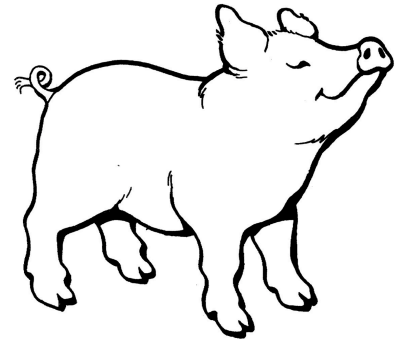


# Pig



**Topics:** Probability, strategy, addition, estimation

**Materials:** One 6-sided die, pencil and paper

**Players:** 2 or more

**Recommended Grades:** 2-8

**Common Core Standards:** MP1, MP2, MP3, MP6, MP7

Roll a 6-sided die and collect points. You can go as long as you want, but roll the wrong number and you lose all your points from that turn!

## Why We Love Pig

Pig is easy to learn and gives students lots of addition practice. Pig is also mathematically rich. Students get to articulate and defend strategies, and get practice with addition in a complex task.

## How to Play

Pig is a game for 2 to 6 players. Players take turns rolling a die as many times as they like. If a roll is a 2, 3, 4, 5, or 6, the player adds that many points to their score for the turn. A player may choose to end their turn at any time and “bank” their points. If a player rolls a 1, they lose all their unbanked points and their turn is over.

**Beginner Game:** The first player to score 50 or more points wins.

**Advanced Game:** The first player to score 100 or more points wins.

## Tips for Starting

1. When introducing this game to young children, make sure you take lots of risks, and let the student(s) give you “thumbs up/down” if they think you should keep rolling.
2. If students aren’t comfortable adding up all the numbers they roll by hand, have them take tiles or other counters to one spot when it is their turn, and another spot (with ten frames or a hundred chart) as their “bank.”
3. Remind students that they will lose games and win games, and each loss can be a chance to re-examine their strategy. It’s hard to lose all your points, but it will happen to everyone!

## Prompts and Questions

- How long are you waiting before you stop rolling?
- Do you have a strategy?
- Before you roll again, tell me how many points you already have for this turn.
- What’s the best way to add those numbers up?

## Variation

Once they have mastered Pig, challenge older students with Odd Pig Out.

# Odd Pig Out

**Topics:** probability, strategy, multiplication, addition

**Materials:** Two 6-sided dice, pencil and paper, (6x6 multiplication table?)

**Players:** 2 or more

**Common Core Standards:** MP1, MP2, MP3, MP5, MP6, MP7

Roll the dice and multiply. You can go as long as you want, but roll an odd product and you lose all your points from that turn!

## Why We Love Odd Pig Out

Odd Pig Out is a natural extension of Pig to multiplication. It is great practice for multiplication and addition in a fast-moving, fun game. Will the same strategies apply to this game as to Pig?

## The Launch

Because students already know Pig, this game should be relatively intuitive to learn.

Players take turns rolling the dice as many times as they like. On each player's roll, they multiply the numbers on the two dice together. If the product is even, they add that number to their current points for the turn. If the product is odd, players lose all their points from that turn and their turn is over. A player may choose to end their turn at any time and "bank" their points.

Play to 300.

## Prompts and Questions

- Is there an easier way to add up all those numbers?
- Do you think you are more likely to roll an even or odd product with 2 dice?
- How are you deciding when to stop rolling?
- Are you sure that's the product of those two numbers?
- What does your multiplication table say?
- What strategy are you using?

## Variations

1. Roll double sixes and lose all of your banked points.
2. Challenge! Play with 3 dice instead of 2 and play to 1000.

## About this Game

Adapted from Math For Love ([www.mathforlove.com](http://www.mathforlove.com))