Unit 04 Geomations: Icebergs

Out in the ocean, there's a giant iceberg sitting out here. Big thing threatening the oil platforms floating around. And in the bottom of this very special iceberg, there is a really strange looking, googly-eyed space alien. And you have been given the task to go out there in your little boat sitting here in the water to get the space alien out.

Now, you're a good geosciences 10 student, and you know that all icebergs have about 1/10 above the surface, and they have about 9/10 below the surface. So you know immediately what to do. You take your gimongous chainsaw and you chainsaw off the top of the iceberg and throw it away, because you know what this will cause is that the iceberg will come bobbing up, carrying the space alien with it.

And so after it gets done bouncing up and down for a little bit, you find that the iceberg is almost as tall as it was before. It still has, sitting way down in the bottom of it, the space alien that you're trying to get to. So there's a space alien down here. And it still has about 1/10 of its height above the surface, and about 9/10 of its height below the surface.

But what you find is it's just a little bit shorter than it was, and it doesn't stick down quite as far as it did. Now you wump the top off again, and you keep wumping the top off, and you keep wumping the top off. And after a long time, you get down to a little iceberg that doesn't stick very far down.

Now it still is the same picture, that it has 1/10 above, and it has 9/10 below. And if you're not careful, you're sitting there admiring this lovely fact of science, and the space alien sticks out a giant tentacle, and it grabs your ship and throws it to the bottom of the sea. And so you'd better not do that.

However, there is a scientific piece to this. Suppose instead of space aliens, that we wanted to talk about mountain ranges. Now, we know that mountain ranges stick up above the plains. But you might not have known that they also stick down.

They have a root in the same way that an iceberg has a root that it's sitting on. There's a slight difference in that about 1/7 of a mountain range is up and about 6/7 of a mountain range is down, way down. The rocks have been heated. They've been squeezed. There's all sorts of interesting things going on and new minerals being grown.

And at the surface, the streams are sitting here, busily trying to grind away the mountain range. As the streams grind away the mountain range, why, the deep stuff will come bobbing up towards the surface. And if you come much later and look at it, you'll find that the rocks have barely any mountains left.

There's still a little bit of root with 1/7 up and 6/7 down. But now what you'll find is that the rocks that had been cooked way down, and bent way down, are very near the surface. And you can go see them.