Little Koala's Party — How to use this resource

This problem solving resource involves use of the following maths concepts:

- numbers represented as words, numerals, tallies and pictures
- counting by ones (to 21)
- addition
- counting on
- tallying
- one-to-one matching

It is designed for use by the teacher with the whole class when introducing, revising or reinforcing the maths concepts; and to discuss problem solving strategies, including checking by drawing. There is an opportunity for students to apply the strategies while working in a small group planning a real or hypothetical party for the class.

The skills are applied in the context of party preparations.

In planning for the party Little Koala must:

- count the number of guests
- write invitations
- plan the menu and determine quantities required
- choose party gifts (hats) and determine quantities required.

Students step through the process, helping Little Koala work out the numbers for her party before planning their own following the same sequence of steps.

Of course the story can be read just for enjoyment but the main purpose of the resource is to engage students in a problem solving investigation.

It is not necessary to complete all the steps in one session. In fact, the story may be best suited to use over a number of shorter sessions with each session targeting one set of the questions.

Suggested sequence:

First reading

Simply read and discuss the story as you would any other, discussing party experiences and knowledge of animals to build interest, background knowledge and context.

Second and subsequent readings

You will notice this symbol in the bottom right hand corner of the following slides:

Slide 19 — Invitations

Slide 20 — Party food

Slide 22 — How many hats?

Click on the symbol to open a page designed to stimulate discussion and provide opportunities for students to engage in problem solving in small groups.

Click on the arrow on the discussion page to move to a second discussion page or return to the story.

Discussion questions

Invitations

If you were to have a party for the families of the children in your
group —

- How many guests would there be?
- How many invitations would you write?

Children need to follow the same steps as Little Koala followed:

To find out the number of guests, students:

- List the children in their group (remind them to include themselves).
- List, tally and count the people in each family.
- Total the number of people in all the families together (by adding, tallying or counting on).
- Draw a picture of each family to check the total.

To find out the number of invitations required:

- Ask students to consider whether invitations should be given to each guest (family member) or each family.
- Look back at Little Koala's invitation to see what she did.
- Make a decision about the number required.

Party food

Slide 1 — Little Koala's party

How many of each item do they need to make?

- How many gum leaf pies?
- How many wattle cupcakes?
- How many glasses of bush punch?

To work out the answers they need to know:

- The number of guests.
- The number of each item per guest.

Ask students to suggest ways of working out the numbers required e.g.

- Draw each guest and the number of items required for each, then count the total.
- Make tallies.
- Count in twos.

Note: The suggestions will depend on the abilities of the students. Some may realise that 21 cupcakes and 21 drinks will be required because that is the number of guests. Some students may still need to match the items one to one to guests.

Slide 2 — class party

If you were to have a party for the families of the children in your group —

- What would you have on the menu?
- How many of each item would you need?

You may wish to decide on the menu as a whole class or allow students to decide in their groups. Decisions must be made about:

- The menu items required (e.g. sandwich, cupcake, drink).
- The number if each item for each guest.
- The number of guests.
- The total number required of each menu item.

If the decision about menu items is made with the whole class, students could still work out the numbers of items required for their group (and then total for the class if necessary).

How many hats?

Slide 1 — Little Koala's party

Do you know how many wattle hats and how many gum leaf hats Little Koala has to make?

- How would you work it out?

We know that there will be wattle hats for the girls and gum leaf hats for the boys. Do we know how many boys and girls there are? (No) *How could we find out?* (If you look back at the pictures of each family, the girls have bows and the boys don't.)

- Tally, count or number the boys and girls in each family (don't forget the parents!)
- Total the number of wattle hats for the girls (11) and gum leaf hats for the boys (10).

Slide 2 — class party

If you were to have a party for the families of the children in your group —

- What gifts would you make for the boys and girls?
- How many of each would you need to make?

You may wish to decide on the gifts as a whole class or allow students to decide in their groups. Decisions must be made about:

- The gift for boys and the gift for girls (if not the same).
- Whether parents will receive a gift.
- The number of boys and girls in each family in the group (or class).
- The total number of boys and girls in all the families in the group (or class).
- The total number required of each gift item.

Look for other resources using the characters and items from the story.