



THE BORELLA RIDE

Weapons of the First World War
Science
Year 8

Weapons of the First World War

Lesson objective

Students will demonstrate their ability to understand technical information. Depending on the class level some questions in the task may be better completed as a class discussion.

Materials

Computer access required

Key Fact

The tank was invented during the First World War. The first tanks in 1916 were not very effective, but by the last year of the war, 1918, well designed tanks supported the Australians in their famous victories at Villers-Bretonneux, Le Hamel and the capture of the Hindenburg Line.



Task

Read the text and examine the photographs. Next, go through the text again. Use a computer search to find all the terms underlined. In 20 to 30 words describe the meaning of each underlined term.

In some cases the meaning of the term is given in the text. Your description should be written very simply, as if you are explaining the thing to someone who has never seen one.

For example, describing a 'wheel' to someone who has no idea what you are talking about may not be as easy as it sounds.



AUSTRALIAN WAR MEMORIAL

ART03023

Weapons of the First World War

Reading

The development of tanks in World War I was a response to the stalemate that trench warfare had created on the Western Front.

Although vehicles that incorporated the basic principles of the tank (armour, firepower, and all-terrain mobility) had been considered in the decade or so before the War, it was the heavy casualties sustained in the first few months of the war that stimulated development.

Research took place in both Great Britain and France, with Germany only belatedly following the Allies' lead.

The British and their allies needed an armoured 'land boat,' a machine that could get through mud, barbed wire and heavy fire to clear a path for the men on foot.

The final design had six components:

- **Caterpillar tracks**
- **Internal combustion engine**
- **Hull**
- **Turrets**
- **Armour**
- **Guns**

Caterpillar tracks work on the same principle as a conveyer belt. The tank engine rotates one or more steel sprockets, which move a track made up of hundreds of metal links. The tank's wheels ride along the moving track, just like the wheels in a car run along the road. Earlier tracked vehicles weren't practical in battle because their steam engines were too cumbersome and unreliable. The internal combustion engine made tracked military vehicles possible.

Tracked vehicles can move easily over rough terrain because the track makes contact with a wide area of the ground. This is measured by ground pressure. A car grips the ground with only the bottom portion of four tires, but a tank grips it with dozens of metres of track. Additionally, the track has heavy tread that digs into muddy surfaces, and it never goes flat like a tire.

The hull is the bottom portion of the tank - the track system and an armoured body containing the engine and transmission. The hull's job is to transport the top portion of the tank, from place to place. Most First World War tanks had two turrets, one on either side, called sponsons. In the sponsons were artillery guns or machine guns which could traverse.

The word 'tank' has nothing to do with the design or purpose of the vehicle. To avoid word getting out about the secret invention, the factory workers making tanks were told they were building mobile water tanks for desert warfare, where water was not easy to find. From then on, even after the true purpose of the invention was revealed, everyone began to call the new 30 ton armoured fighting vehicle a tank.



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