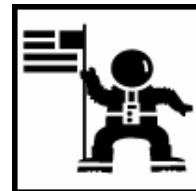


Astronaut Game

The activity page should be printed on legal sized paper.

Objectives: 2.00NA Analyze problems
2.6A Model facts
2.6B Recall addition and subtraction facts
2.24A Conduct probability experiments

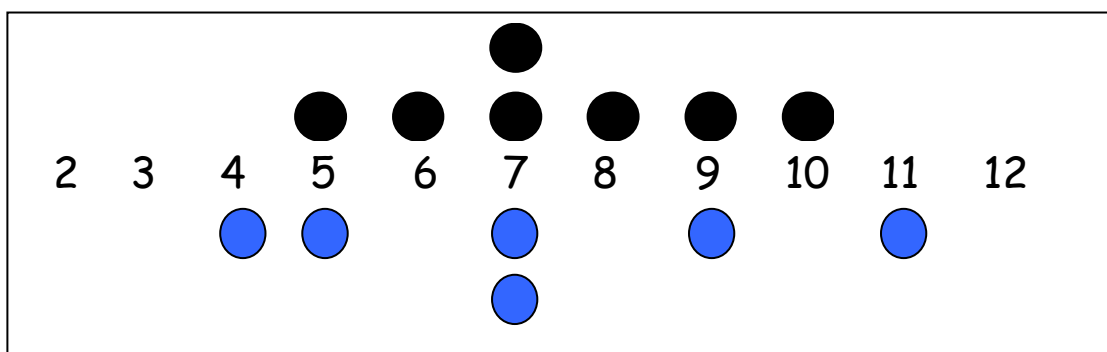


Essential Vocabulary: add, predict, probability, results, impossible, unlikely, equally likely, certain

Materials: astronaut counters or counters to represent astronauts, pair of dice with number 1-6, Astronaut Gameboards

Relevancy: To see if you can find a strategy that will help you to remove all of the astronauts from your mat before your opponent.

Activity: Explain to students that today they are going to play a game to practice their math facts. "The object of the game is to bring your astronauts home before your opponent." Before they begin the game they should make a prediction of which sum, 2 - 12, they think they will roll most often when rolling two dice. After making the prediction, students will place 6 astronauts on the mat for the sums they think they will roll most often. Students may choose a number more than once as shown below:



After each player places their counters on the mat, they may take turns rolling the dice. If students roll a number their astronaut was placed on, they "send it home", remove it from the mat. The first player to send all 6 astronauts home is the winner.

Students may not have a strategy at first. The more they play the game, they will begin to see that some sums are more likely to be rolled than others. For example, 2 can only be rolled by rolling two 1's, while 4 could be rolled by rolling the numbers 1 and 3, 2 and 2, and 3 and 1.

Students should check each other for correct answers. They may record a journal response after playing the game:

- What strategies did you find that helped you to remove the astronauts before your opponent?
- Were there any numbers that came up often?
- Were some numbers unlikely to be rolled? Why?

You may want to keep this game in a workstation to provide multiple opportunities for students to practice basic facts and develop a sense of sums most likely to be rolled.

The Astronaut Game

2 3 4 5 6 7 8 9 10 11 12

Roll 2 dice. Add them together to see if you can bring one of your astronauts home. Remember, you can only bring an astronaut home when it's your turn to roll.

*****Don't forget to say the math problem out loud!*****