














Addition, Subtraction, Multiplication and Division: Estimation Reasoning

Aim: Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. I can solve reasoning questions involving estimation.	Success Criteria: I can round numbers to a certain degree of accuracy. I can use mathematical language to explain my reasoning.	Resources: Lesson Pack
	Key/New Words: Problem solving, solutions, predict, identify, RUCSAC, reasoning.	Preparation: Estimation Talk Partner Activity Sheet - 1 per pair Estimation Reasoning Activity Sheet - 1 per pair

Prior Learning: It will be helpful if children are familiar with the methods used to solve addition, subtraction, multiplication and division problems and can round numbers to a certain degree of accuracy.

Learning Sequence

	Estimation Reasoning 1a: Use the step-by-step slides from the Lesson Presentation to model how to use rounding to estimate the answer to a question.	
	Estimation Reasoning 1b: Recording their answers on the Estimation Problems Talk Partner Activity Sheet , the children work with a partner to apply the strategy to a similar question, explaining their reasoning. Display the answers on the Lesson Presentation and discuss.	
	Estimation Reasoning 2a: Use the step-by-step slides from the Lesson Presentation to model how to check answers using estimation.	
	Estimation Reasoning 2b: Recording their answers on the Estimation Problems Talk Partner Activity Sheet , the children work with a partner to apply the strategy to a similar question, explaining their reasoning. Display the answers on the Lesson Presentation and discuss.	
	Estimation Problems Reasoning 3a: Use the step-by-step slides from the Lesson Presentation to model how to spot and correct errors in calculations.	
	Reasoning Practice: In mixed-ability pairs, the children complete the Estimation Problems Reasoning Activity Sheet to show that they can solve reasoning questions involving estimation.	
	Reasoning Answers: Using the slides from the Lesson Presentation , discuss the answers to the activity questions. Children self-assess how confident they feel about solving reasoning questions involving addition and subtraction.	