

# black hole explorer

## Standard Pre-Made Ships

These ships represent a moderate funding level. They are more or less evenly matched, but have strengths in different areas. This allows for participants to see the trade offs that of necessity arise in mission planning and building. Besides the random nature of luck, participants can experience how the relative preparedness of their ships affects their chances for success.

### **Ship 1. Trailblazer Class**

The 'Trailblazer' is designed to carry maximum probe load, as well as maximum energy, allowing for greater data collection and maneuverability. The trade off is that the ship has fewer shields and lesser hull strength, making it more vulnerable to the dangerous conditions around the black hole.

### **Ship 2: Dauntless Class**

The 'Dauntless' is designed to be resistant to the radiation dangers around the black hole, carrying maximum radiation shields. The trade off for the shields is that this ship has only enough room for one thick layer of hull.

### **Ship 3: Vanguard Class**

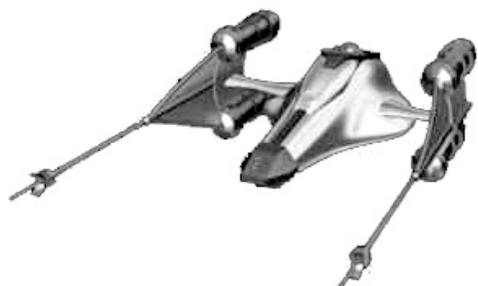
The 'Vanguard' is designed to be very well balanced, with a good number of probes, and reasonable shielding, strength and energy, hopefully to be able to handle anything that comes. While the ship has no major weakness, neither does it have a major strength. Be flexible and ready for anything. If your probes or shields are damaged, you may want to buy more from a ship that lands next to you, but remember you have limited energy.

Print out this document or copy it using the two-sided feature of your printer or copier. Each of the ships should have a "quick rules" reference on the back. You may need to make multiple copies of each ship, depending on how many ships are in the game.

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## Explorer Ship 'Trailblazer' Class

The 'Trailblazer' is designed to carry maximum probe load, as well as maximum energy, allowing for greater data collection and maneuverability.

**NOTE:** Be careful, however, the trade off is that the ship has fewer shields and lesser hull strength, making it more vulnerable to the dangerous conditions around the black hole. You might want to hang on to any repair cards for emergencies, and use your extra energy to buy shields from ships that land near you.

**PROBES.** No ship can have more than three.

Number of probes  
to start: 3

Tick here when probes  
are damaged:

Tick here when probes  
are launched:

**SHEILDING** to protect vital systems from Radiation. No ship can have more than three shield layers.

Number of shields  
to start: 1

Tick here when shields  
are damaged:

**HULL STRENGTH** to protect the ship from gravity. No ship can have more than three reinforcement layers.

Number of layers  
to start: 1

Tick here when strength  
is damaged:

**ENERGY** to move and power the ship. Each engine provides 6 units of energy at the start of the game, to use as the game progresses. No ship can have more than three engines. One engine = 6 energy tokens; Two engines = 12; Three engines = 18.

Number of engines  
to start: 3

Tick here when engines  
are damaged:

Take 18 energy tokens to start.

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.

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## Rules Quick Reference

This is the spaceship you are going to use to get close enough to a black hole to study it. Try to be the one who gets back safely with the most probe results before time runs out. But be careful! A black hole is very hazardous, and your ship might get damaged or spiral into the black hole, never (or probably never) to return!

### Part 1. Preparing for the Game

Review your ship; see how many engines, probes, etc. you start with. Take the appropriate number of energy tokens from the pile. Start your ship token at the large space ship picture on the board.

### Part 2: Playing the game.

Your aim is to 'orbit' the black hole, and to launch at least one probe when you get near it. Once you have launched all your probes, try to return home - back to the large picture of a space ship on the board.

#### Moving

ALWAYS move counterclockwise when approaching and leaving the Black Hole. Roll 2 dice to move.

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

Each level around the board is called an 'orbit'. You must make at least one orbit before ascending or descending in the CHANGE ORBIT zone. You can only move up or down one level at a time. You can only willingly go up and down in the CHANGE ORBIT zone (although other events like running out of energy can drop you down or bump you up anywhere.)

It costs nothing to drop an orbit, but always costs one energy point to willingly climb an orbit, because you are fighting the pull of gravity from the black hole.

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

#### Launching a Probe

If you are in the last orbit (lowest level) you can launch a probe at the end of your turn. You must pay one energy point and then cross off a probe box on your sheet. The facilitator will give you a 'Probe Result Card'.

#### Helping Out

If you land within one space of another ship, either in your orbit or one orbit above or below, you can arrange an exchange. It costs you one energy for each thing you give them: either a probe, a shield, or even another energy point. Why do it? You might be in need yourself later in the game, or maybe you are playing in teams.

#### Losing your ship

The area around the black hole is very dangerous. Many ships will not make it in to launch a probe, or make it out to report their results. If your ship is destroyed before anyone else has made it back 'home', pull another ship sheet and keep trying! You may still succeed in getting in and out with a result before anyone else.

#### Falling into the Black Hole

If you fall into the black hole, roll two dice. 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 and give it another try!

### Part 3. Winning the Game.

You can only report your results to the scientific community if you make it out of the black hole! Once you have launched one to three probes, and gotten your probe results, then return to the ship. The one who makes it back with the most probe results before time is up, wins the game.

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## Explorer Ship 'Dauntless' Class

The 'Dauntless' is designed to be resistant to the radiation dangers around the black hole, carrying maximum radiation shields.

NOTE: Be careful, however, the trade off for the shields is that this ship has only enough room for one thick layer of hull. You might want to use any repair cards to keep your hull in good shape. You might want to consider using some of your energy to buy an extra probe from another ship that lands near you.

PROBES. No ship can have more than three.

Number of probes  
to start: 2

Tick here when probes  
are damaged:

Tick here when probes  
are launched:

SHEILDING to protect vital systems from Radiation. No ship can have more than three shield layers.

Number of shields  
to start: 3

Tick here when shields  
are damaged:

HULL STRENGTH to protect the ship from gravity. No ship can have more than three reinforcement layers.

Number of layers  
to start: 1

Tick here when strength  
is damaged:

ENERGY to move and power the ship. Each engine provides 6 units of energy at the start of the game, to use as the game progresses. No ship can have more than three engines. One engine = 6 energy tokens; Two engines = 12; Three engines = 18.

Number of engines  
to start: 2

Tick here when engines  
are damaged:

Take 12 energy tokens to start.

Spacecraft Name:

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Number of shields  
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