

Circuit Board Game

Aim

- To get the most energy deposited in your resistor during the course of the game.

How to make the game

- The switches (orange) should be folded over so that the two positions of the switch are on the two sides of a square.
- The pale blue hexagonal counters should be cut out, and the tabs at the edge folded up (this will keep the purple triangles in place during the game).
- The purple hexagons should be cut out *and cut up* into triangles.

How to set up the game

- Put the orange switch pieces in place so that the side facing up is of the switches in the closed (ON) position.
- Each player chooses one of the five resistors on the board. Any energy deposited in that resistor during the game is 'theirs'.
- Each player takes a blue hexagon. They take turns to put 'their' hexagon on any vacant green square. Each green square has a number in the bottom right hand corner. The hexagon should be loaded with this many purple pieces when it is placed on the square.
- If there are only 2 or 3 players, they each put a second hexagon onto a vacant green square (appropriately loaded).
- It is suggested that the order in which players put hexagons onto the board is the reverse of the order in which they chose resistors.
- Players agree the time at which the game will end.
- The remaining blue hexagons are put to the side (they will not be needed), and the remaining purple triangles are put near the board (they will be needed).

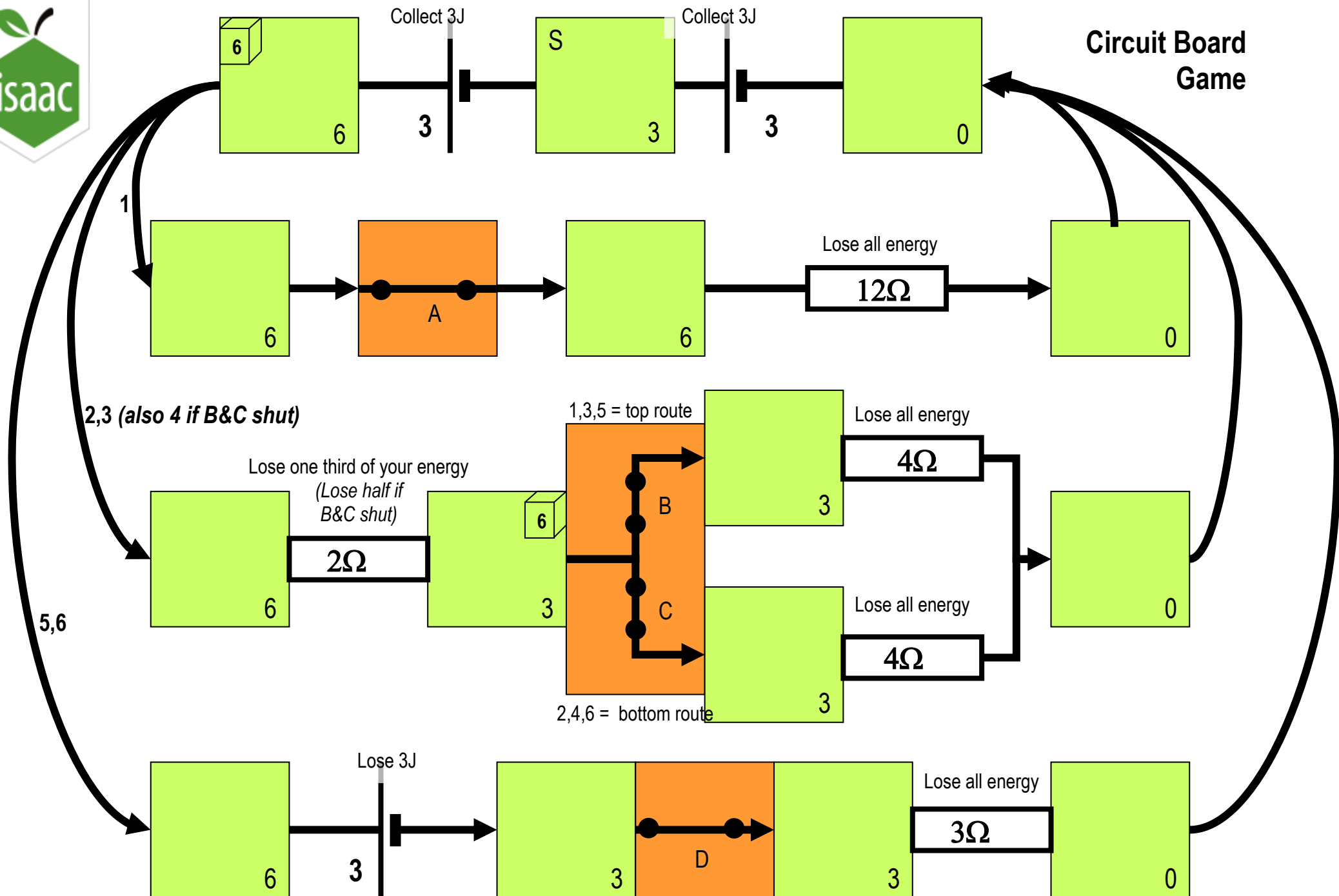
How to play the game

- Players take turns.

- On each turn, a player moves any blue hexagon from one green square to the next green square as indicated by the arrows. The player may choose ANY blue hexagon for the move.
- If there is more than one possible route away from the current square (these two squares are marked with a dice symbol), a die is rolled, and the markings on the board are followed to determine where it goes. If for some reason, it is impossible for the hexagon to go that way (e.g. a switch is open), then the die is rolled again and again by the player until a valid option is given. The player does not lose a turn. If there is only one valid route away from the square, the player may take it without rolling the die.
- If the player has to pass his or her hexagon through a resistor or cell during the move, (s)he will have to add or take energy away from it as indicated on the board. Each purple triangle represents one joule (1J). Energy lost on passing resistors should be given to the player who 'owns' that resistor.
- You may move a hexagon forward onto a green square which is currently occupied by another hexagon. If this happens, you nudge the hexagon in front to its next square (adding or taking away energy and rolling the die as necessary). This second hexagon might then have to nudge a third onwards too...
- If, in moving your hexagon, you land on the square with an 'S' you are entitled (if you wish) to open or shut one of the four switches on the board. You indicate this by turning the switch over. You do not get this privilege if you 'nudge' a hexagon onto the 'S' square – only if your chosen hexagon for the move ends up there.
- NOTHING moves in a part of the circuit with an open switch.
- If a player does bad physics at any stage (e.g. adds/takes away the wrong number of triangles or moves in a dead part of the circuit), they should be corrected by the other players, they should put the hexagon back where it was, and they lose the turn.
- If at any stage, all four switches are open, the game ends, and the player with the most energy (purple triangles) wins. Otherwise, the player with the most energy at the agreed end time wins.



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Game parts

