ORDER CHANCE, EVENTS AFFECTING THE CHANCE OF OTHER EVENTS.

INVESTIGATIONS OVERVIEW PAGE
THIS PAGE IS A SUMMARY OF THE INVESTIGATIONS THAT STUDENTS MAY ENGAGE IN TO DEEPEN THEIR RELATIONAL UNDERSTANDING.
INVESTIGATIONS WITH INSTRUCTIONS TO STUDENTS FOLLOW ON SUBSEQUENT PAGES.

- In pairs, children have some chance word cards. They place the chance word cards in order from most likely to least likely. They select a chance event card. They determine the likelihood of the chance event. They place the chance event card next to the chance word that describes its likelihood. Reflection: How can we order chance words and chance events from most to least likely?
- Children select a die or spinner. The roll the die or spin the arrow once. They explain that one number cannot be rolled / spun if another number is rolled / spun. Children select 2 dice or 1 spinner. They roll both dice or spin the arrow two times. They explain that the chance of one outcome occurring on one die / spin is not affected by the occurrence of another outcome on the other die / spin.Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?
- In pairs, children play chance games, for example, Snakes and Ladders, Bingo. Children use the language of chance as they play to make predictions, for example, I predict I am unlikely to roll a six / I am likely to go down the snake / I am more likely to win. Reflection: How can we order chance words and chance events from most to least likely?
- In pairs, children take turns to roll a standard die. Irrespective of who rolls the dice, Child 1 gets a point if a 1, 2, or 3 is rolled. Child 2 gets a point if 4, 5, or 6 is rolled. Children decide on the number of turns. The first child to score 10 points wins. Children discuss the likelihood of each child winning after each roll of the die. Reflection: How can we order chance words and chance events from most to least likely?
- In pairs, children take turns to roll two standard six-sided dice. Irrespective of who rolls the dice, Child 1 wins a point if the difference between the numbers on the dice is 0, 1 or 2; Child 2 wins a point if the difference is 3, 4 or 5. The first child to score 10 points wins. Children discuss the likelihood of each child winning after each roll of the dice. Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?
- In pairs, children have dice with different numbers of faces, for example, 3-sided dice, 4-sided dice, 10-sided dice, 12-sided dice etc. They identify the possible outcomes from 1 roll of the die. They determine whether the occurrence of one outcome affects the chance of another outcome occurring in one roll. They roll the die to prove it.Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?

- In pairs, children have 2, 3 or 4 dice with the same numbers of faces, for example, 3-sided dice, 4-sided dice, 10-sided dice, 12-sided dice etc. They identify the possible outcomes on each die from rolling 2 dice, or 3 dice, or 4 dice. They determine whether the occurrence of one outcome on one dice affects the chance of outcome occurring on other die / dice. They roll multiple dice / one die multiple times to prove it. Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?
- In pairs, children have coins. They identify the possible outcomes from 1 toss of the coin. They determine whether the occurrence of one outcome affects the chance of another outcome occurring in one toss. They toss one coin to prove it. Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?
- They identify the possible outcomes on each coin from tossing 2 coins, or 3 coins, or 4 coins. They determine whether the occurrence of one outcome on one coin affects the chance of outcome occurring on other coins. They toss multiple coins / one coin multiple times to prove it. Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?

Order Chance, Events Affecting the Chance of Other Events

Sit with a friend.

Have some chance word cards.

Place the chance word cards in order from most likely to least likely.

Select a chance event card.

Determine the likelihood of the chance event.

Place the chance event card next to the chance word that describes its likelihood.

Reflection: How can we order chance words and chance events from most to least likely?

Order Chance, Events Affecting the Chance of Other Events

Select a die or spinner.

Roll the die or spin the arrow once.

Explain that one number cannot be rolled / spun if another number is rolled / spun.

Select 2 dice or 1 spinner.

Roll both dice or spin the arrow two times.

Explain that the chance of one outcome occurring on one die / spin is not affected by the occurrence of another outcome on the other die / spin.

Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?

Order Chance, Events Affecting the Chance of Other Events

Sitwith a friend.

Play chance games, for example, Snakes and Ladders, Bingo.

Use chance words as you play to make predictions, for example,

- I predict I am very unlikely to roll a six
- I am very likely to go down the snake
- I am more likely to win than you.

Reflection: How can we order chance words and chance events from most to least likely?

Order Chance, Events Affecting the Chance of Other Events

Sitwith a friend.

Take turns to roll a standard die.

Child 1 gets a point if a 1, 2, or 3 is rolled. Child 2 gets a point if 4, 5, or 6 is rolled.

Decide on the number of turns.

The first child to score 10 points wins.

Ddiscuss the likelihood of each child winning after each roll of the die.

Reflection: How can we order chance words and chance events from most to least likely?

Order Chance, Events Affecting the Chance of Other Events

Sitwith a friend.

Take turns to roll two standard six-sided dice.

Child 1 wins a point if the difference between the numbers on the dice is 0, 1 or 2; Child 2 wins a point if the difference is 3, 4 or 5.

The first child to score 10 points wins.

Discuss the likelihood of each child winning after each roll of the dice.

Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?

Order Chance, Events Affecting the Chance of Other Events

Sitwith a friend.

Have dice with different numbers of faces, for example, 3-sided dice, 4-sided dice, 10-sided dice, 12-sided dice etc.

Identify the possible outcomes from 1 roll of the die.

Determine whether the occurrence of one outcome affects the chance of another outcome occurring in one roll.

Roll the die to prove it.

Have 2, 3 or 4 dice with the same numbers of faces, for example, 3-sided dice, 4-sided dice, 10-sided dice, 12-sided dice etc.

Identify the possible outcomes on each die from rolling 2 dice, or 3 dice, or 4 dice.

Determine whether the occurrence of one outcome on one dice affects the chance of outcome occurring on other die / dice.

Roll multiple dice / one die multiple times to prove it.

Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?

Order Chance, Events Affecting the Chance of Other Events

Sitwith a friend.

Have coins.

Identify the possible outcomes from 1 toss of the coin.

Determine whether the occurrence of one outcome affects the chance of another outcome occurring in one toss.

Toss one coin to prove it.

Identify the possible outcomes on each coin from tossing 2 coins, or 3 coins, or 4 coins.

Determine whether the occurrence of one outcome on one coin affects the chance of outcome occurring on other coins.

Toss multiple coins / one coin multiple times to prove it.

Reflection: How can we describe when one outcome does affect another outcome, and when one outcome does not affect another outcome?