

Bellringer

What type of stress builds large mountain ranges?

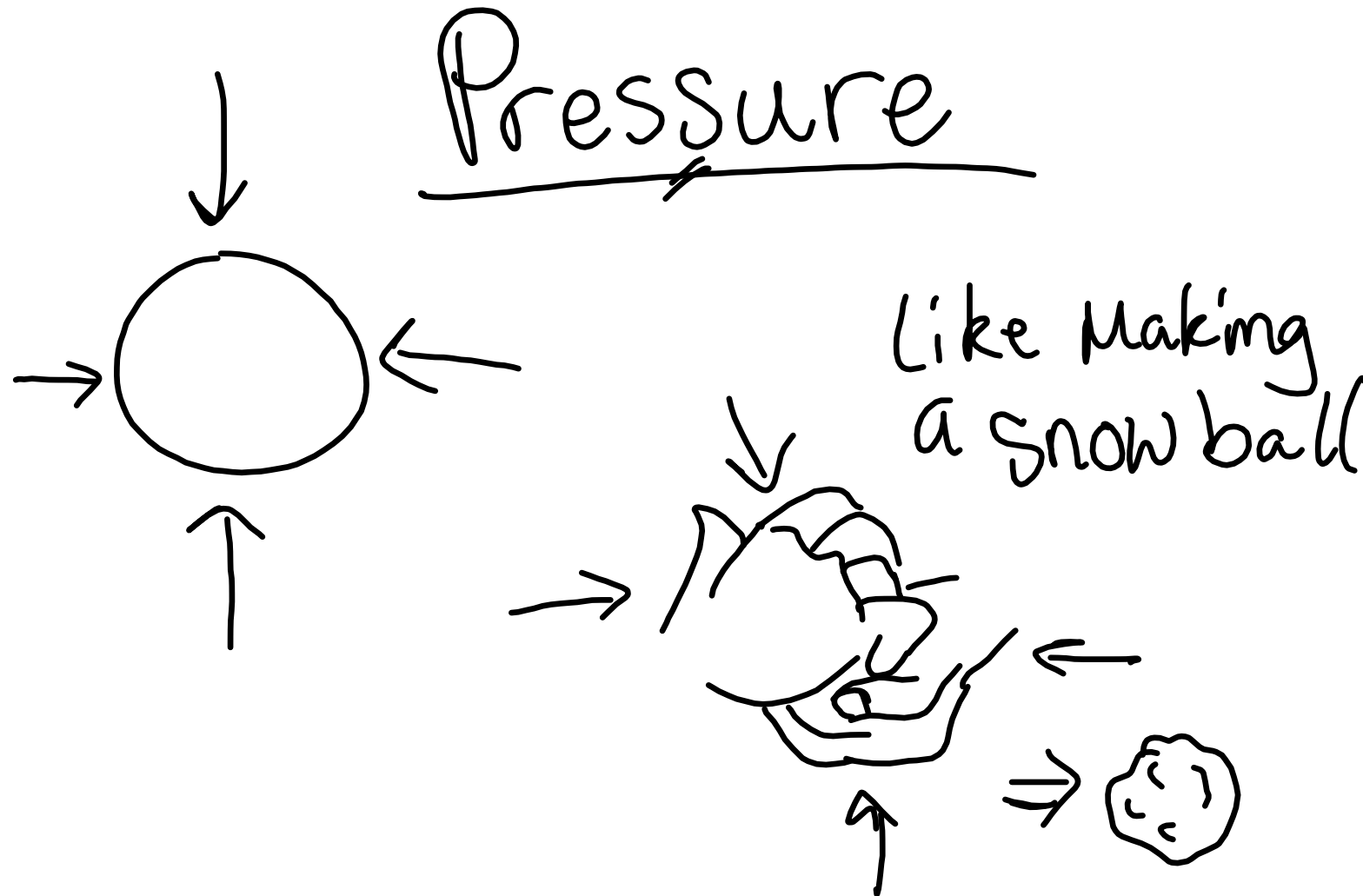
What's the difference between an anticline and a syncline?

Learning Objectives:

I can interpret information to determine the geologic structure.

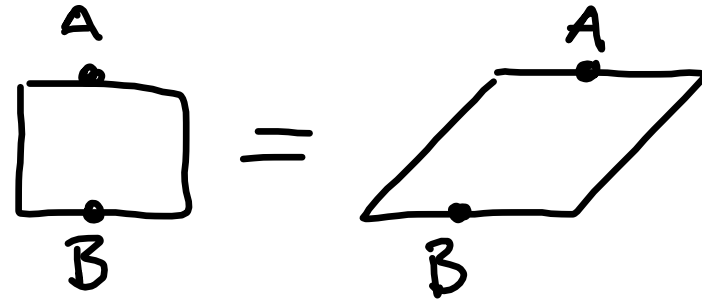
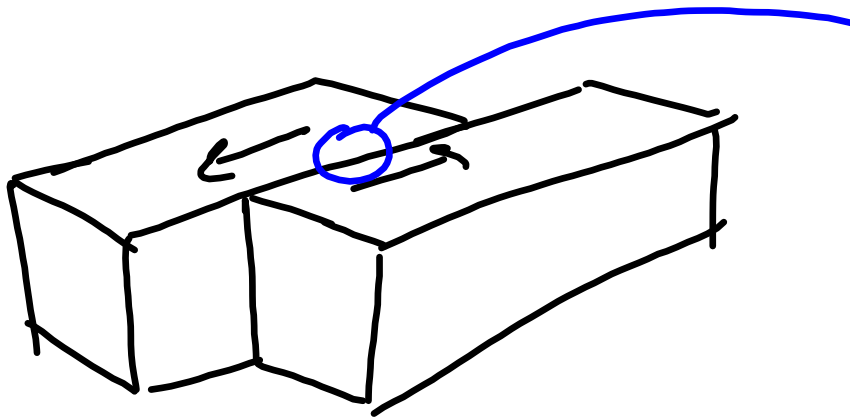
Deformation – A change in the shape, position, or orientation of a material, by bending, breaking, or flowing.





Force per unit area, or the “push” acting on a material in cases where the push is the same in all directions.

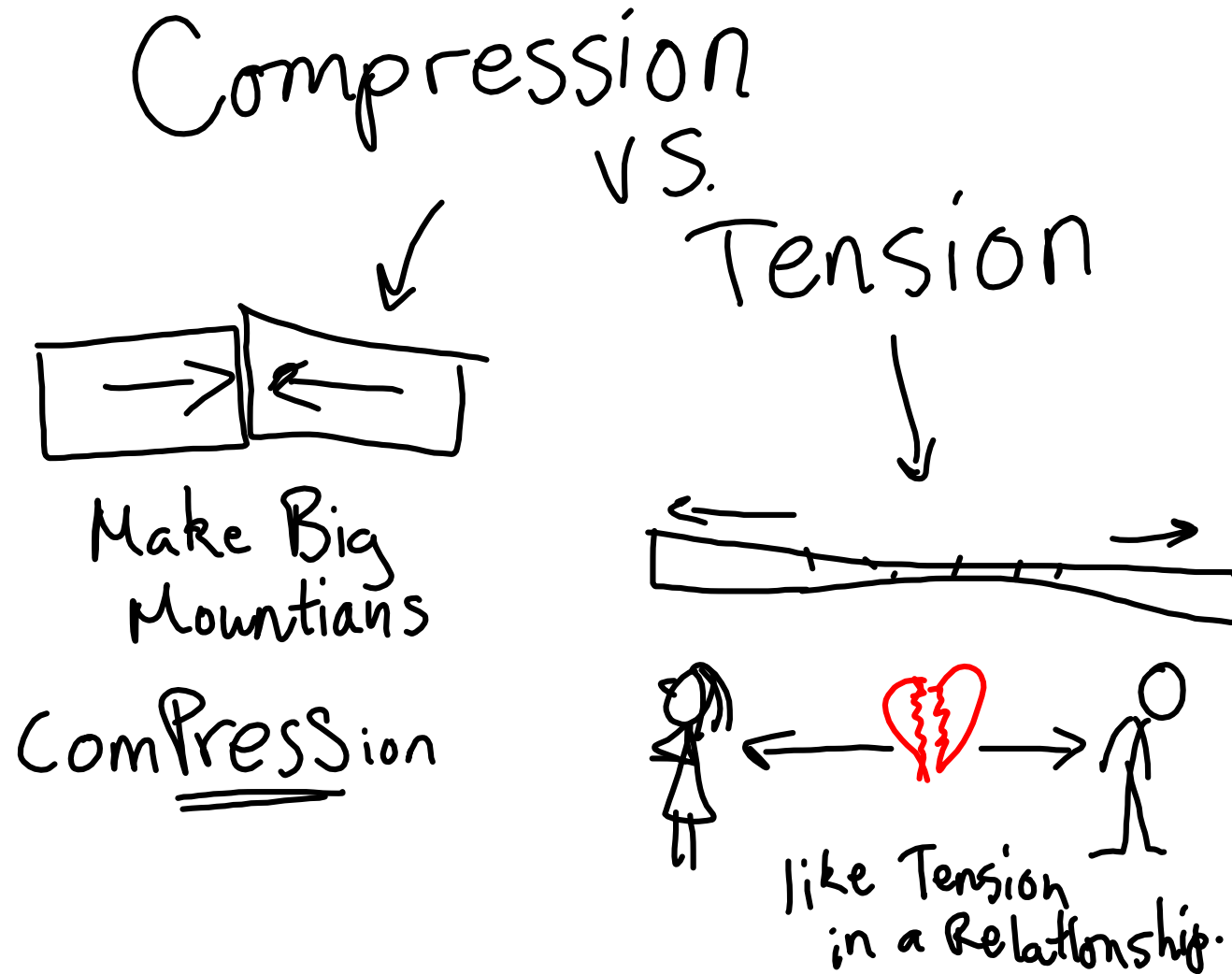
Shear



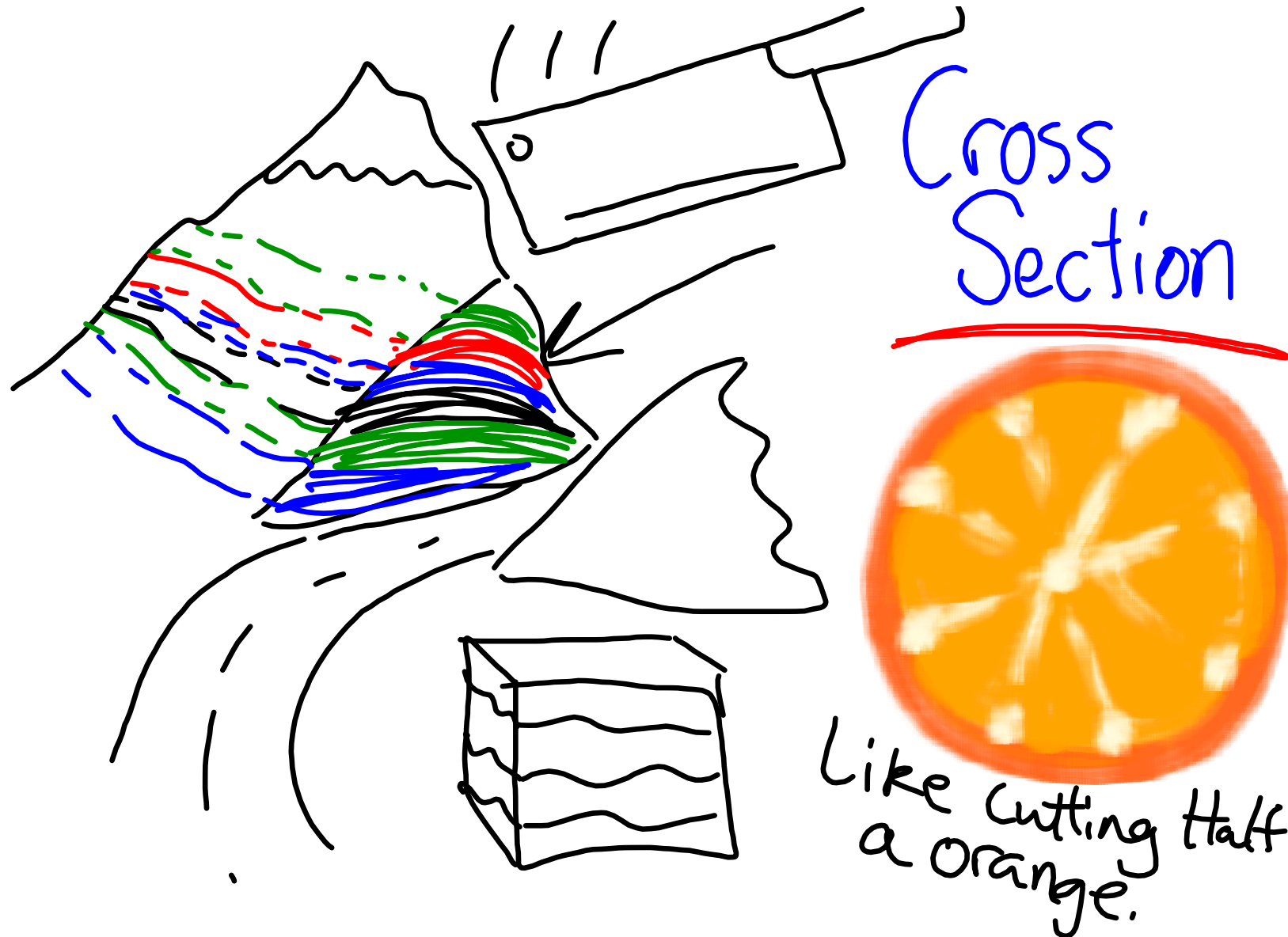
Like a Deck of
Cards



A stress that moves one part of a material sideways past another part.

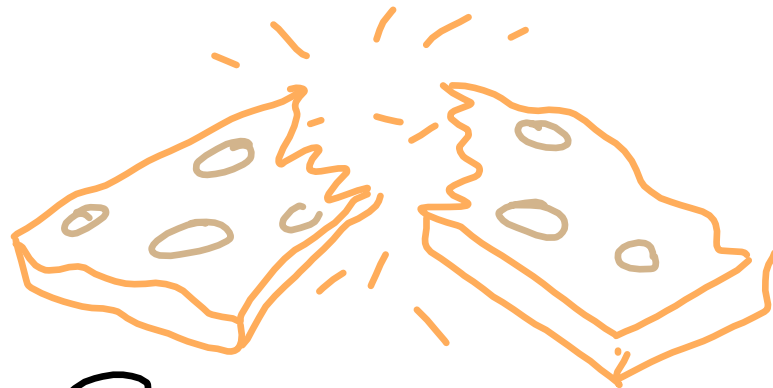


Compression is a stress force that pushes from two converging directions that can lead to building up of material smashed together and Tension is a stress that pulls on a material and could lead to stretching.

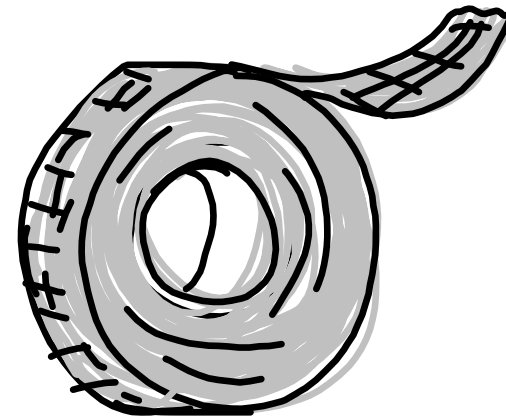


a diagram depicting the geometry of materials underground as they would appear on an imaginary vertical slice through the Earth.

Brittle vs Ductile.



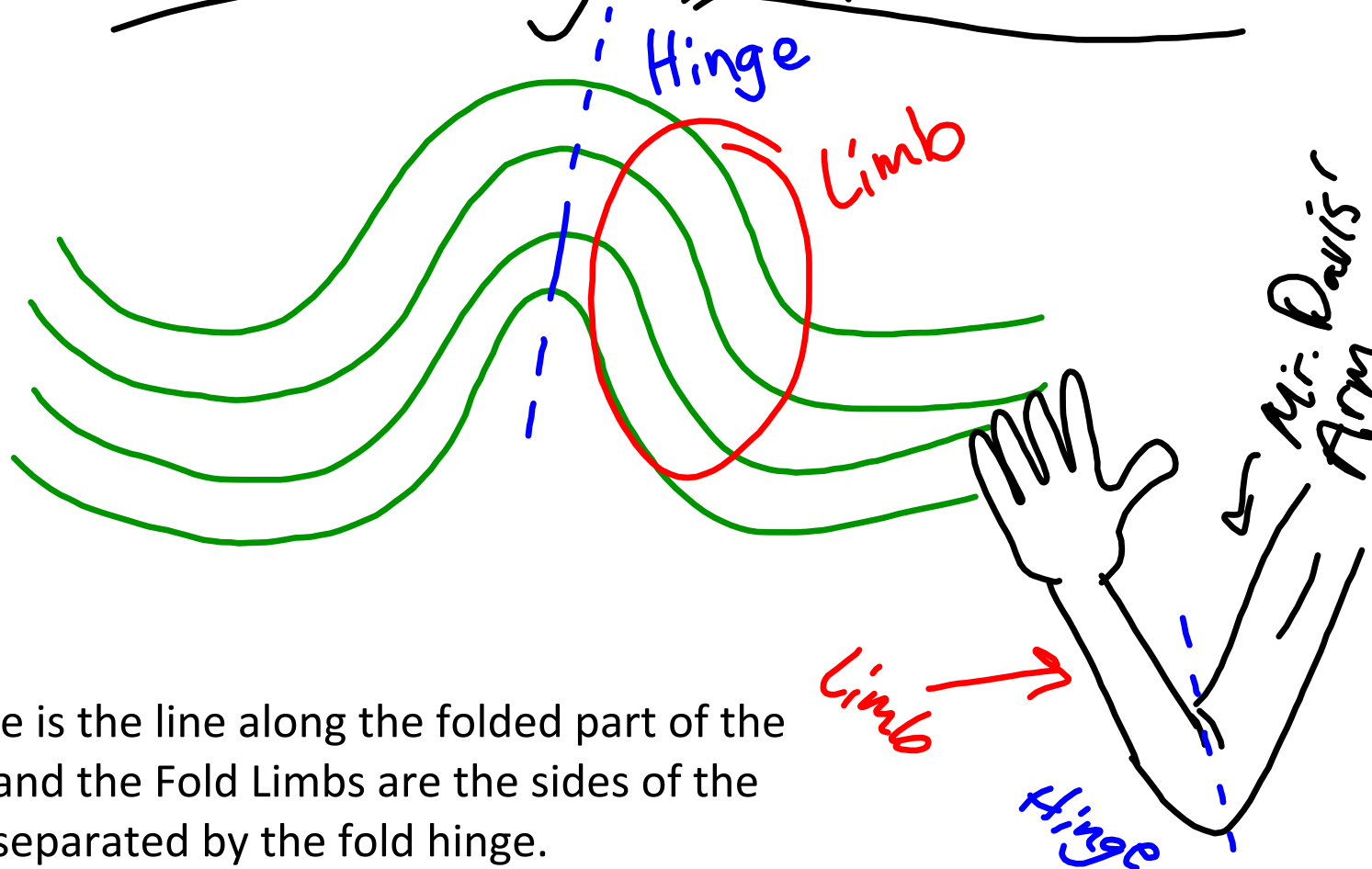
Peanut Brittle



Duct Tape
Ductile

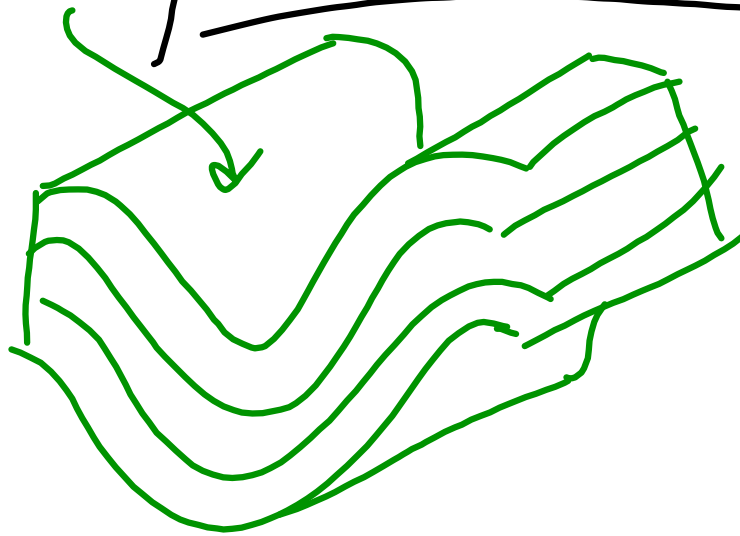
Brittle deformation is the cracking and fracturing of a material subjected to stress and Ductile (plastic) deformation is the bending and flowing of a material (without cracking and breaking) subjected to stress.

Fold Hinge & Limb.

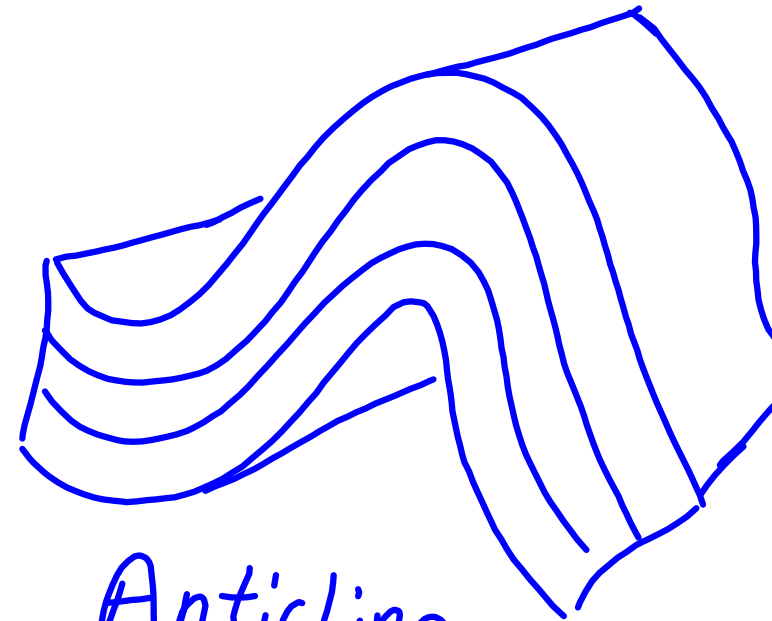


Fold Hinge is the line along the folded part of the material and the Fold Limbs are the sides of the material separated by the fold hinge.

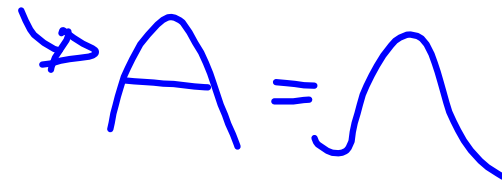
Syncline vs. Anticline



Sink line
Syncline

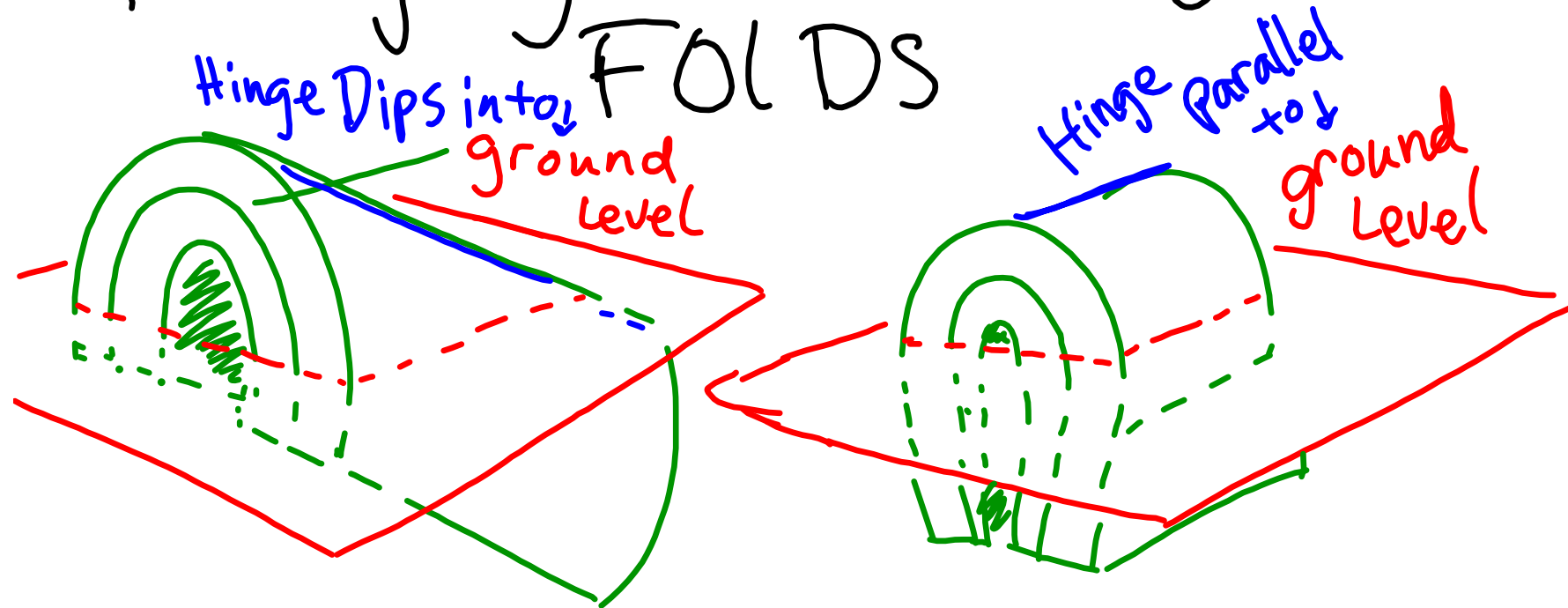


Anticline

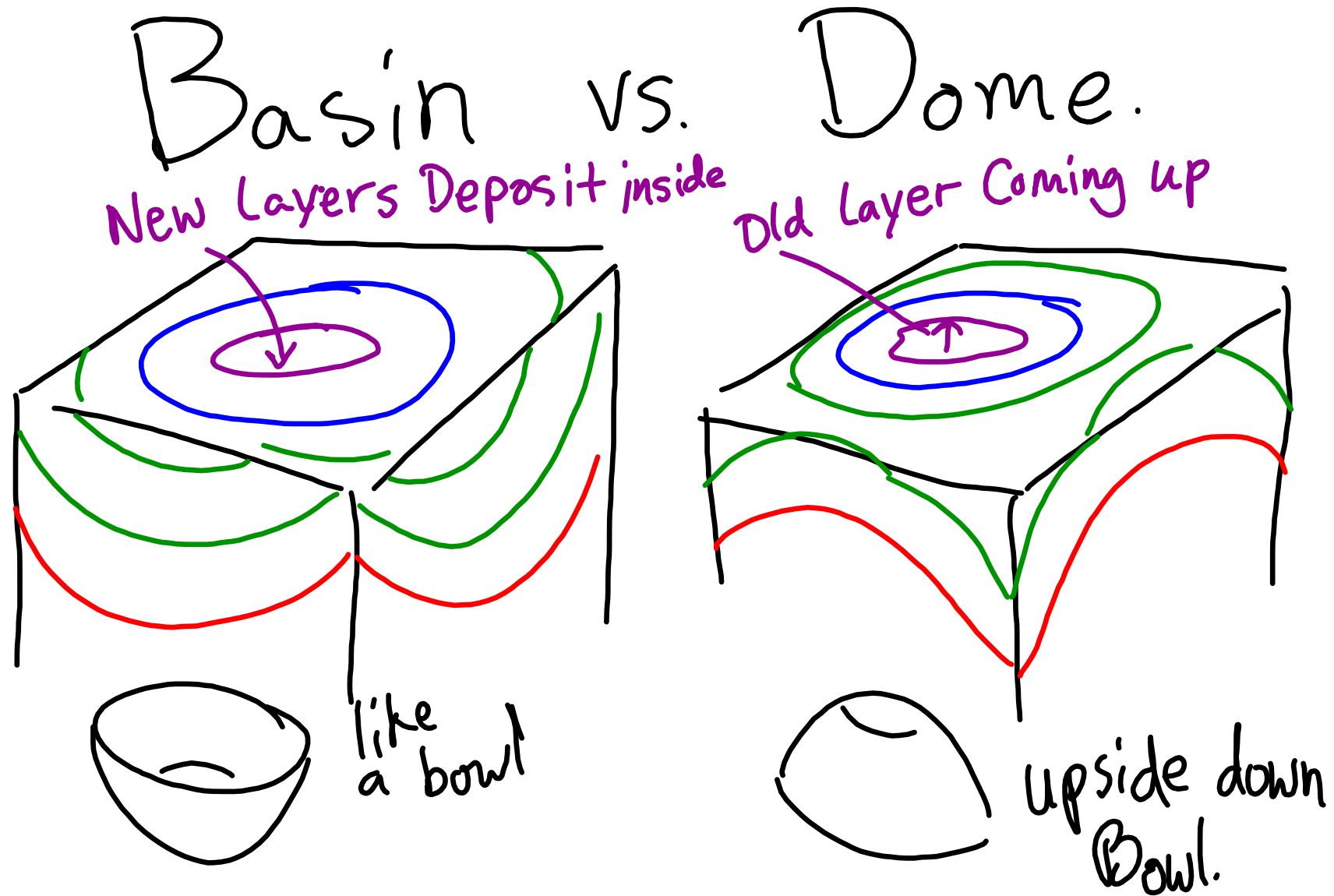


Anticline is a fold with an arch-like shape in which the limbs dip down and away from the hinge and Syncline is a trough-shaped fold whose limbs dip up and toward the hinge.

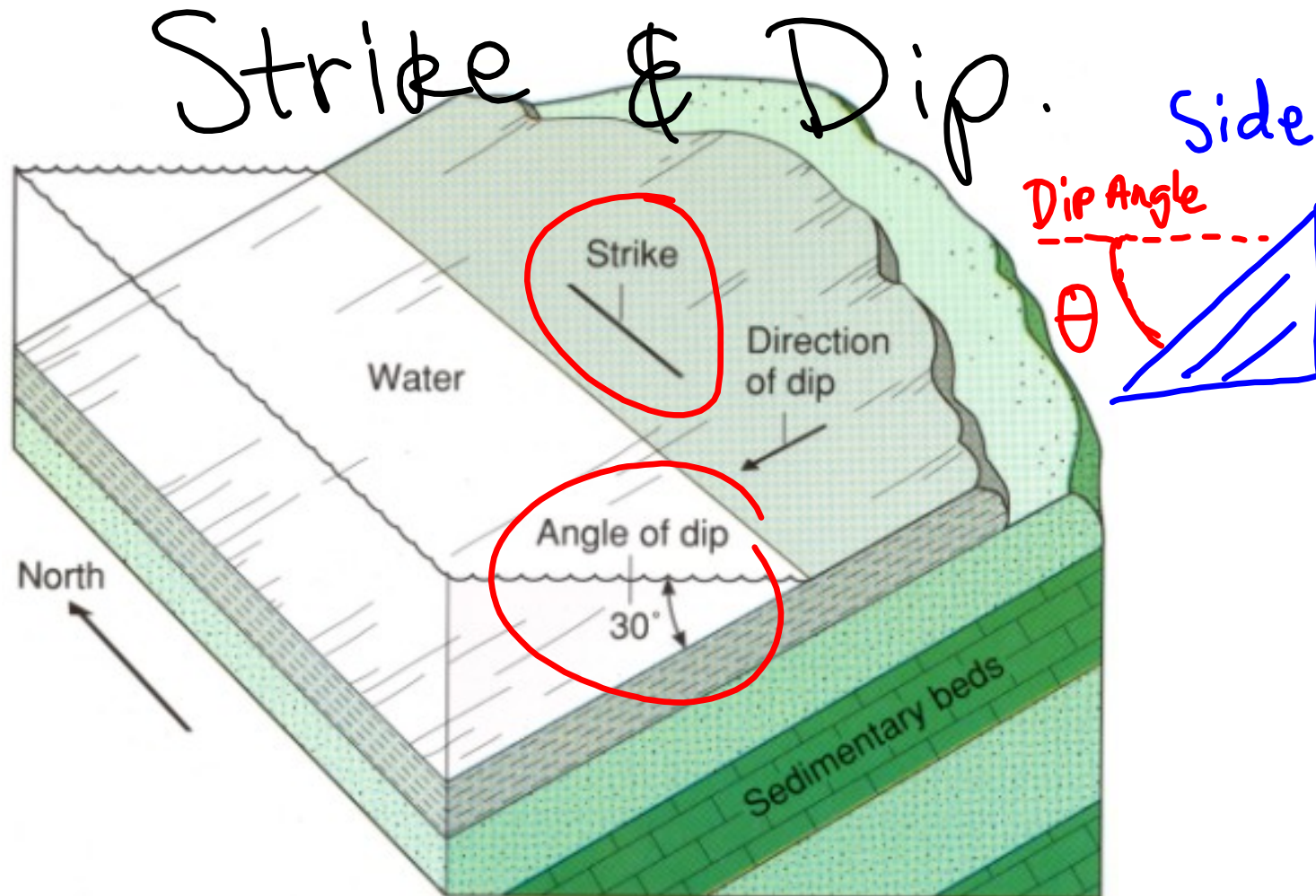
Plunging vs. Nonplunging.



Plunging fold has a tilted hinge going into the ground and a Nonplunging fold has a horizontal hinge parallel to the ground.



Basin is a fold or depression shaped like a right-side-up bowl and Dome is a folded or arched layers with the shape of an overturned bowl.



Strike is the compass trend of an imaginary horizontal line on a plane and Dip is the angle at which a layer tilts, relative to horizontal; the angle is measured in an imaginary vertical plane that trends perpendicular to the strike.