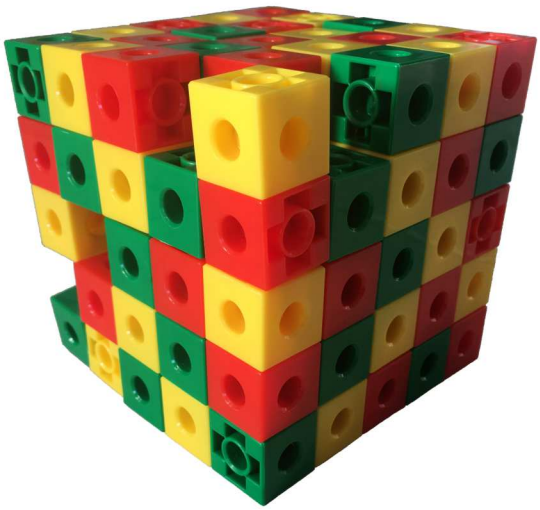
Cube-Or-ACK!

Cube-Or-ACK! is a turn-based strategy game for 2–4 players vying for control of the Cube they are building together

Description



Cube-Or-ACK! is a cube-building game where players have to attach their playing pieces to each other while staying within the constraints of a cube and avoiding their own colour. The maximum size of the cube is determined by the number of playing pieces available.

Players may choose to approach this game in a competitive or a cooperative manner:

- **Cooperative Play:** the players work as a team to try to build the most complete cube possible until no more pieces can be added
- **Competitive Play:** the players try to place their pieces in such a way that prevents the other players from being able to add their pieces to the cube until one player runs out of pieces or no more pieces can be added

This game's main mechanic is connecting together interlocking cube-shaped math manipulatives. Players attach small cubes to each other in order to build a larger cube.

Players will have the opportunity to learn terminology used to describe 3D shapes, what it means to cube or cube-root a number, the number of units or pieces it takes to build a solid 3D shape, and to tally up scores.

Ages 5+ **2-4 players** **10-20 min.**

What You Need to Play

A large set of interlocking cubes in a variety of colours, similar to that pictured above.

If you don't already have something suitable, you may wish to buy a set from Amazon:
https://www.amazon.com/s/url=search-alias%3Daps&field-keywords=snap%2Bcubes%2Bmath%2Bmanipulatives

Getting Started

Each player chooses a different set of coloured interlocking cubes. If only two people are playing, each person picks two sets of pieces and play proceeds as if there were four players while making sure to alternate turns between the two players.

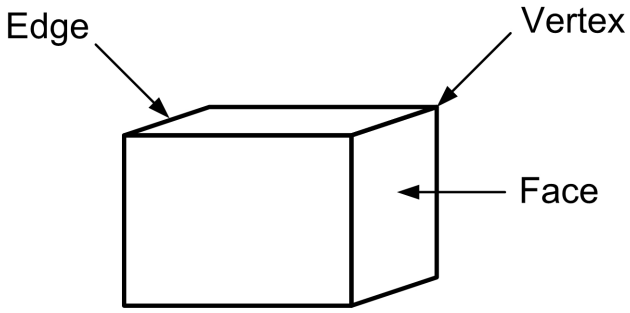
Once the order of play is determined, the first player simply puts out the first piece so that the second player can attach their piece.

Taking Turns

Once the first two pieces have been connected, play continues in turn with each player adding one of their pieces to the structure that is being built wherever they choose, while abiding by the following restrictions:

1) The size of the larger shape being built will be contained within a virtual cube, aka "the Cube", having the dimensions of the nearest whole-number cube-root of the total number of pieces. For example:
   a. If 3 players have 20 pieces each for a total of 60, then the Cube will be constrained to the dimensions of 4 x 4 x 4 (rounding up)
   b. If 4 players have 30 pieces each for a total of 120, then the size of the Cube will be constrained to 5 x 5 x 5 (rounding up)
   c. If 2 players have 2 sets of 40 pieces each for a total of 160, then the size of the Cube will be constrained to 5 x 5 x 5 (rounding down)

2) Any piece that is being added may not have one of its faces touching another face of the same colour (touching with edges and vertices only is permitted).



3) Twisting or removing of pieces from the cube in order to place a new piece is not permitted.

Winning

Depending on whether the players are working together or against each other, the game is won in the following manner:

- **Cooperative Play:** When playing cooperatively, the players are trying to beat their last score. Once no player is able to add another piece, the game ends. Count up the total number of pieces that have been added to the Cube you were trying to build and compare the total to your last attempt. Try to find the most optimal sequence of adding blocks to build a solid Cube!

- **Competitive Play:** The player with the most points wins. Once no player is able to add another piece, or once one player has run out of pieces, the game ends. Each player totals up the number of faces that are showing for their colour on the larger outer faces of the overall cube (don't count any exposed interior faces), where each face is worth 1 point. Any piece left in a player's hand counts as -3 points. If a player has used all of their pieces, they are awarded a bonus of 10 points. *Hint: Control the most edges and corners for a numerical advantage!*

…and don't forget to shout…
"Cube!" if you win or **"ACK!"** if you don't.

Up the Challenge

Maybe you would like to increase the challenge by:

- Adding another colour to each player's set of pieces to double the number of colours to consider when placing your pieces
- Requiring that you may not add to a face or edge of the Cube until you have exhausted the interior possibilities
- Including interior exposed faces in your scoring
- Using some other shape, like a rectangular prism or a step pyramid
- Requiring the constraining shape to be hollow

Let us know what other fun variations you come up with!

Thanks for Playing!

Game design by
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