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| **Ocean’s deep** Year: 8 | | Sequence: C | |
| Lesson Title: **That sinking feeling.** | | Suggested number of lessons: **1** | |
| Learning Objective:  All - can describe what makes an object float.  Most - I can explain why an object floats in terms of forces.  Some - I can analyse how an object floats and calculate relative densities to decide if an object will float or sink. | | | |
| Content of lesson: Density, Floating, Forces | | | |
| Literacy and numeracy:  Students will be calculating density using a worksheet. | | | |
| Learning Activities | Resources: |  | |
| **Starter**: Floating and sinking spiral to identify keyword. Or pictures related to titanic. | Powerpoint | **Risk Assessment:** Wet floors and slipping. | **Suggested Homework:** Research the need for Plimsoll lines. |
| **Main Activity**: Show the first couple of slides. Discuss their ideas as to why Jack died and Rose survived in the movie “Titanic”.  Students investigate objects that float and sink and how their weight changes in the water. The idea of an object weighing less or nothing can be quite a difficult concept for some students to grasp.  **Main 2**: Students then need to think about why Jack could not join Rose on the float even though there was enough space.  MAIN Students – should discuss this in terms of balanced forces and then density  ABOVE students – should move straight on to looking at relative densities.  Students can the use one of three differentiated worksheets to find out why Jack could not sit on the raft with Rose.  Investigate Archemedes principle and then carry out calculations to see if Jack could have survived. | Class set of different objects which float and sink   * (i.e. iron, plasticine, wood block , aluminium) same size * Newton meters (if poss different ranges) * Rubber bands * Ice-cream tubs (troughs) * Salt * Weighing boats * Spatulas * Balances |
| Plenary: Peer assessment/PIP on their work. |  |

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