This book introduces children to a number of basic project management concepts (or simply *project concepts*, if you prefer).

Resources and Downloads

www.projectkidsadventures.com/resources

School Curriculum Applicability

The concepts covered in this book include independent learning and aspects of technology, specifically:

- Characteristics of technology and technological outcomes.

- Technological modelling, products and systems.

- Planning, identifying resources, skills and stages required to complete an outcome.

The relevant school curriculum standards include, at a minimum:

New Zealand

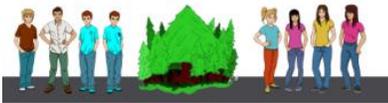*The New Zealand Curriculum (2007)*, **Technology**

- Nature of Technology [Level 1,2]

- Technical Knowledge [Level 1,2]

- Technological Practice [Level 1,2]

Australia

Australian Curriculum [ACARA], **Science**

Year 5

- ACSHE083 – Scientific understandings, discoveries and inventions are used to solve problems

- ACSIS088 – Uses equipment and materials safely, identifying potential risks

- ACSIS093 – Communicates ideas, explanations and processes in a variety of ways

Year 6

- ACSIS101 - Communicates ideas, explanations and processes in a variety of ways

- ACSIS105 - Uses equipment and materials safely, identifying potential risks

United States

National Standards, **Technology**

- NT.K-12.1 Basic operations and concepts

- NT.K-12.6 Technology problem-solving and decision-making tools

United Kingdom

Primary Curriculum

Design and Technology Key Stage 1

1. Developing, planning and communicating ideas (a,b,c,d,e)

2. Working with tools, equipment, materials and components to make quality products (a,c,d,e)

3. Evaluating processes and products (a,b)

5. Breadth of study (a,b,c)

### Design and Technology Key Stage 2

1. Developing, planning and communicating ideas (a,b,c)

2. Working with tools, equipment, materials and components to make quality products (a,b,d,e)

3. Evaluating processes and products (a,b,c)

4. Knowledge and understanding of materials and components (a,b,c)

5. Breadth of study (a,b,c)

Project Management Concepts

Amanda's father leads her through the basic project stages that are common to every successful project, regardless of your preferred terminology or system.

Project Kids Adventures
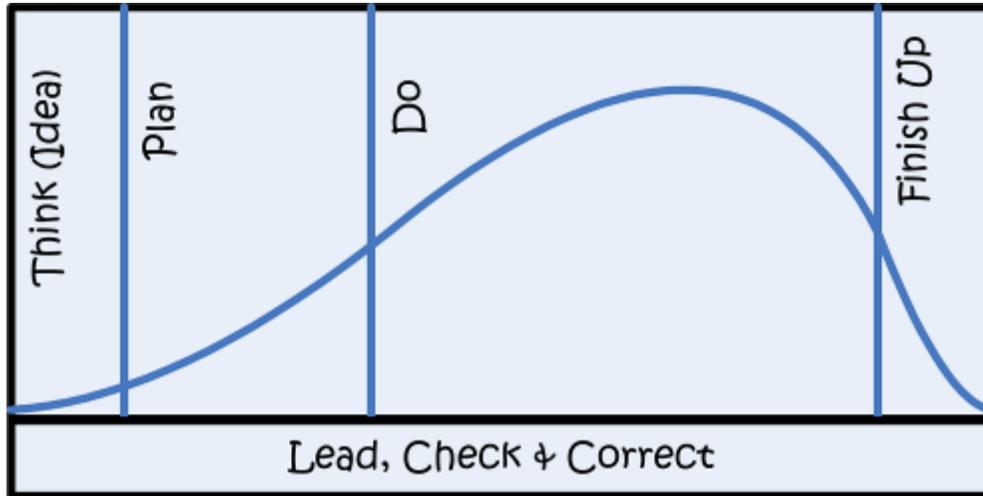
- **Initiation** (Idea / Think)

  o Spring Break is Over! [Boys]

  o The Tree! [Boys]

  o The Sky's the Limit! [Boys]

  o This Means War! [Girls]

- **Planning** (Plan)

  o Idea, Plan, What? [Girls]

  o The Plan [Girls]

  o The Tree Hunt [Girls]

  o Do We Have Enough Wood? [Girls]

  o No More Nails! [Both]

  o Finishing Touches [Both]

- **Execution** (Do)

  o Ready, Set, Build! [Boys]

  o Disaster! [Boys]

  o Do We Have Enough Wood? [Girls]

  o Girls in the House [Both]
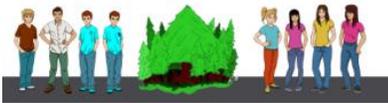
- o Finishing Touches [Both]

- **Closeout** (Finish Up)

  - o Grand Opening [Both]

  - o Pizza! [Both]

- **Project Control** (Lead, Check & Correct)

  - o The Accident [Boys]

  - o Safety Inspection [Both]

  - o The Storm [Both]

  - o No More Nails [Both]

Note that the boys started out (as we often do), jumping straight in to doing things without any planning or preparation; there are lessons learned around the results of skipping project stages and "just getting on with it"- as shown in Chapter 11, *The Accident*, and Chapter 12 – *Safety Inspection*.

A number of other project concepts are also introduced, either directly or indirectly in the story, including:

- **Requirements** (*Idea, Plan, What? / The Plan / The Tree Hunt*)

- **Estimating / Measurement** (*Do We Have Enough Wood?*)

- **Cost / Budget** (*No More Nails, Lemonade, Sir?, Tickets, Please*)

- **Resource Management** (*No More Nails / Do We Have Enough Wood?*)

- **Teamwork / Human Resource Management** (*Girls in the House / No More Nails / Lemonade, Sir? / Finishing Touches / Grand Opening / Pizza!*)

- **Change Management** (*The Storm / No More Nails / Lemonade Sir?*)

- **Risk Management** (*The Accident / Safety Inspection*)

The Girls' Project Method

There are a number of project methodologies out there, but when teaching children (or even adults, really), simpler is generally better for starting out. While the project stages apply as a general structure, how projects are structured can differ greatly depending on the circumstances. For example, one project may have a single Think-Plan-Do sequence with all of the planning up front, then all of the doing over a period of time.
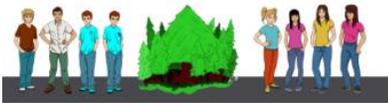
Other projects, such as building a tree house, lend themselves to having several smaller phases, each with Think-Plan-Do sequences. When there is a lot of uncertainty, it makes sense to have an overall vision and high level requirements, then plan and do a bit at a time, assess how each step went, and then factor the lessons into the next stage of work.

When the girls built the tree house, they could only measure one level of branches at a time (that was all they could reach!), so they could not do detailed planning for the whole tree house at once. They progressed one level at a time, and also learned how to do each segment better and faster, based on the lessons learned from building the previous levels.

Note: This has many similarities to the *Agile* method of managing projects, where a period of up-front planning is followed by a burst of activity to complete the task, and then they move on to the next piece of planning and work.