

Lesson Plan: "Risk vs. Reward: Decision-Making Under Uncertainty"

### **Objective:**

Students will explore the concept of evaluating risks and rewards in decision-making. They will learn how to assess potential outcomes, calculate expected value, and weigh short-term vs. long-term benefits using real-world and fictional examples. Additionally, they will analyze how risk preferences (risk aversion and risk loving) influence decisions.

#### **Materials Needed:**

- Game of Thrones clip or summary of Stannis and Jon Snow discussing the risks and rewards of helping the Wildlings.
- Handouts on risk-reward analysis, expected value, and decision-making frameworks.
- Examples of real-world scenarios involving risks and rewards (e.g., investments, public policy, or personal decisions).

### **Lesson Steps:**

# 1. Introduction (10 minutes):

- Define **risk**: The possibility of loss or an undesirable outcome.
- Define **reward**: The potential gain or benefit from a decision.
- Explain the importance of **risk-reward analysis**: Balancing potential gains against potential losses to make informed decisions.
- Introduce **expected value**: A calculation used to determine the average outcome of a decision considering probabilities.

### 2. Viewing Clip (5 minutes):

- Show or summarize the *Game of Thrones* scene where Stannis and Jon discuss the risks of helping the Wildlings.
- Highlight key tradeoffs:
  - Risks: Alienating the Night's Watch and other allies, potential betrayal by the Wildlings.
  - o **Rewards:** Gaining a stronger army to fight the White Walkers.

### 3. Group Discussion (15 minutes):

- Divide students into small groups to discuss:
  - o What are the risks and rewards Stannis and Jon considered in their decision?
  - How do the short-term and long-term outcomes differ?
  - What factors increase or decrease the likelihood of success?
  - How would you weigh these risks and rewards in their position?

# 4. Concept Application (20 minutes):

# Case Study Analysis:

- o Provide examples of real-world risk-reward scenarios, such as:
  - Investing in a volatile stock vs. a stable bond.
  - Launching a risky but innovative product.
  - Implementing a public health policy during a pandemic.
  - Investing in junk bonds vs. investing in investment-grade bonds (see lesson plan for Lesson Plan: "Reputation and Credit: The Weight of Trust in Financial Markets"
- Ask students to analyze:
  - The risks and rewards of each scenario.
  - How expected value could guide the decision.
  - What additional information or assurances could help mitigate risks.
- Discuss how these principles apply to Stannis and Jon's decision.

# 5. Wrap-Up and Reflection (10 minutes):

- Summarize key takeaways:
  - o Every decision involves weighing risks and rewards.
  - Expected value provides a rational framework for decision-making under uncertainty.
  - o Risk preferences significantly influence decision-making processes and outcomes.
  - Balancing short-term and long-term considerations is crucial in high-stakes decisions.
- Pose a reflective question: How do you balance risks and rewards in your own life decisions, and what strategies can improve your decision-making?

### 6. Activity or Homework (20 minutes):

### Decision-Making Simulation:

- o Present students with a fictional scenario similar to Stannis and Jon's:
  - A kingdom must decide whether to risk resources and alliances to support an uncertain but potentially critical cause.
- Provide additional context, such as:
  - The likelihood of success and failure (e.g., 70% chance of gaining a strong ally, 30% chance of betrayal).
  - The potential rewards and losses for each outcome.

- Assign each group a risk profile:
  - **Risk-averse** groups prioritize minimizing losses, even if it means forgoing significant potential gains.
  - Risk-loving groups prioritize pursuing high rewards, even if it means taking substantial risks.
- o Groups analyze:
  - Potential risks and rewards.
  - Short-term vs. long-term impacts.
  - Expected value of the decision based on probabilities provided by the instructor.
  - How their assigned risk profile influences their decision-making process.
- Groups present their decision and justify it based on their analysis and assigned risk preference.
- Facilitate a class discussion:
  - o How did the assigned risk profile affect the final decision?
  - o Did the outcomes align with the group's preferences?
  - O What might cause a risk-averse individual or group to take on more risk, or a risk-loving individual or group to act more conservatively?