A core, prescribed content for all Physics ITE?

James de Winter
jad26@cam.ac.uk
Questions

• If there were prescribed content for initial teacher education for any/all routes, what would the physics content be?
• How much academic reading and/or research should it have in it?
• How long?
• Where and when? (class/faculty/elsewhere)
• Does it need to be led by an experienced tutor?
• What is an experienced tutor and how do you become one?
A starting point

- One book
- One paper
- One session
- One demo
- One website (teacher)
- One website (student)
One Book
Oersted Medal Lecture 2001: “Physics Education Research—The Key to Student Learning”

Lillian Christie McDermott  
*Department of Physics, University of Washington, Seattle, Washington 98195-1560*

Research on the learning and teaching of physics is essential for cumulative improvement in physics instruction. Pursuing this goal through systematic research is efficient and greatly increases the likelihood that innovations will be effective beyond a particular instructor or institutional setting. The perspective taken is that teaching is a science as well as an art. Research conducted by physicists who are actively engaged in teaching can be the key to setting high (yet realistic) standards, to helping students meet expectations, and to assessing the extent to which real learning takes place.  
© 2001 *American Association of Physics Teachers.*  
[DOI: 10.1119/1.1389280]
This session will look at some of the challenges relating to the teaching of forces across KS3 and KS4 and ways to approach them. It’ll look at ways to help students to ‘see’ forces more clearly and get a grasp of what they do. There will be various force related activities to see and have a go with including things that involve ropes, skateboards, gravity defying water, UFOs and other toys.
One demo

When the series circuit shown to the right is connected, Bulb A is brighter than Bulb B. If the positions of the bulbs were reversed,

a) Bulb A would again be brighter
b) Bulb B would be brighter.
c) either of the above could occur.
Which of these circuits draws the most current?

a) Circuit A.
b) Circuit B.
c) Both the same.
One website (student)