

Black hole explorer

Rules Quick Reference

You are going to build a spaceship to fly close enough to a black hole to study it, and be the first back with scientific discoveries that could win you a Nobel Prize! But traveling too close could leave you spiraling into the black hole, never (or probably never) to return!

The Game has three parts:

Part 1. Preparing for the Game

Construct a spaceship based on the amount of money available. Once the spaceship is built, you can proceed to the board. Turn over this sheet to begin construction!

Part 2: Playing the game.

Your aim is to orbit the black hole, and to launch a probe when in the Danger Zone. If your probe is successful, you pick up a Probe Result Card. Once you have launched all your probes, return home.

Any time you land on an **E** (Event) square, pick up an Event card and do what it says.

Moving

ALWAYS move counterclockwise when approaching and leaving the Black Hole.

Roll 2 dice to move. You can also buy extra dice rolls to move faster (one energy token per die, two dice max each turn).

You must make at least one orbit before ascending or descending in the CHANGE ORBIT zone. It costs nothing to drop an orbit, but costs one energy token when climbing an orbit.

If you run out of energy, you automatically drop one orbit every turn.

Launching a Probe

This expends 1 energy token, and is performed at the end of your turn (after moving and, if landing on an E, drawing of event card).

Outer Danger Zone orbit, probe is successful with roll of 1,2

Middle Danger Zone orbit, probe is successful with roll of 1,2,3,4

Inner Danger Zone orbit, probe is automatically successful.

Falling into the Black Hole

A roll of two sixes sends you home through a wormhole to automatically win

Any other roll and it's time to build a new spaceship!

Part 3. Winning the Game.

First spaceship back home can attempt to win the Nobel Prize. Success will depend on how many Probe Result cards you have: roll of 5,6 with one Probe Result; 3,4,5,6 with two; automatic win with three. If the first ship back fails, then the second has its chance etc.

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Spacecraft Construction

You need to build a ship with available funds. To see how much money you have, roll a die and multiply by 10 million (e.g. a roll of 2 gives you \$20 million)

Your Funding is: \$ million

Now spend this money building your spaceship. Each component costs \$5 million. As with a real mission, you will need to make an educated guess as to how best to spend your money.

Probes at \$5million each, to launch into the black hole. Maximum of three.

Number of probes: Cost: Tick here when probes are launched:

Radiation **Shielding** to protect vital systems, each layer is \$5million, maximum of three layers.

Number of shielding layers: Cost:

Hull **Strength**, to resist the tug of gravity, each level of reinforcement costs \$5million, maximum of three levels.

Strength Level: Cost:

Engines: More engines means more energy. Each engine is \$5million, maximum of three engines.

Number of engines: Cost:

For one engine, take 6 energy tokens; Two engines take 12; Three engines take 18.

Spacecraft Name:

Now, you are ready to begin your mission! As the mission progresses, some of the information above will change – for example, you may gain hull strength, or lose an engine. Record those changes on this sheet.