



Sedimentary Pile – Teacher Notes

Sediments are **compacted and cemented** to become rocks. Mineralising groundwater cements the clasts together and overlying beds provide pressure that compacts and de-waters the sediments.



Students can create their own rock columns by layering coarse to fine sediments into plastic cups and pressing them down firmly. Cementing groundwater can be made from a supersaturated solution of Epsom salts. Keep adding Epsom salts to hot water and stir until no more can be dissolved. Soak the sediments and leave for a couple of weeks to dry. Plastic containers may be left or can be removed by a Stanley knife. Students can challenge each other to guess “Way up” by looking at graded bedding indications in the beds.

Materials per student or group

- Containers with different sediments e.g. builder’s sand, garden sand, beach sand, potting mix, pea gravel, pindan. The more varied the colours the better
- Clear plastic drinking glasses or the bottom half of clear plastic drink bottles
- A super-saturated Epsom salt solution or plaster of Paris
- Water
- Stanley or craft knife

If the activity has to be completed more rapidly, dry Plaster of Paris can be mixed weight for weight with the sediments. Layer the sediments into the container, press down and add water. Cement powder can also be used but a whitish blurred rock results.

OPTION Index fossils can be made from buttons, cutting out shapes from plastic ice cream containers or buying plastic dinosaurs. If plastic dinosaurs are placed into only one bed they can be used as index fossils. Since the dinosaurs represent the same period of time, students can arrange their columns to line up the dinosaur beds and find who has the oldest beds and who has the youngest.

