



## Viscosity: Sinking Marble Method

### *Planning Board Notes*

The presentation shows some common errors when using a timer and then gives the children the opportunity to measure the time for a marble sinking in two different liquids.

Please note that some of the buttons may need to be pressed twice before they activate. This is because the presentation contains a mixture of animations and slides.

The first slide shows a timer being used incorrectly. The start button is pressed at the same time as the marble is dropped. It is stopped when the marble reaches the bottom of the container. Ask children to look for the errors and then discuss what should have been done.

The second slide shows the timer being started and stopped at the correct points (as the marble crosses the start and finish lines). However, the timer was not re-set to zero before the trial and so give the wrong answer. Again, ask children to look for the error.

Eventually, the next slide shows the timer being used correctly.

The presentation can then be moved to an animation which allows children to time a sinking marble. This will require two volunteers, one to start and stop the timer and the other to drop the marble. Children can measure the time it takes the marble to sink in the two liquids. Making several attempts on each one can allow a discussion on accuracy and the importance of taking averages.

To start the animation, press on the big measuring cylinder. The red button drops the marble, the green button re-sets the marble and clicking onto the other measuring cylinder changes the liquid. The timer has start, stop and re-set buttons.