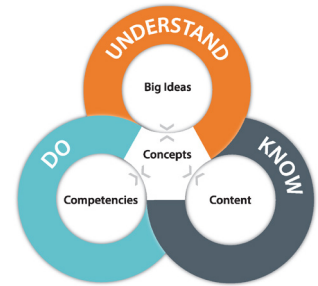


### Under/over 7

In life, we often encounter risk and chance. This lesson uses the dice game Under/Over 7 to encourage students to think about their decisions in contexts that involve risk and chance. By playing this low-stakes mathematical gambling game, students are using mathematical concepts, such as addition and quantities, while provided with a safe environment to develop decision-making strategies in situations involving choices and chance. This lesson helps students develop computational fluency through addition.



### Instructional strategies

1. Introduce students to the rules of the game. The goal of the game is simple: predict whether the sum of the dice will roll to a total of under 7, over 7, or equal to 7. The game is typically played with 2 dice.

A player typically places a wager on one of three possibilities:

- Possibility 1: Under 7
- Possibility 2: Over 7
- Possibility 3: 7

Players take turns rolling the dice. Each time they roll the dice they are to predict one of the three possibilities presented above.

To add stakes to the game, you can have them bet something (use low-stake items such as candies or chocolates). If they don't guess correctly, they lose what they bet. If they correctly guess possibility 1 or 2, they double what they bet. And if they correctly guess possibility 3, they quadruple what they bet.

2. Invite class to form groups of 3 or 4 students. Give them time to play without betting. Then add betting items and give them more time to play. Afterwards, facilitate a class discussion about the experience of playing the Under/Over 7 game using questions such as those provided below.
  - a. What did you enjoy or not enjoy about playing the dice game?
  - b. How did you feel about betting items? How, if at all, did it change the game?
  - c. Would you rather play the game with or without betting? Why?
  - d. When we bet something in a game, what are the benefits? What are the risks?
  - e. How can we manage the risks of betting?



3. Get students to form small groups and talk about situations in their daily life where they have taken a chance. If desired, have them think about and discuss the questions below. Then have students share their stories with the rest of the class.
  - a. Can you think of a time when you took a big chance? Explain what happened.
  - b. What did it feel like to take a chance? Would you do the same thing again? Why or why not?
  - c. What could you have done differently? What difference do you think it could have made?

## Gambling literacy

### Big ideas

- ✓ Gambling can be a fun recreational activity but can also lead to significant harm
- ✓ We can learn how to control gambling by examining the different ways people have thought about it, engaging in critical self-reflection and listening to each other

### Competencies

- ✓ Develop personal and social skills to reflect on and manage personal behaviour and choices related to gambling
- ✓ Explore and appreciate the diverse cognitive, social, emotional and physical factors that impact gambling behaviour

For a complete look at the gambling literacy competencies, as defined by the Canadian Institute for Substance Use Research, see: <https://www.uvic.ca/research/centres/cisur/assets/docs/iminds/hs-gambling-curriculum.pdf>

## Links to curriculum

### First Peoples' principles of learning

- ✓ Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors
- ✓ Learning involves patience and time
- ✓ Learning requires exploration of one's identity

### Mathematics 1/2

#### Big ideas

- ✓ Development of computational fluency in addition and subtraction with numbers to 100 requires an understanding of place value (Grade 2)

#### Competencies

- ✓ Use reasoning to explore and make connections
- ✓ Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
- ✓ Visualize to explore mathematical concepts

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