



Dirt Roads - Teacher's Notes

Dirt Roads

Activity: Dirt Road Rules

Materials per group

- Access to sandpit
- Watering can or bottle of water with holes in base to create a sprinkler. Thumbtacks pierce the thinner sections of the base easily.

Method

1. Ask students to use their hands to scoop out a level stretch of road into the surface of the sandpit.
2. Rain about 200mL of water over the surface.
3. Observe and either photograph the effect of rain on the surface or describe it in words.
4. Ask the students to make a raised flat road of compacted sand and observe the effects of rain.
5. Repeat, but make the road surface slightly domed to shed water from the center of the road. Compact the sand well.

Which design is most efficient in shedding water from the road surface?

Road design	Observations
1. Road cut into surface	Filled with water - boggy
2. Flat raised road	Some water run off but still boggy
3. Domed raised road	Efficiently shed rain

Suggest improvements in this design. Better compaction, gravel would drain better, many small gutters leading away to stop water flow building up and erosion increasing.

Why are dirt roads often closed after heavy rain?

The surface can be ruined by vehicle tracks being cut into the muddy surface and then hardened.



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Why is the level of the road above the level of the adjoining countryside?
To allow rain water to drain away

Why has gravel been added to the road surface? To make it harder for vehicle tyres and to make it more difficult to erode by wind and rain

Why are there wreaths of wildflowers growing alongside the road in the gutters? Any water from the road drains into these gullies and keeps plants well watered.

Teachers may like to suggest that students research Len Beadell, an Australian hero who built the Gun Barrel Highway to support Australian and Commonwealth rocket development from the mid-1950s. The track is named after his construction party who aimed to build roads straight as a gun barrel. His famous book "Too long in the bush" is a pleasure to read.



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