dard, and home computer graphics can now produce complete and detailed board layouts with smooth piece movement. Draughts has been completely analysed, and a computer program could easily be the world champion. Backgammon, Bridge, Othello, Pontoon and Go have all been made available on a variety of home machines. Computers make strong opponents on board, table or screen.

Learning Through Play

Several software companies specialise in educational games, with the computer setting tests and puzzles and providing the reward of a game if the answer is right. Or a game may just look like a game, but also have educational information embedded in it about adding up, spelling, or even

the law of supply and demand.

A favourite game is one in which children guide a pen-holding robot, known as a 'turtle' because of its shape, over a sheet of paper. In this way they have fun drawing pictures and are learning geometry at the same time.

Arcade-style

Arcade-style games are games for fast action and movement and have drawn billions of coins through the slots of video machines. On home computers you can play all the arcade favourites, with swooping invaders, hopping frogs, digging miners and giant gorillas.

But the software companies have games ideas of their own and have come up with games that match the arcades for excitement and spectacular graphics. With a home computer there is a wider choice of fast and thrilling arcade-style games, all ready to be played when you want, and with no hungry cash slot gaping. These games test home computers — and programmers — to their limits.

Grand Strategy

Games that require thought and planning, the deviousness and single-mindedness of a great general, have also moved onto the micro.

The player can be any general in any war, deploying armies and trying to out-think and outplan the computer opponent. The computer is at its best acting as the umpire and the board controller, as it cuts out the densely written rules and easily lost cardboard pieces that have kept board wargames a minority cult.

Alternatively, the player can be the king of a small country, working out how to husband the crops and treasure while keeping the workers happy and fed and keeping robbers out of the fields.

1 Wizardry: Step into a mysterious world. Your companions can help. But who to choose? A warrior, a maiden or a scientist?

2 Backgammon: Your opponent in this game is backed by a formidable power — the relentless logic of the computer

3 ABC Dragon: An educational game for children

4 Zaxxon: One of the original arcade games. The screen becomes the pilot's windscreen as he weaves his way through missiles and dogfights to his goal!

5 Legionnaire: As a Roman general, your fate turns on the outcome of the battle

6 Aircraft flight simulation Fly the plane or crash!

Equally, the player can be in charge of a country's energy supplies, weighing the costs of coal, oil and nuclear power against their dangers and long-term effects. The computer can help you take the long view, and perfect your world takeover schemes.

High Flying

Games programs can put you in the cockpit of a light aircraft, reading the instruments and handling the controls to make perfect take-offs and landings at a variety of simulations of real airports; they can make you pilot of a space shuttle mission, complete with views of the Earth through the portholes; or they can make you a Rockefeller-style tycoon on the stock markets of the world, making and breaking the giant corporations.

Accuracy is all in simulation games. Follow the rules of the real world, and the game will show you what would really happen. But make a mistake, and you don't find yourself trapped in tangled wreckage or having to take a plunge from a Wall Street balcony. Computers are more forgiving than the real world!