



HISTORY BITES

LITTLE NIBBLES OF HISTORY

What was the Mechanical Turk?

The Mechanical Turk - a chess machine that could beat anyone!

Have you ever heard of the *Mechanical Turk*? I do not mean the Amazon Mechanical Turk (MTurk) Amazon's crowd sourcing marketplace, this is not the same.

The *Mechanical Turk* was a creation of Wolfgang von Kempelen. It all happened in 1769 when the French illusionist François Pelletier was invited to perform in Vienna at the court of Maria Theresa of Austria.



He was famed for what he did with magnets. The court, and especially the Empress, was impressed with his illusions, except for one man, Wolfgang von Kempelen, a Hungarian civil servant.

He vowed to create an even greater illusion.

Which he did! One year later he introduced the *Mechanical Turk*, an automatic Chess machine.

It was able to play chess against any human opponent. It even performed the knight's tour, a puzzle that requires the player to move a knight to occupy every square of a chessboard exactly once.

He impressed everyone when he showed it at the court a year later.



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The *Mechanical Turk* was impressive. On the top, wearing Ottoman robes with a turban, was life-sized black bearded head and a torso, hence the name. He was sitting on a three and a half feet long, two feet wide, and two and a half feet high cabinet. Naturally, there was a chessboard on top in front of him.

In fact, it was a fake, there was a human hiding inside who operated it. He was in fact a chess master.

It was so successful that it toured Europe, and then America, for nearly 80 years, with a chess master inside. It was a con! Probably the most famous automaton in history, which wasn't an automaton

The *Mechanical Turk* was a sensation, it toured Europe and North America.

Some of the best chess players of the time played it. It didn't win every game, it lost some, but won the majority of them. It, (I was tempted to say he!) remained popular even after Wolfgang's death. The *Mechanical Turk* even played games against many famous people such as Napoleon Bonaparte and Benjamin Franklin.

Everything was worked by a series of levers, which meant that the interior was complicated and designed to mislead. This meant that if you opened it from the left, you saw a series of gears and cogs similar to clockwork and if both back doors were opened at the same time, you could actually see right through it. Of course, the other side was also empty other than a red cushion and some detachable bits. It was designed in such a way as you could also see right through the machine. The whole thing was designed to maintain an illusion.

How it worked was that the chessboard on top was rather thin and each chess piece had a small magnet attached to its base, so that once on the board, the magnet would attract a piece of string allowing the operator inside to see where the pieces were on the board and therefore win the match.



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Naturally, Wolfgang realised that the operator inside may need to communicate to the presenter outside, so he had two numbered discs positioned one in and one out on top of each other, they could then be moved round to a prearranged code.

It was an illusion that worked for nearly 80 years!

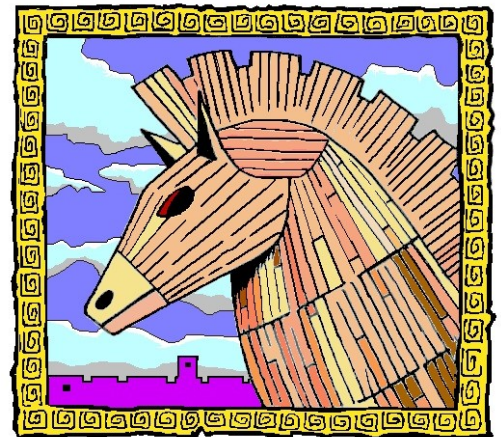
When Kempelen died in 1804, the *Mechanical Turk* ended up in the hands of an engineer, Johann Maelzel, who continued to travel with it and give performances. He sold it to Eugène Rose de Beauharnais, Duke of Leuchtenberg who was the son of Joséphine, Napoleon's first wife. As his stepson Napoleon actually adopted him, which is how he got his titles.

The *Mechanical Turk* continued to stun audiences for several years after, and you could say that it was the forerunner of today's computer chess programs

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<https://www.britannica.com/story/the-mechanical-turk-ai-marvel-or-parlor-trick>

<https://www.history.com/news/how-a-phony-18th-century-chess-robot-fooled-the-world>

<https://www.chess.com/terms/turk-chess-automaton>

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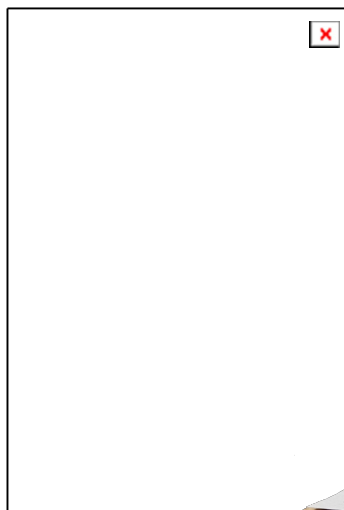
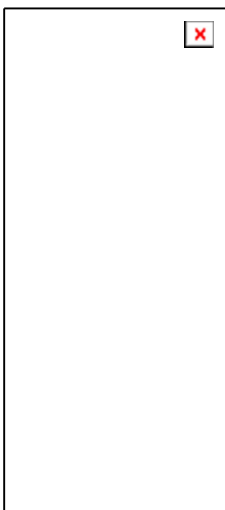
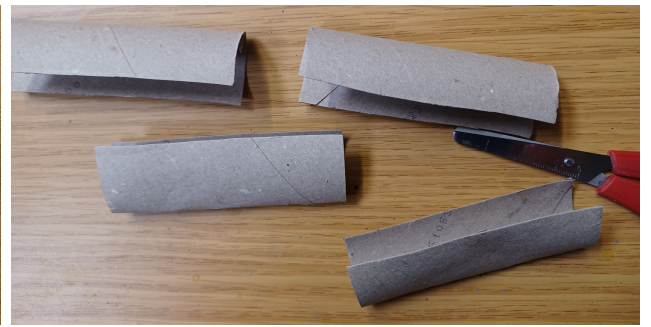
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2 lesson. (1 to make, 1 to paint)

CLASSROOM ACTIVITY

Your own Mechanical Turk

For this you will need a quantity of small magnets, masking tape and some junk!



Use a box as your base, then create arms by cutting cardboard tubes in half and threading string through them. Stick a small plastic bottle to a cardboard tube and stick little pieces of masking tape over your plastic bottle so it can be painted, then attach this to the back of your box. Now attach the arms by sticking the string onto the body. Cut a hole in the back of the box so you can put your hand in with a magnet. Create counters by sticking magnets under them. Then paint, you can even use Googly Eyes for your Turk! Then challenge a friend to a game of drafts with your Mechanical Turk!

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