

FAQs for 321 Countdown

1. Starting 321 Countdown

Q: How does "321 Countdown" fit into the K-6 mathematics syllabus?

A: "321 Countdown" is a project aimed at supporting the K-6 mathematics syllabus. The learning framework covers the Number strand of the Mathematics syllabus. The project has expanded to include a learning framework for measurement.

"321 Countdown" assists teachers in developing a mathematics program that addresses the syllabus outcomes. Resources such as *Developing Efficient Numeracy Strategies* provide examples of how aspects of the "321 Countdown" learning framework can be developed into teaching activities as well as providing the links to the Mathematics K-6 syllabus outcomes.

Through the assessment process and the planning of activities based on the analysis of this assessment, teachers can develop a program that caters for students working at different stages within the framework.

Q: How am I going to find the time to assess the whole class at the beginning of each year?

A: You might consider assessing the students over a period of time. You could complete some of the assessment questions with each student, to begin to build a picture of the student's problem-solving strategies. These results could be used to form initial groupings, with the remaining questions completed over a period of time.

Use your professional judgement when administering the questions. Do not try to complete every question on the schedule if the student is obviously struggling.

An alternative approach could be to use the whole assessment on a small number of students each week. There is a need to plan for continuous monitoring of student performance. This could occur through recording observations as students complete activities, using student work samples, student reflection journals and discussions with students and/or parents.

In this way you do not need to use the complete assessment schedule to reassess each student but keep track of the students' learning along the continuum.

Q: How is "321 Countdown" different from what we are doing now?

A: The project offers a school-based model of professional development that enables teachers to make informed judgements concerning each student's knowledge and problem solving strategies.

Teachers are encouraged to share discoveries, questions, observations and teaching ideas through collegial meetings. The use of video has proven very effective in stimulating these meetings.

The project also provides a performance-based model of assessment. The assessment process focuses on identifying the upper limits of each student's knowledge and strategies rather than on whether the response is correct or incorrect.

The project's learning framework provides teachers with an explicit framework of students' problem-solving strategies, showing increasing levels of sophistication.

By observing students' strategies and relating these to the learning framework, teachers are able to develop a richer interpretation of students' thinking. Teachers are also able to see clear directions for programming students' learning and planning appropriate teaching activities to assist students' number development.

2. Working with 321 Countdown

Q: *Where is the explicit teaching in "321 Countdown"? It seems to be just games.*

A: Children are active learners who create, modify and integrate ideas by interacting with the physical world, other children and adults. They learn by talking about what they are thinking and doing. Mathematical activities that resemble games often provide the basis for this interaction and learning. The activities in "321 Countdown" are based on teachers assessing the students' current thinking and strategies, identifying the next stage of development for each student and then planning explicit teaching activities designed to move the students to the next stage.

Through this model, teachers are following an effective teaching and learning cycle that builds on students' current method of thinking.

Q: *How do I assess the students once they're in groups?*

A: Each teaching activity or session can provide an opportunity for gathering information on student performance. Through continuous assessment, a small number of students can be assessed at each lesson. Assessment may take the form of recording observations of student performance noting additional information of aspects of the framework.

The resources *Developing Efficient Numeracy Strategies Stage 1 and Stage 2*, provide assessment tasks at the end of each section that could be used to assess student progress. These questions are organised in terms of the "321 Countdown" learning framework and could be easily adapted to group work.

3. My child's school & 321 Countdown

Q: *Where will the textbook fit into "321 Countdown"? At least with a textbook I can see what my child needs to learn.*

A: "321 Countdown" uses a range of approaches to support student learning. The teaching activities are designed to meet the individual needs of students. Often these teaching activities are readily modified to accommodate several different stages of development.

For example, an activity may be modified by changing the type of die used or by extending the number range. By their very nature, most textbooks are limited in addressing students' methods of solution. Just as students' ways of knowing and representing mathematics may be different from those of adults, so too students' solution methods may be different from those presented in print.

Textbooks can contribute to the range of resources teachers draw upon. However, implementing "321 Countdown" is a way of following the intent of the Number strand of the Mathematics K-6 syllabus.

It may be worthwhile for your staff to evaluate the effectiveness and value of the textbook. It is worthwhile considering, *Will the one text fit the needs of all of the students in my class?* After all, textbooks don't teach mathematics, teachers do!

Q: *Is it important for my child to learn multiplication tables?*

A: It is important for children to be able to recall and apply multiplication facts up to 10×10 by the end of stage 2. "321 Countdown" focuses on students' ability to understand the processes involved in multiplication and division. The learning framework outlines a progression of how students form and share equal groups. As a basis for understanding when it is appropriate to multiply or divide, it is important initially for students to develop strategies for using groups. CMIT aims to develop students' strategies to use multiplication and division successfully, not simply recall facts.