTDIP017)
• Designing, building and testing a rainfall data recording User Interface [UI]
Relates to (ACTDIP018)
• Finding, sorting and analysing existing rainfall datasets from the Bureau of Meteorology for a local area over different time periods.
• Analysing data. Making statements about dataset sources. Reporting findings through a visualisation [chart, infographic etc].
Relates to (ACTDIP016)
• Collecting local rainfall data using a digital device that has been purchased by the school.
• Comparing both data set sources [BOM and local].
• Analysis of how this data will inform the design if a rainfall data recordinding User Interface [UI]
Relates to (ACTDIP017)
Terminology that can to be taught and used
accessibility
app
components
computer-aided drawing [extension activity]
data
dataset
design brief [extension activity]
digital environment
digital information
digital solution
digital technology
environmental sustainability
equipment
functionality
graphical representation technique
information system
input
output
peripheral device
preferred futures [extension activity]
project
systems thinking
user interface [UI]
visualisation software tools [extension activity]