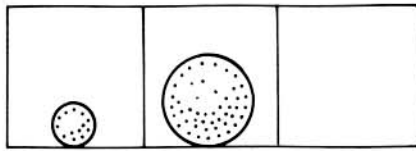


Balloon Ride



Grade Level

TOOLS

10 or more toothpicks
Balloon Ride board

A game for
2 players

Why

To practice problem-solving techniques by trying to figure out how to win a variation of the old Chinese game of NIM

How

- Tell the children a story about the hot air balloon coming to town. There is a contest to win a free ride. There are ten ropes holding the balloon to the ground. Two people take turns cutting the ropes. Each person may cut either **one** or **two** ropes. The person who cuts the last rope wins a free ride.
- Put out ten toothpicks on the Balloon Ride board to represent the ropes.
- Players take turns picking up one or two toothpicks at a time.
- No one is allowed to skip a turn.
- The person who takes the last one (or two) toothpicks wins the free ride.

▶ *When you and your child begin to see some patterns and possible strategies, see if together you can work out a way to win every time. (Hint: Start with a game that has just a few toothpicks. Who has the best chance of winning? Then add a few more toothpicks. This is called working backward.)* ◀

More Ideas

- After you think you have found a way to win, use a larger number of toothpicks—maybe twelve or nineteen.
- You can also change the number of toothpicks that can be picked up—try picking up one, two, or three toothpicks on each turn.
- You may even want to change the rules so that the person who has to pick up the last toothpick is the **loser** instead of the winner.

▶ *This activity develops intuitive understanding of subtraction or “take-away.” If children can find a strategy to win, it will build a stronger number sense.* ◀



BALLOON RIDE

