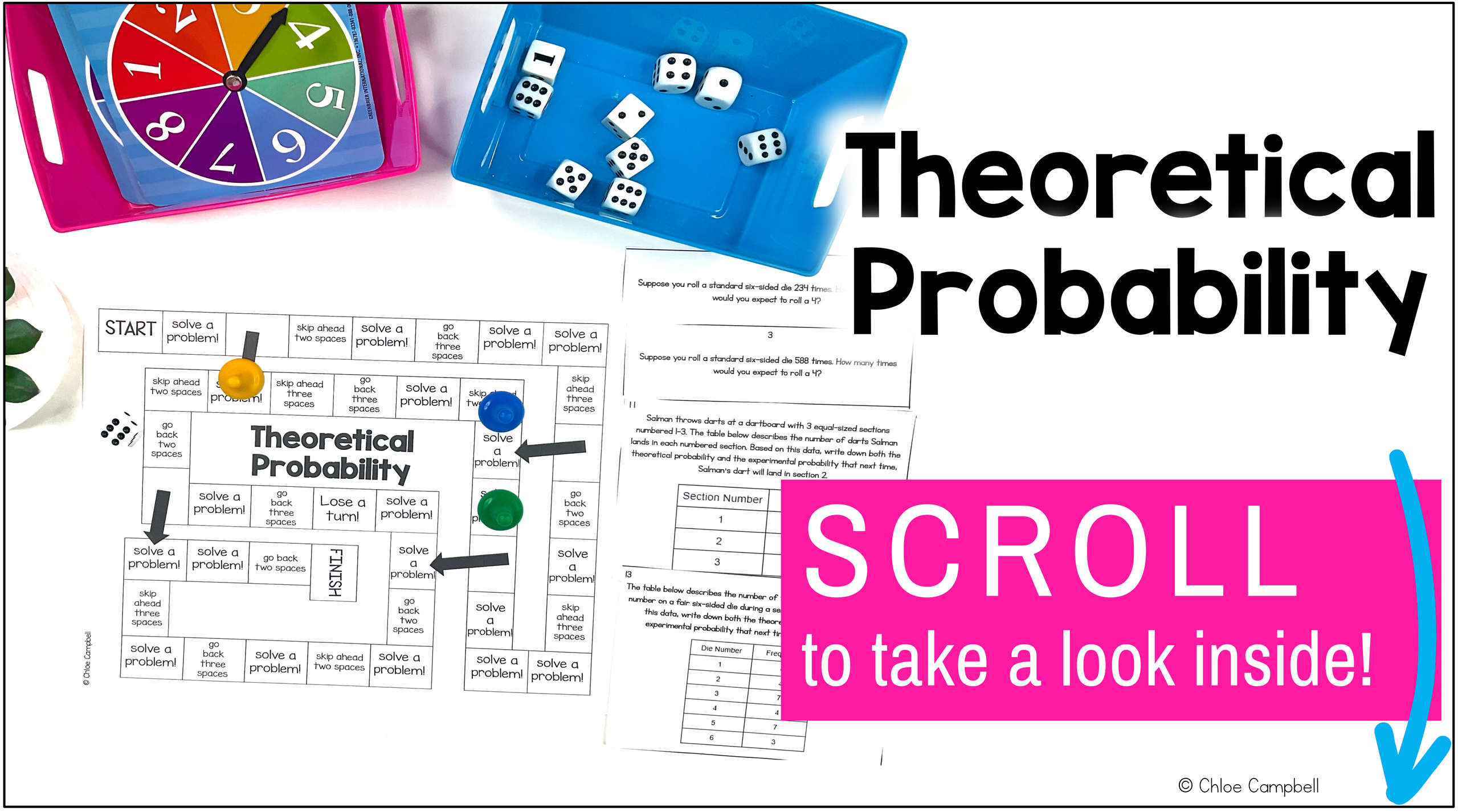
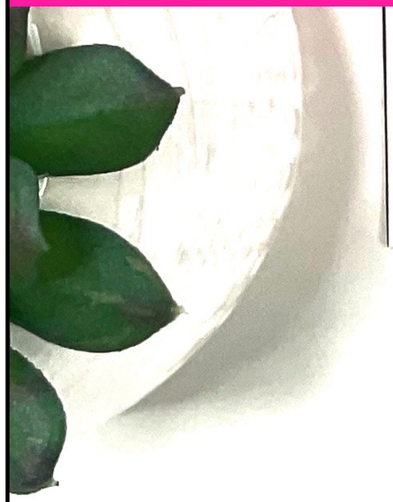

Theoretical Probability
START
solve a problem!
skip ahead two spaces
go back three spaces
go back two spaces
Lose a turn!
FINISH
Suppose you roll a standard six-sided die 234 times. How many times would you expect to roll a 4?
3
Suppose you roll a standard six-sided die 588 times. How many times would you expect to roll a 4?
Salman throws darts at a dartboard with 3 equal-sized sections numbered 1-3. The table below describes the number of darts Salman lands in each numbered section. Based on this data, write down both the theoretical probability and the experimental probability that next time, Salman's dart will land in section 2.
Section Number
1
2
3
The table below describes the number of
number on a fair six-sided die during a se
this data, write down both the theore
experimental probability that next ti
Die Number
1
2
3
4
5
6
7
4
7
3
SCROLL
to take a look inside!
© Chloe Campbell
© Chloe Campbell

Math Skills Included:



5

Suppose you roll a standard six-sided die 312 times. How many times would you expect to roll a number less than 3?

11

Salman throws darts at a dartboard with 3 equal-sized sections numbered 1-3. The table below describes the number of darts Salman lands in each numbered section. Based on this data, write down both the theoretical probability and the experimental probability that next time, Salman's dart will land in section 2.

Section Number	Darts Landed
1	7
2	5
3	5

13

The table below describes the number of times that Johanna rolled each number on a fair six-sided die during a series of experiments. Based on this data, write down both the theoretical probability and the experimental probability that next time, Johanna will roll a 2.

Die Number	Frequency
1	8
2	4
3	7
4	4
5	7
6	3

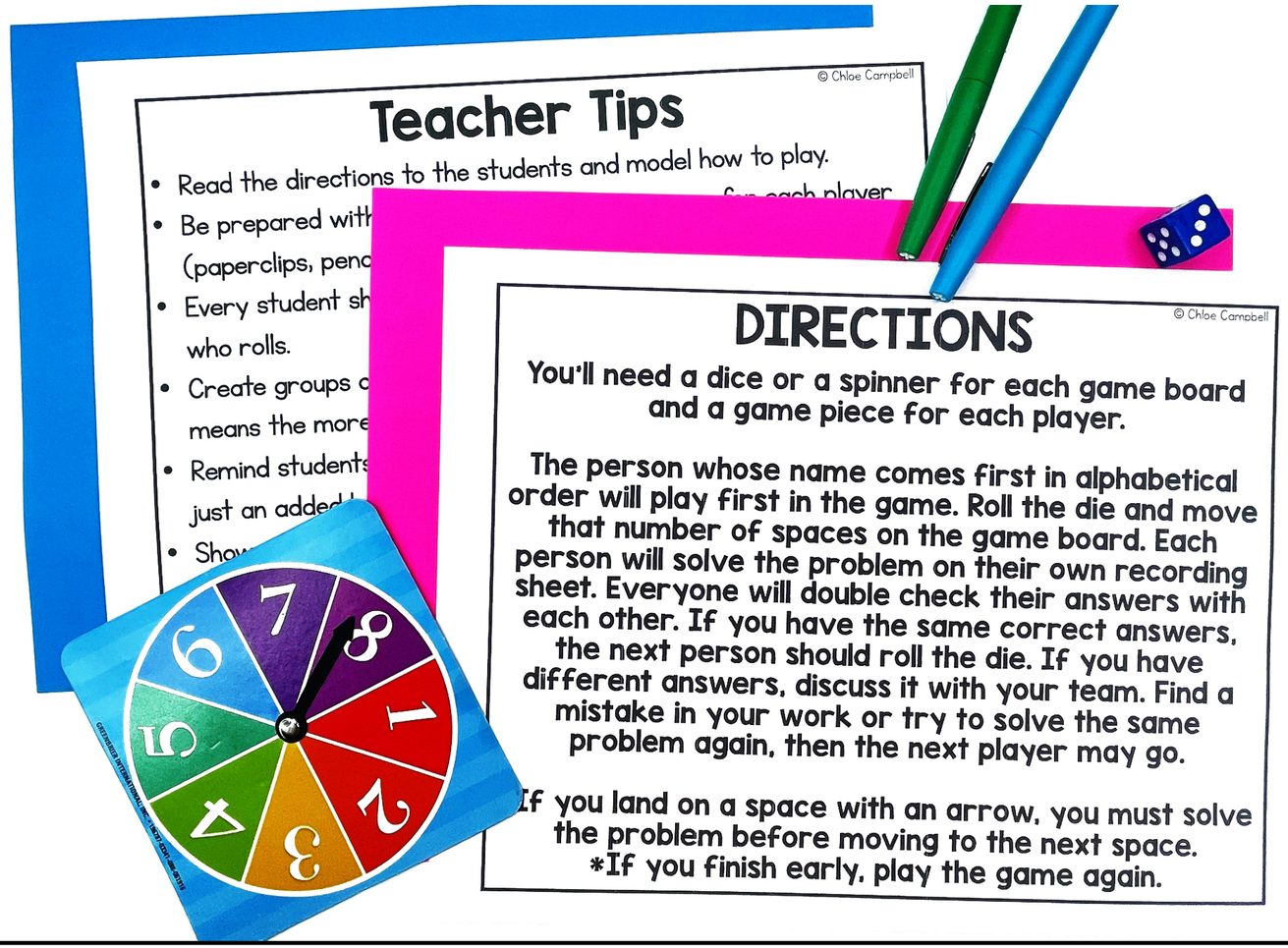
3

Suppose you roll a standard six-sided die 588 ti
would you expect to roll a 4?

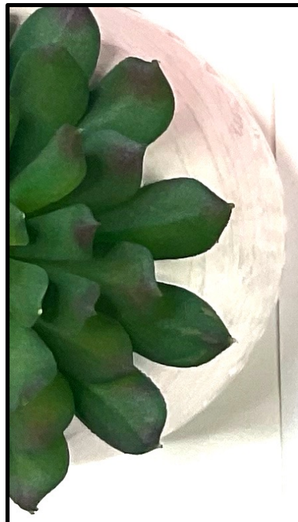
Solve Real World Problems and Make Predictions Based on Theoretical Probability

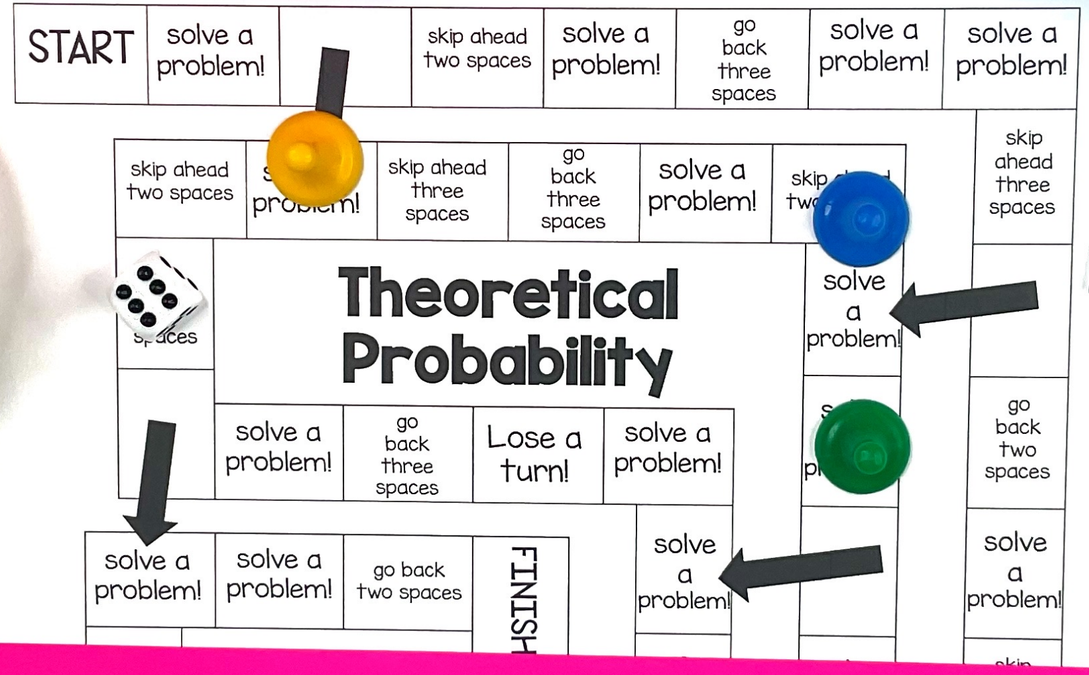
You'll Receive

- Teacher Tips
- Student Directions
- Printable Math Board Game
- Recording Sheet
- Answer Key



Student Recording Sheet





Name

Theoretical Probability Recording Sheet

1 $\frac{1}{6} \times 3$ …2	2 $\frac{4}{6} \times 138 = 92$	3 $\frac{1}{6} \times 588 = 98$	4 $\frac{4}{6} \times 582 = 388$
5 $\frac{2}{6} \times 312 = 104$	6 $\frac{4}{\_} \times 414 = 276$	7 $\frac{2}{6} \times 570 = 190$	8 $\frac{3}{6} \times 600 = 300$
9 $\frac{1}{6} \times 234 = 39$	10 $\frac{1}{6} \times$ …$= 26$	11 Theoretical: $\frac{1}{3}$	12 Theoretical: $\frac{1}{6}$
13	14	15	16

Suppose you roll a standard six-sid… would you expe…

3

Suppose you roll a standard six-sided… would you expect…

11

Salman throws darts at a dar… numbered 1-3. The table below d… lands in each numbered section. B… theoretical probability and the ex… probability that next time, Salman's dart will land in section 2.

Section Number	Darts Landed
1	7
2	5
3	5

13

The table below describes the number of times that Johanna rolled each number on a fair six-sided die during a series of experiments. Based on this data, write down both the theoretical probability and the experimental probability that next time, Johanna will roll a 2.

Die Number	Frequency
1	8
2	4
3	7
4	4
5	7
6	3

7

Suppose you roll a standard six-sided die 570 times. How many times would you expect to roll a number greater than 4?

HAPPY TEACHERS SAID...

> This was a hit during centers. All students were engaged, and better yet - learning! Love this!

> My students love playing games and a simple, easy prep game like this is a great addition to math centers, early finisher activities, and review days.

> These are great for small group stations! What a fun task card adaptation. Students get to play a fun and competitive board game, but they also get to practice learning. Plus, the recording sheet makes it easy to grade and monitor student progress; they aren't just playing they are actively learning and participating with evidence of ability. Great resource!

What's the Best Way to Use this Game?

- ☑ Math Centers or Stations
- ☑ Whole Group Practice
- ☑ Morning Work
- ☑ Partner Activity
- ☑ Early Finisher Tasks
- ☑ Substitutes

Tips for Playing Math Games:

- Read the directions to the students and model how to play.
- Be prepared with dice/spinner and game pieces for each player (paperclips, pencil top erasers, pieces from another game, etc.)
- Every student should solve every problem - not just the person who rolls.
- Create groups of 2-4 students. The lower number of students means the more focused students are while playing.

Tips for Playing Math Games:

- Remind students that the focus is not playing the game...that's just an added bonus! The focus should be on practicing the math skills.

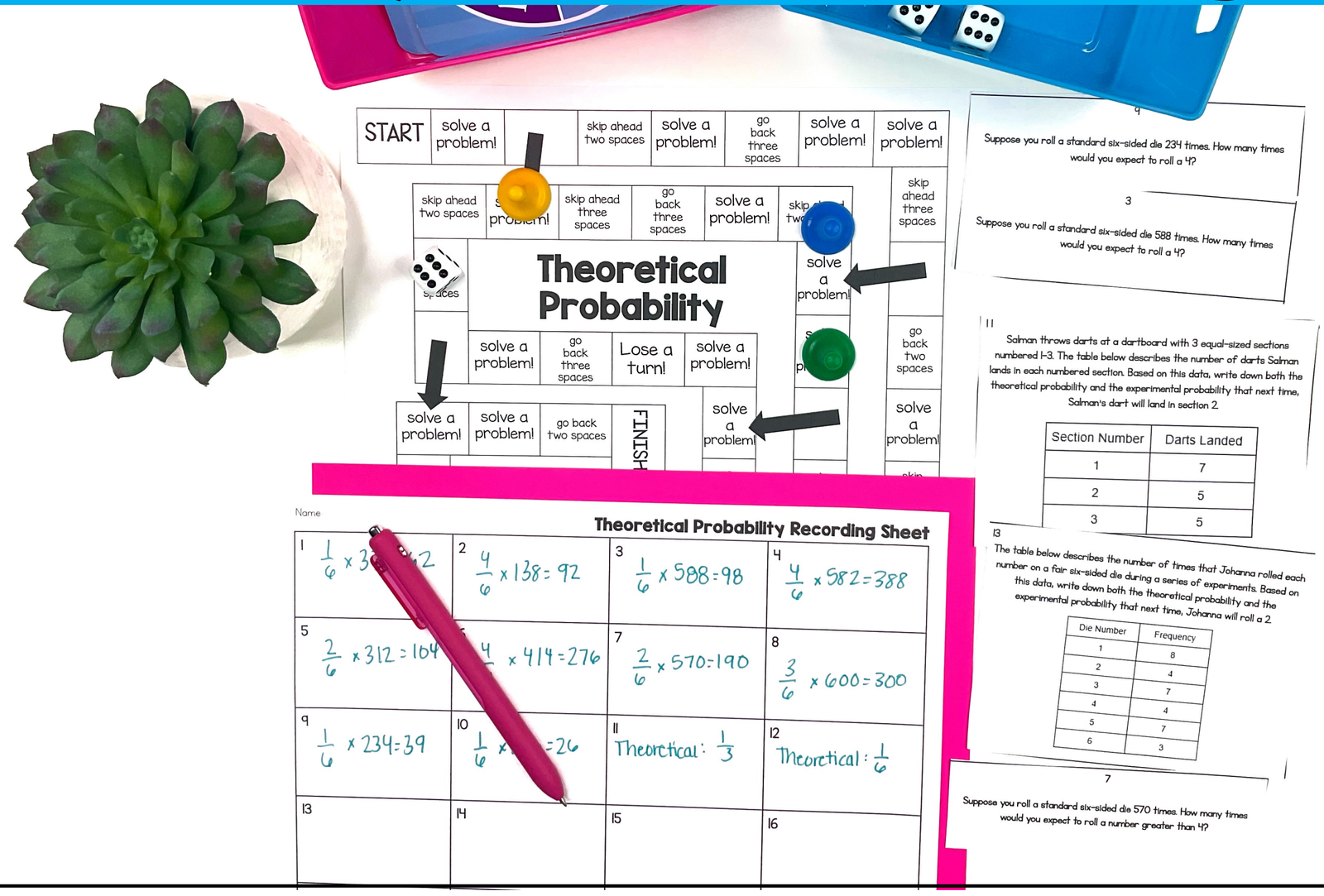
- Show students how to compare and discuss answers. Did you both get the same answer? If students get different answers, ask them to solve the problem using a different strategy or help coach each other through the problem.

Why Board Games?

Research shows that challenge-based gamification in the classroom lead to an increase of 34.755% in student performance

(ScienceDirect, 2020).

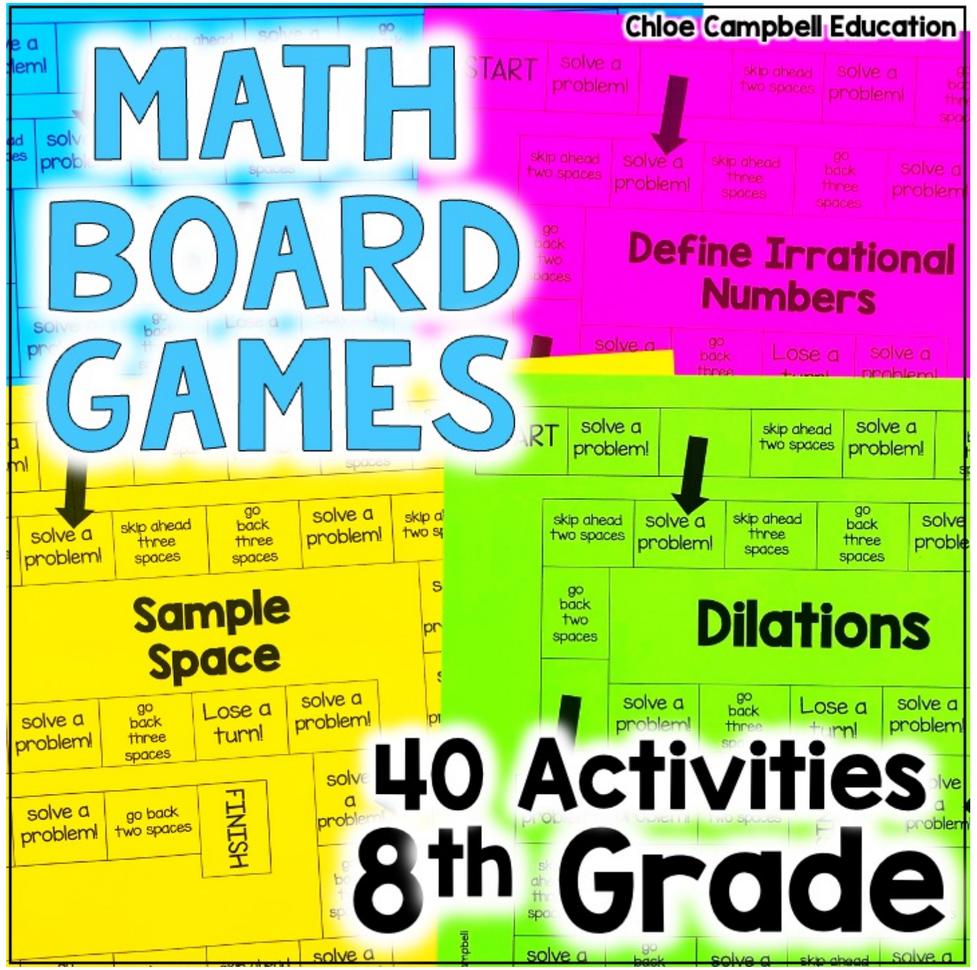
Students won't even realize they are learning!



ADD TO CART

Purchase now to see student engagement and student achievement increase!

Save MONEY and Get the BUNDLE!



Click Here for the Bundle!