The Himalayas in 30 seconds!
Making a miniature fold mountain range in an empty box

From Wei Hsiu,
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After reviewing this activity, I think that this activity is very interesting to pupils. The Himalayas in 30 seconds may be a magical view to younger pupils. But I think it might need to add some extended activities which can make pupils thinks more and get more abilities about inquiring science to older pupils.

I suggest some extended activities as below.

1. Teachers show the pictures of the layers of rocks and fold and give the model of this activity to students. Ask students to operate this modal to try to find out what kind of force may create the structure of folds and faulted.

2. The actual layers of rocks are hard. In this activity, we use layers of sand. The sand is not dense. The actual layers of rocks are in the ocean and we use layers of dry sand in this activity. Teacher can ask pupils to improve this activity. Let this activity more like actual model .

Thank you for sharing this earth learning idea. It is useful to teachers and pupils.

From Claire, UK
I recently observed a fantastic A level geology lesson aimed at summarising geological mapping, recognising structures etc. It illustrated a fun but very clever way of modelling in 3D to help the visualisation and understanding of a concept that can be tricky for some to get their heads around!

The teacher used a selection of cakes (food is always a good way of getting pupils' attention!). They should be of the layered variety i.e. swiss rolls (chocolate and jam), angel layer cake etc. Cakes are piled on a table with pupils sitting around. The cakes can then be used to demonstrate various structures by slicing them and arranging in different ways. For example: Slice the swiss roll lengthwise and place one half upside down (antiform) and one half flat side up (synform).

Use the horizontally layered cakes to slice at an angle and offset to illustrate faulting. Blocks could be used underneath the cakes to raise one side of the faulted "strata". Push each side together to show folding.

Any combination of structures could be combined to show the complexity of structures. When several have been amalgamated, slice the top off horizontally to show the "bird's eye view" as on a geological map. Of course, the side view is visible at the same time to show the complete 3D picture.

Anyway, the possibilities are endless and the pupils can eat the cakes as they are trimmed which is very popular.

(Credit goes to Fraser Smith at John Kyrle High School, Ross on Wye, Herefordshire, UK for this brilliant lesson).

Another good way of illustrating folds is to use bananas (without their skins of course) as they have just the right consistency.

From Dave, UK
I suggest replacing flour with plaster of Paris. When the folds have formed, fix the board/cardboard in place with a small piece of plasticine or similar, then sprinkle some water over the folds. The plaster will set and the shape can be kept.

From Marcus, UK

This photo shows a recumbent fold five miles east of Saundersfoot, Pembrokeshire, UK. It occurs in shales and limestones; this type of structure can sometimes be reproduced in the flour and sand.