



Instructions

NASA Space Voyagers: The Game



Players



This game can be played individually or collaboratively by teams of up to four students. Having students work together will give them a better chance of accomplishing their mission goals to win the game – in the same way that collaborative teams are essential to NASA's missions. Teams of two are recommended.

Objective

The object of the game is to earn enough research points to fully explore a chosen destination (reach the total "exploration value") before running out of cards. Players earn research points by playing spacecraft and instruments at their destination while overcoming any challenges the destination has in store.



Card Types

- Starter Pack (49 cards):
 - **Resources and Instruments** (36 cards)
 -  **Moon pack** (4 cards)
 -  **Mars pack** (9 cards)
- Check back for expansion packs, coming soon!

There are four types of cards: destinations, resources, instruments, spacecraft.

Destinations: These cards represent the location you are setting out to explore, which is chosen at the beginning of the game. Each destination has its own challenges, some even requiring collaborative play. Players will find that some spacecraft and instruments are more appropriate at certain destinations than others.

Each destination card has an exploration value (a), which is the number of points you



will try to earn to complete your research and win the game. Each turn, the destination card will present a series of challenges to your spacecraft based on the number rolled



on the dice. The number rolled determines the event that players must overcome using their available spacecraft and instruments.

Destination cards should stay separate from the rest of the cards.

Resources: There are two categories of resources cards: funding and research.



Both are required to purchase spacecraft and instruments. The number inside the icons in the top-right corner of the spacecraft and instruments cards (**b**) indicates how much of each kind of resource is needed to purchase that card and put it into play.



Only one resource card can be played from your hand each turn. When a player uses a resource card, it is “tapped” (turned horizontally to indicate it has been used this turn).



At the start of the player's next turn, all tapped cards become untapped (ready to use again) unless environmental conditions from the destination card prevent it.

Instruments: These cards can be purchased with resources cards to give spacecraft extra abilities. You must have the resources indicated in the top-right corner of the card (c) to purchase an instruments card and put it into play. You do not have to have a spacecraft card in play to purchase an instruments card. Instruments can only be added to some kinds of spacecraft (d), which must have an additional instrument allowance noted.



Instruments may provide spacecraft with special abilities, resistance to environmental conditions at the destination, improvements in durability, or research bonuses – as indicated on the card (e). For example, an instrument with a note of "+1/+0" provides spacecraft with a bonus point in research strength but no bonus points in durability.

Spacecraft: These cards are the primary method for exploring your destination and earning exploration points. Before they can be played, spacecraft cards must first be purchased with resources cards.



There are a variety of spacecraft cards with different details that make them vulnerable or resistant to different events in space. Placing them strategically on the game mat will help players keep track of how their spacecraft might be affected by different space events.



Each spacecraft card includes:

- **Resources Cost (f)** – The two icons in the top-right corner of each card indicates the amount of research and funding resources needed to purchase that spacecraft and put it into play.
- **Power source (g)** – These can be solar, RTG, or battery-powered. Events in space may affect spacecraft powered in certain ways more than others. Familiarize yourself with the challenges at your destination to strategize what might work best.
- **Bonus abilities (h)** – Some advanced spacecraft have special abilities, which will allow them to either perform advanced research, or shield them from events at their destination. These may cost additional resources or turns to use, but will provide a strategic advantage.
- **Additional instrument allowance (i)** – Some spacecraft can carry additional instruments as indicated in the card description. Players must purchase instruments to add to their spacecraft using resource cards.



- **Research value (j)** – The first number on the bottom-right of the card indicates the maximum number of research points you can earn with the spacecraft each turn. You can improve this number by adding certain instruments to your spacecraft.
- **Durability (k)** – The second number on the bottom-right of the card indicates how much total damage the spacecraft can sustain at your destination. If it reaches zero, the spacecraft is destroyed and the card can no longer be used. You can improve your durability by adding certain instruments to your spacecraft.




A spacecraft can research the destination once each turn, meaning the research value, plus any bonus research points, can be subtracted from the destination's total. Any used spacecraft are tapped (turned sideways to indicate they have been used) until the player's next turn.

Card Vocabulary and Symbols

Review the following vocabulary terms and symbols, which you'll find on the various cards in the deck:

- There are four types of spacecraft for each destination:
 - **Flybys** – spacecraft that fly by the planet or world, take images, and make scientific observations from space but do not go into orbit
 - **Orbiters** – spacecraft that circle the planet or world, take images, and make scientific observations from space but do not land
 - **Landers** – spacecraft that land on the surface, take images, and make scientific observations from one location
 - **Rovers** – spacecraft that land on the surface and then drive around to numerous locations to take images and make scientific observations
- [Spacecraft power sources](#) include solar, RTGs, and batteries:
 - **Solar** – Solar-powered spacecraft receive their power from the Sun. Solar-powered missions can be impacted by radioactive and solar events.
 - **RTGs** – [Radioisotope thermoelectric generators, or RTGs](#), are electrical power sources and the most robust type of power. They are impervious to the weather of the destination.
 - **Batteries** – Batteries can power instruments and spacecraft, but they may have a limited lifespan and need backups.
- There are three symbols you will encounter on the game cards:



-  **Funding** – This money symbol associated with funding is used on spacecraft and instruments cards to indicate how many funding cards are required to purchase that card or special ability.
-  **Research** – This beaker symbol associated with research is used on spacecraft and instruments cards to indicate how many research cards are required to purchase that card or special ability.
-  **Tap** – This arrow symbol indicates that the card must be tapped (turned sideways) after the resource, spacecraft, or special ability has been used. Cards are automatically untapped at the start of the next round and can be used again.

Winning the Game

The goal of the game is to subtract the total exploration value of the destination by performing research with available spacecraft. Spacecraft can use their research value, plus additional research points from instruments, each turn to eat away at the total.

The game is won by the players subtracting the total exploration value from their destination before they run out of cards.

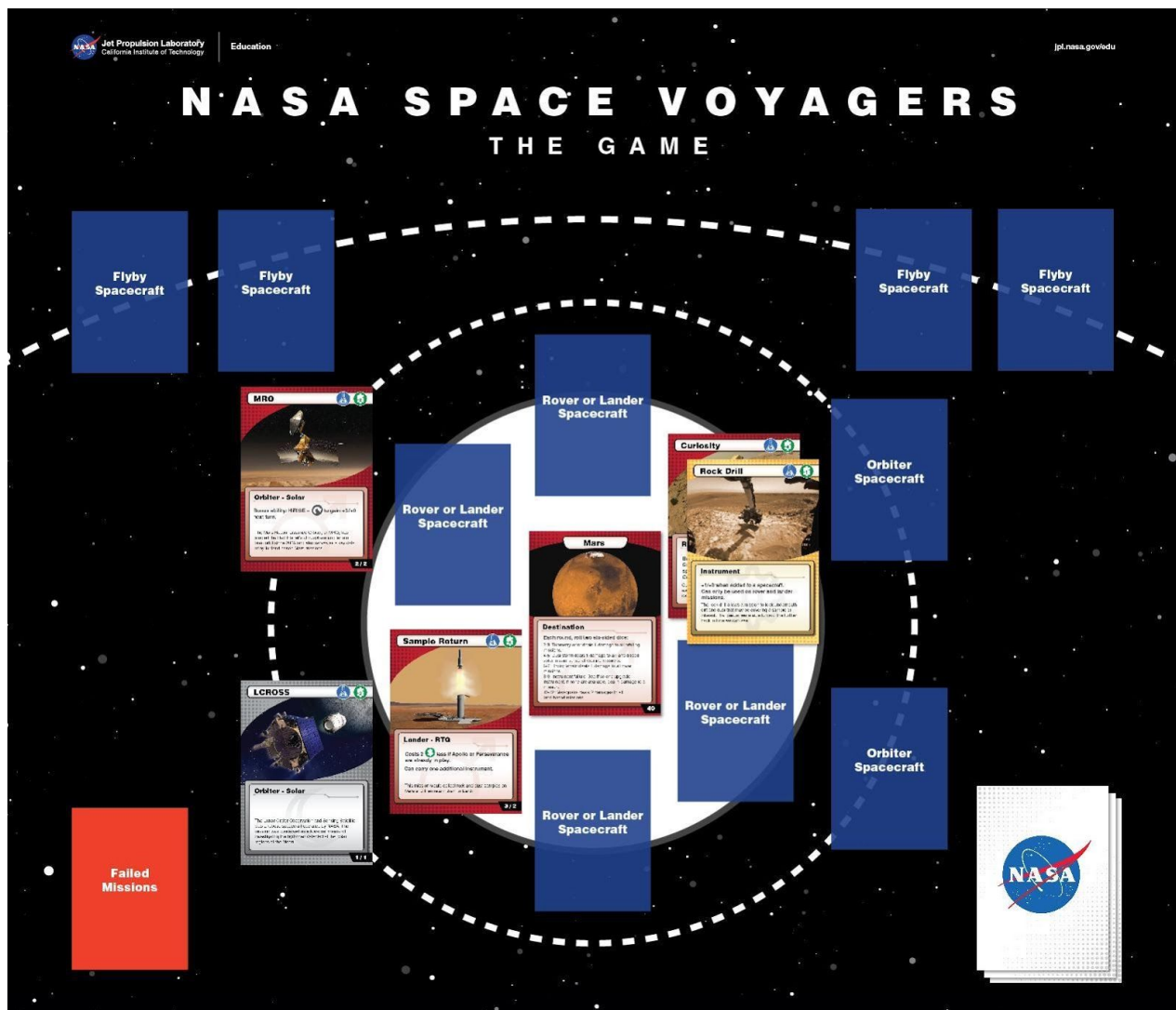
Playing with a partner presents a strong collaborative advantage, and cooperation can be very helpful. If playing collaboratively, players can freely discuss the cards in their hands and pool resources together.

Gameplay

1. Before starting the game, choose the destination you would like to explore and place that card in the middle of the game mat or somewhere visible for quick reference. Remember, each destination has different challenges that spacecraft must overcome. Players should familiarize themselves with their destination and be strategic about the kinds of spacecraft, power sources, and instruments they use.



- The game begins by each player drawing seven cards from the shuffled deck. Players can choose to replace up to two of their cards, placing their original cards back in the deck.
- Starting with the first player, each player takes a turn consisting of one or more of the following actions. (If playing collaboratively, actions can also be taken using other players' cards):





- **Put down a resources card** to go toward the purchase of a spacecraft or instrument. Remember that each player can only play one resources card from their hand each turn.
 - **Purchase a spacecraft** and put it into play to start accumulating research points at your destination. You must have the resources identified in the top-right of the card to purchase a spacecraft and put it into play. Once spacecraft are put into play, they can begin accumulating research points at the destination.
 - **Purchase an instrument.** You must have the resources identified in the top-right of the card to purchase an instrument. Instruments can be purchased at any time, but they must be added to a spacecraft to accumulate research points.
 - **Add an instrument to a spacecraft.** Instruments can only be added to spacecraft according to the rules on the spacecraft card. Once instruments are added to a spacecraft, their research value can go toward the destination total.
 - **Tap all used spacecraft and resources.** Turn all used spacecraft and resources cards sideways. They cannot be used again until the next round.
 - **Draw a new card.** At the end of their turn, each player draws one new card from the deck.
4. Once all the players have taken a turn:
- **Tally the research points.** Add up the research value of all used spacecraft and instruments and subtract the amount from the exploration value of the destination.
 - **Roll the dice to get a challenge from the destination.** Roll the dice, and refer to the corresponding number on the destination card to see what actions you must take.
 - **Take the actions described** on the destination card with all relevant spacecraft and instruments in play, tallying damages by placing sticky notes, pennies, or other markers on applicable cards and removing those that reach zero durability.
 - Damages are permanent and cumulative as turns continue throughout the game.
 - Spacecraft that reach zero durability have failed and are removed from play.



- Some spacecraft and instruments have special abilities that allow them to withstand damages, so be sure to read the cards carefully.
5. After players have taken the actions described on the destination card and marked any damages, a new round begins and previously tapped cards that haven't been affected by the events at the destination are reset. Rounds continue in this fashion until players have subtracted the total exploration value of their destination to win the game – or until players can no longer play a hand or the entire deck has been spent.