

# Turning test prep into learning

## Summary

This strategy focuses on changing classroom practices devoted to preparing students for high-stakes assessments. It aims to help students detect and correct their own individual misconceptions. The strategy shifts test preparation from repetitive practice on multiple-choice items and checking answers to engaging students in sense-making and reasoning about the mathematical content and processes embedded in the items. It works by helping students who have tried an item to analyze and understand the incorrect “distracters.” This has four highly beneficial effects:

- Students come to understand their own individual mistakes and misconceptions.
- This “detective” role leads students to think in more reflective ways.
- Students feel more responsible for their own learning.
- The strategy leads to more robust long-term learning and, if done well, higher test scores.

To employ this strategy effectively, the teacher needs to handle classroom discussions with and between students in a facilitative non-directive way. These skills also make teachers more effective in all their work.

## Challenge addressed

Test prep takes too much time

## The strategy

### Key features

- works with multiple choice items from state tests
- focus on the distracters leads to understanding the concepts

## Background

Students who can detect and correct misconceptions, their own and others', have more reliable understanding. Research suggests that having this 'debugging' skill is a key distinction between high and low performers, and underpins long-term learning.

## Implementing the strategy

This activity fits into the curriculum in various ways. Teachers may prefer to use the activities as part of the test prep time before state or district tests. They are specifically designed for this purpose. A collection of related items can be used over several class periods, each as a class opener. Or, several items together can be the basis of a single lesson. The critical feature of classroom use is to have students discuss their reasoning and how someone might get any of the incorrect choices.

This activity can also form an effective part of review of earlier work.

The item design is generative so that teachers can develop their own items to fit with the curriculum-in-use. They can be used to prepare for unit tests and can serve as items on a unit test.

**Other support available.** This teaching approach involves classroom discussion in which the teacher plays a facilitating non-directive role. This will be unfamiliar to some students, for whom the teacher is seen mainly as the source of problems and right answers to them. *Learning through mistakes and misconceptions* offers professional development focused on this.

### **Strengths**

- raises test scores more effectively than practice alone
- help students' to think in more depth
- replaces less productive 'test prep' activities
- helps develop important new skills in both students and teacher

### **Likely Challenges**

- requires the teacher to handle classroom discussion non-directively
- appears to go more slowly, though in this case "slower is quicker".

### **Tool**

*Turn Test Prep into Learning* classroom teaching materials use collections of multiple-choice items to enhance student learning. The tool includes multiple choice items, samples of student work, vignettes of classroom discussions related to items, and a guide for teachers that offers assistance in using the tasks to support student learning.