

AIMS Teaching Ideas

- Encourage pupils
 - to think for themselves
 - to enjoy figuring things out
 - to criticise their own reasoning
- Turn students into teachers

Ideas to try

- 1 Discuss lessons with a teaching partner, before and after each class.
- 2 **Problem-based learning.** Plan your courses around *projects chosen by the students*. Their projects will then motivate them to learn relevant science and mathematics. (For example, if the project is ‘make a solar water-heater’, then the students will need to learn about *pressure, density, friction, radiation*; and if they try to optimize their design, they will discover a need for *calculus*. The project ‘understand the AIDS epidemic’ will motivate learning about *physiology, cells, viruses*; about mathematical functions such as *exponentials*; and about *probabilities*.) When a project is completed, offer a new range of projects that will motivate other topics from the science and mathematics curriculum.
- 3 Encourage students to **ask questions**. And when a student asks a question, *don’t answer the question!* Say ‘what do *you* think?’ (Reason: students must be active.)
- 4 **Ask questions.** Plan each lesson around one or two questions. Help the students discover answers to the questions. (Reason: students must create the subject for themselves.)
- 5 When you have explained a new idea, **ask a question** to find out whether the idea has taken root in each student.
- 6 When asking the class questions, give *all* the students time to answer. And ask the class to **criticise their own answers**. For example, ask if they have an alternative answer that they think might be correct.
- 7 If students answer questions incorrectly, **ask another question** to direct their self-criticism.
- 8 In large classes, use **voting** to allow everyone in the class to answer a question. Voting encourages everyone to be awake, and gives immediate feedback to the teacher about the progress of the class.
- 9 **Peer teaching.** Have students explain things to each other.
- 10 Have **seniors teach juniors**. (This may be useless for the juniors, but it’s great for the seniors!)
- 11 Give students **free time** to think and formulate questions.
- 12 Put students in small groups to discuss things. Have groups explain their thoughts to the whole class.
- 13 Have students evaluate their own presentations.
- 14 Have students evaluate each others’ presentations.
- 15 When asking a group for opinions or feedback, go through the group from the most junior to the most senior.
- 16 Encourage students to **question authority**. ‘Don’t memorise – argue!’
- 17 Establish a group of teachers who meet for two days every 6 weeks to share teaching ideas.

Remember

Learning is maximized when:

- (a) the **student participates completely in the learning process**, controlling its nature and direction;
- (b) learning addresses practical, social, or personal **problems**; and
- (c) **self-evaluation** is the principal method of assessing progress or success.