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)

Alignment to Key Competencies

All five of the key competencies for living and lifelong learning are addressed and demonstrated throughout the story.

- ***Thinking*** (Project planning, creative solutioning)

- ***Using language, symbols and texts*** (Project planning, Work Breakdown Structure, Network diagrams)

- ***Managing self*** (Motivation, resourcefulness, determination to succeed)
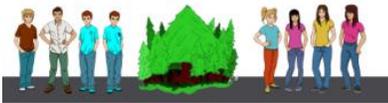
- *Relating to others* (Stakeholder engagement, change management, understanding motivation, advocates and antagonists)

- *Participating and contributing* (Working in a project team)

Health and Physical Education

- Relationships with Other People [Level 1,2,3]

    o   Relationships

    o   Interpersonal skills

Technology

- Nature of Technology [Level 1,2,3]

    o   Characteristics of technological outcomes

- Technological Knowledge [Level 1,2,3]

    o   Technological modeling

    o   Technological systems

- Technological Practice [Level 1,2,3,4]

    o   Outcome development and evaluation

## Australia

Australian Curriculum [ACARA]

General Capabilities

- Personal & Social Capability

Year 5 & 6 - Health & Physical Education

- ACPPS055 - Practise skills to establish and manage relationships

- ACPPS056 - Examine the influences of emotional responses on behaviour and relationships

- ACPPS057 - Recognise how media and important people in the community influence personal attitudes, beliefs, decisions and behaviours

Year 7 & 8 - Health & Physical Education
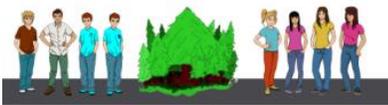
- ACPPS074 - Investigate the benefits of relationships and examine their impact on their own and others' health and wellbeing

- ACPPS075 - Analyse factors that influence emotions , and develop strategies to demonstrate empathy and sensitivity

Year 5 & 6 - Technology

- ACTDEP026 - Apply safe procedures when using a variety of materials, components, tools, equipment and techniques to make designed solutions

- ACTDEP028 - Develop project plans that include consideration of resources when making designed solutions individually and collaboratively

Year 7& 8 - Technology

- ACTDEP036 - Generate, develop, test and communicate design ideas, plans and processes for various audiences using appropriate technical terms and technologies including graphical representation techniques

- ACTDEP039 - Use project management processes when working individually and collaboratively to coordinate production of designed solutions

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)

Project Kids Adventures

Design and Technology Key Stage 2
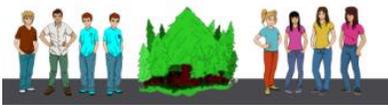
1. Developing, planning and communicating ideas (a,b,c)

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)

Portugal

**Curriculum Goals for Technological Education (5th and 6th grade)**

5th Grade

6.1: Record information in a rational and concise manner.

6.2: Interpret and represent information aiming at the organization and ranking of its content.

7.1: Identify technological vocabulary, using it to transmit ideas and opinions.

7.2: Interpret instructions and graphical/technical schemes.

9.1: Organize events in chronological order.

6th Grade

8.1: Identify the required steps to organize and plan tasks (workspace, materials and tools, lists of components, etc.).

10.1: Demonstrate facts and events that show cause and effect relationship.

10.2: Distinguish between a sequence and an aggregate of actions.

13.1: Identify requirements and available resources.

13.2: Develop skills for finding the best solution, assessing pros and cons, and critically evaluating achieved solutions.

Curriculum Goals for Information and Communication Technologies (7th and 8th grade)
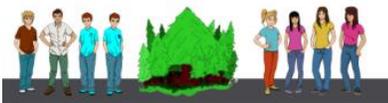
(…) prioritize student participation in small projects, problem solving, and practical exercises focused on project/product development.
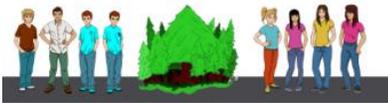
Project Management Concepts

Amanda's father introduced her to the basic project stages that are common to every successful project, regardless of your preferred terminology or system. These are reinforced in each book.
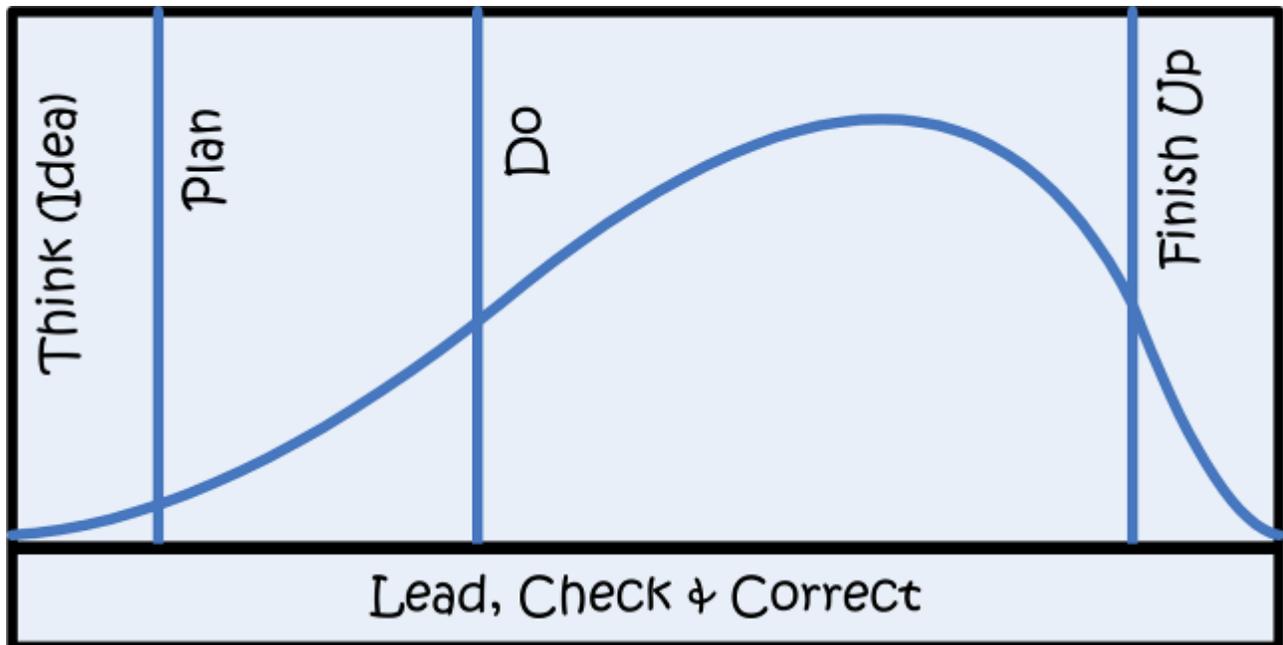
The chapters can also be mapped directly to project phases:

- **Initiation** (Idea / Think)

    o   Hasty Decisions

    o   I Could Have Said No

    o   Pimple Pete

    o   I Plead Insanity

- **Planning** (Plan)

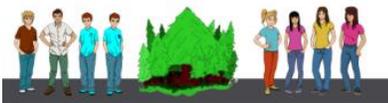   o   New Recruits

    o   Second Fiddle

    o   Sour Grapes

- o Fearless Leader

- o No Man's Land

- o Behind Enemy Lines

- o War Council

- **Execution** (Do)

    - o Because I Said So

    - o Green-Eyed Monster

    - o Rumor Has It…

    - o Poison Pen

    - o One Little Kiss

    - o Face the Music

    - o Love Me…Not

- **Closeout** (Finish Up)

    - o Love Me…Not

    - o Sweet Revenge

    - o Just Desserts

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

    - o Second Fiddle

    - o New Recruits

    - o Sour Grapes

    - o Fearless Leader

    - o No Man's Land

    - o War Council

    - o Poison Pen

    - o Face the Music

Planning

During the planning process the kids do a brainstorming session, followed by development of a simple *Work Breakdown Structure* showing what needs to be done or delivered.
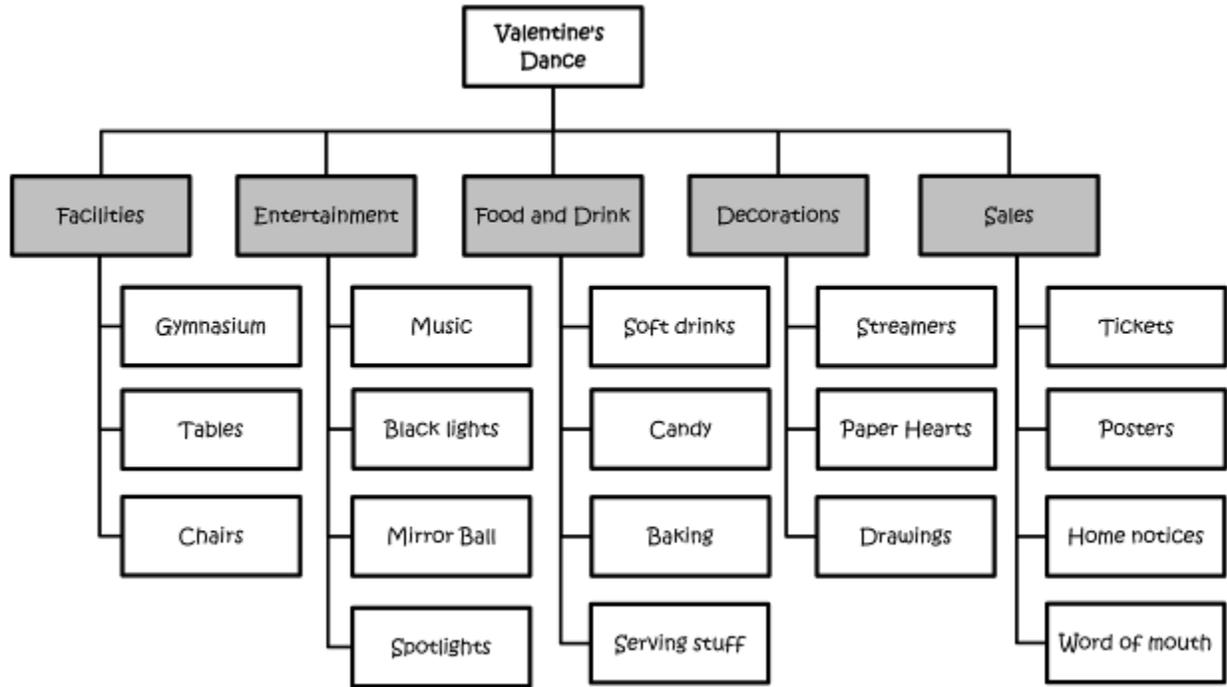
Next, they put the activities into logical sequences, identifying *dependencies* between tasks. This project is similar to the Haunted House, with parallel activity streams. This is represented in a *network diagram* (the children call it a bubble diagram in the story).
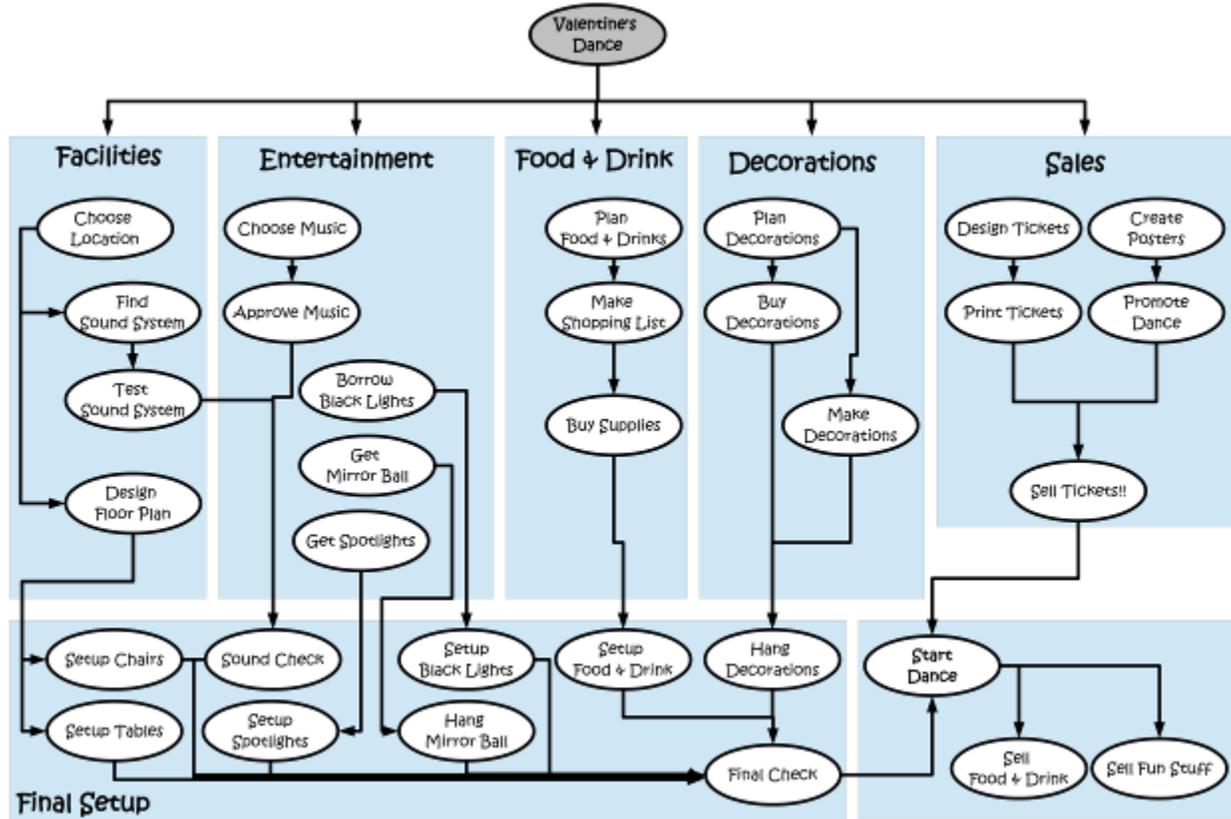
In this network diagram (sometimes called a dependency diagram), it becomes clear what needs to happen first, second and so on, so they can work on the right tasks as the right time and in the right order, while still being prepared for the next activity.

They then use **task estimating** to see if they will be able to complete the project on time, and where the longest chain of task dependencies is; this is called the **critical path**.
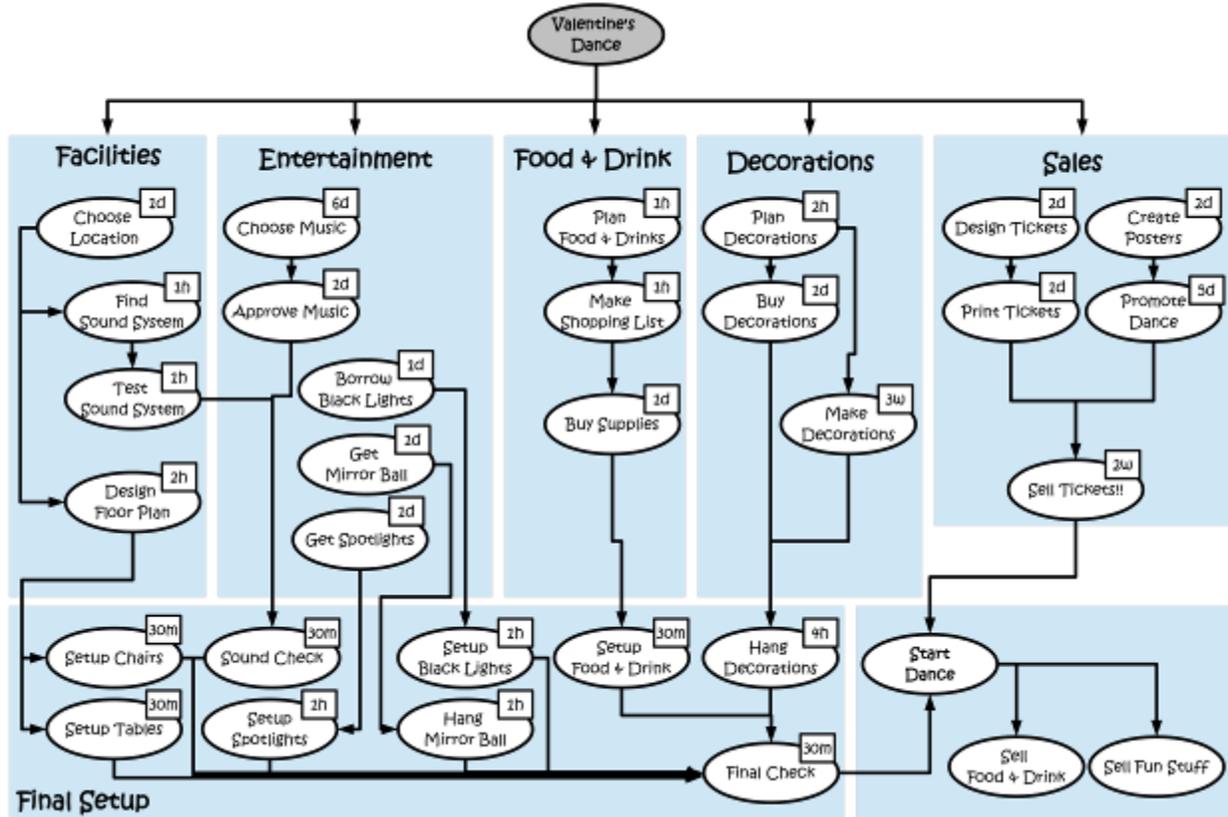
Tim then draws a *Gantt chart* to help visualize and track tasks, which is a planning tool they used on a previous project. The Gantt chart shows tasks, schedule, resources and dependencies all on one combined diagram. A simple Gantt chart can be used effectively for this project, with the groups of tasks, timeframes and who is the lead for each task clearly visible. Arrows show sequencing where it is not immediately obvious (note: drawing all of the dependency arrows would make it quite messy for readability of the Gantt chart the kids are using, so some were omitted).

Project Kids Adventures

Valentine's Dance

Task	Who	Duration	Week 1	Week 2	Week 3	Week 4	Week 5
			S M T W R F S	S M T W R F S	S M T W R F S	S M T W R F S	S M T W R F S
Valentine's Dance		23 days					
Planning	All	6 days					
Facilities		2 days					
Choose Location		1 day					
Find Sound System		1 hr					
Test Sound System		1 hr					
Design Floor Plan		1 hr					
Entertainment		7 days					
Choose Music		6 days					
Approve Music		1 day					
Borrow Black Lights		1 day					
Get Mirror Ball		1 day					
Get Spotlights		1 day					
Food & Drink		15 days					
Plan Food & Drinks		1d					
Make Shopping List		1d					
Buy Supplies		1 day					
Decorations		16 days					
Plan Decorations		1d					
Buy Decorations		1 day					
Make Decorations		3 weeks					
Sales		29 days					
Design Tickets		2 days					
Print Tickets		1 day					
Create Posters		2 days					
Promote Dance		5 days					
Sell Tickets		2 weeks					
Final Setup		1 day					
Setup Chairs		30 min					
Setup Tables		30 min					
Sound Check		30 min					
Setup Spotlights		1 hr					
Setup Black Lights		1 hr					
Hang Mirror Ball		1 hr					
Setup Food & Drink		30 min					
Hang Decorations		4 hr					
Final Check		10 min					
Dance		2 hr					
Start Dance		0 hr					
Sell Food & Drink		2 hr					
Sell Fun Stuff		2 hr					

The project has several parallel streams, which in this case worked out so that the grouped tasks can mostly be done independently until the *Final Setup* stage, where everything must be put together just prior to the dance.

Tracking Time

This book also includes a visual timeframe in each chapter (a special calendar with completed dates crossed off, days remaining and an indicator of the current project phase).

This simple, familiar visual is intended to help the children to be more aware of time passing as they progress through the book and the project, and intentionally add a little bit of deadline anxiety - "only 9 days left!" Young or old, we all seem to work better when we have a deadline and have visibility of time elapsing.

Focus on Relationship Management

There is a strong focus on *relationships* (and not just the boy/girl Valentine's kind) in this story. Learning to work with people is a crucial skill in life, and there is an explicit emphasis on relationship, stakeholder and change management aspects and skills development throughout the story.

The glossary has also been significantly expanded from the prior books to include the related concepts and definitions introduced in this book.

In some ways, the organizing of the dance itself is simpler than some of their other projects - at least, from the technical perspective of identifying the deliverables and putting together a plan.

- Have it in the school Gymnasium? Check.

- Food and Drinks? Check.

- Music? Check.

- Tickets and flyers? Check.

- Decorations? Check.

- Participants? *Uh oh…*

The project kids are forced to learn a whole range of 'soft' skills and terms in order to 'survive' this project and deliver a successful dance. These skills are centered around working with people, influencing them, and engaging some very special people (*advocates*) to help convince everybody to come to the dance. Not *only* come to the dance, but to make decorations and bring baking, and therefore help out (for free!) and make the project easier as well.

Challenges

The primary obstacle facing the project kids is the extreme lack of interest in the dance (not apathy, but an active disinterest), due to the spectacular failure of the dance the prior year. They recognized that although they could technically organize a 'dance', there was a very high risk that there would be negligible participation. This introduced secondary, but significant risks in relation to the project budget (expenditures for food that would be wasted, and low income/cost recovery for what is supposed to be a fundraiser for the school).

The kids arrive at some very creative solutions that (if they worked) would reduce the cost risk and risk of food waste, through the contest for best baking - while hopefully raising interest (motivation) to come to the dance and see if they won. A second idea was intended to reduce the workload of the committee, while also raising the interest levels of students, through having students create and hang up decorations which would be judged. Both ideas use the concept of *crowdsourcing*.

Unfortunately, the principal pointed out that while these ideas both had merit, they were not likely to be strong enough motivators on their own to (a) get kids to come, (b) make decorations, or (c) bring baking.

The project kids needed to learn a whole new set of 'soft skills' and concepts in order to tackle these obstacles, including:

- Stakeholder management (who are they, how we engage with them, managing expectations, etc.)

- Relationship management (how to get along with different kinds of people)

- Influencing the actions and behaviours of others

- Understanding motivational factors (Extrinsic & Intrinsic)

- Additional communication skills and approaches (we can always get better at this, no matter how old we are)

- Utilizing **Advocates** to introduce positive changes and communicate effectively to the masses, while increasing stakeholder motivation and engagement.

They also learned more about leadership (delegation, responsibility and accountability).
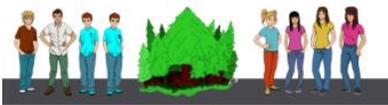
Unfortunately, they had other problems as well, from a simple misunderstanding about a little kiss, to…

Subversive Forces

The kids also have to work against 'subversive forces', in the form of the grade 8 bully 'Pimple Pete', who ran the unsuccessful dance the year before. A reluctant provider of information about the prior year's dance, Pete works to continually undermine the efforts of the dance project team. This first act takes the form of 'telling the principal' when the girls are forced to enlist the other Project Kids from the Primary school, because the perception of the dance is so extremely negative they can get no help from students in the Middle School.

When he is unsuccessful in trying to gain control of the dance (and worse - the Primary school kids are now allowed to help *organize* the dance!), Peter resorts to viral communication in the form of malicious *rumors* that are intended to make the dance committee give up hope (No more decorations! No baking!). However, the rumors also get quite personal as one of the messages seeks to undermine the relationship between a project team member and a key advocate. The bully, Peter, attacks from all fronts - using a negative form of 'advocacy' to spread his rumors. (This highlights the importance and moral values of being careful with all of your messages, as dishonest messages can spread as quickly - often more so - than real, honest messages).

Driven 'underground' with his activities following the principal's speech about rumors, we see and hear very little from Pimple Pete - until the final, very public act of sabotage.

With the support of the principal (their Project Sponsor), a store of innate stubbornness and a lot of ingenuity, the project kids are able to recover from each of these near-disastrous acts of sabotage and keep the project moving forward.

Other concepts

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

- **Change Management** (War Council / Because I Said So / Rumor Has It… / Poison Pen / Sweet Revenge)
- **Cost / Budget** (Behind Enemy Lines)
- **Estimating / Measurement** (Behind Enemy Lines, Rumor Has It…)
- **Leadership** (Fearless Leader, Face the Music)
- **Lessons Learned** (Just Desserts)
- **Requirements** (New Recruits, War Council*)*
- **Resource Management** (Behind Enemy Lines)
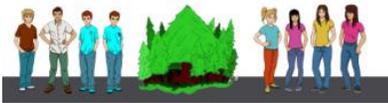
- **Risk Management** (Behind Enemy Lines, Rumor Has It… / Sweet Revenge)

- **Stakeholder Management** (Pimple Pete / No-Man's Land / Behind Enemy Lines / War Council / Because I Said So / One Little Kiss / Love Me…Not)

- **Teamwork / Human Resource Management** (Hasty Decisions / I Could Have Said No / I Plead Insanity / New Recruits / Sour Grapes / Fearless Leader / Behind Enemy Lines / Green-Eyed Monster / Face the Music)