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## 13 voting strategies that will work in the classroom

Using a student response system (SRS) encourages student engagement in the lesson, while providing the teacher with immediate feedback on how well the subject matter has been understood.

The credit card size TurningPoint Keypad can be used anonymously or individually assigned to enable the recording of the each student's responses, or by the class as a whole. The TurningPoint Keypad range includes both infrared and radio frequency versions; kits are available for class sizes of 28 or 32.

For use without a computer, the TurningPoint ResponseCard Anywhere RF Receiver can be used to poll students, teachers and parents literally anywhere – in class, on an excursion, schools grounds, gymnasium, staff meetings, at a museum etc.

Classroom teachers wanting to conduct self-paced assessment can save time using the XR Keypads, which allow alpha-numeric responses and provide automatic test marking and reporting.

TestingPoint, a MS Word based authoring program supplied as part of the TurningPoint suite allows teachers to quickly create tests with: Multiple Choice, Multiple Response, Matching, Short Answer, True/False, Numeric Response, Fill in the Blank and Essay Questions. QuestionPoint is also included with its bank of 30,000 or so questions.

### 1 Status check

While teaching, poll students for their degree of confidence in their understanding of a topic.

### 2 Exit poll

At the end of a class session, poll students to find out which of several concepts covered that day they most want to spend more time on.

### 3 Assess prior knowledge

Find out what students already know, think, believe, or perceive about a topic or idea before addressing it in class.

### 4 Provoke thinking

Ask a provocative and interesting, but inviting, question to “open up” a new topic or subject, get students engaged and thinking about it, and provide context and shared experience for subsequent learning.

### 5 Elicit a misconception

Lead students to reveal a specific common misconception or belief that may hinder their learning, so that it may be articulated, examined, and dispatched.

### 6 Exercise a cognitive skill

Drive students to engage in a specific type of cognitive activity or exercise a specific habit of mind (c.f. Dufresne et al. 2000) such as seeking alternative representations, comparing and contrasting two situations, categorising and

classifying cases, or strategising a solution.

### 7 Build conceptual structure

Hone, link, or extend a concept by challenging students to identify its limits of applicability, differentiate it from a similar concept, recognize a relationship with another concept, or apply it in a new context.

### 8 Stimulate discussion

Provoke dialogical whole-class discussion with a highly disputable question having multiple reasonable or defensible, but not obviously correct, answers.

### 9 Induce cognitive conflict

Create a teachable moment by deliberately bringing students to the realisation that two of their beliefs, perceptions, ideas, interpretations, or models conflict.

### 10 Anticipate a demonstration

Ask students to predict the outcome of a demonstration or experiment, and commit to that prediction, so that they will be attentive to the important aspects, and will learn more when their prediction is either confirmed or disconfirmed.

### 11 Test capability

Determine whether students have developed the capacity to answer a particular kind of question.

### 12 Demonstrate success

Build students' confidence and help them to recognise their own progress by posing a question that most can answer successfully now, but could not have at a previous time.

### 13 Review

Pose a series of rapid questions with minimal discussion, to remind students of a body of material already covered and to help both students and teacher gauge how well students understand it.

### Reference

- Ian D Beatty and William J Gerace. Technology-Enhanced Formative Assessment: A Research-Based Pedagogy for Teaching Science with Classroom Response Technology. *J Sci Educ Technol* (2009) 18: 146–162 [Available online at <http://www.springerlink.com/content/j878737x4421u753/>]



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