

Backgammon

Skills & Standards Alignment Guide

SKILLS DEVELOPED THROUGH BACKGAMMON

Grades K–2

- Counting with one-to-one correspondence
- Number recognition (1–6 on dice)
- Comparing quantities (more/less checkers)
- Turn-taking and rule-following
- Fine motor coordination
- Early probability awareness

Grades 3–5

- Mental addition using dice combinations
- Multi-step planning
- Predicting outcomes
- Risk vs. reward evaluation
- Pattern recognition
- Beginning probability reasoning
- Flexible thinking when plans change

Grades 6–8

- Probabilistic reasoning
- Decision-tree thinking
- Long-term strategy development
- Systems thinking
- Data-informed decision-making
- Adaptive strategy under uncertainty

Grades 9–12

- Expected value reasoning
- Strategic optimization
- Statistical thinking
- Risk modeling
- Game theory fundamentals
- Analytical decision-making under incomplete information



BACKGAMMON STANDARDS ALIGNMENT

Backgammon supports mathematical reasoning, strategic thinking, probability analysis, and problem-solving across grade levels. The standards below are verified representative examples that align naturally with skills developed through gameplay.

INDIANA ACADEMIC STANDARDS (2020) – Mathematics

- **Kindergarten – K.NS.1:** Count to at least 100 by ones and tens; count on from a given number.
- **Grade 2 – 2.C.1:** Add and subtract within 100 using strategies based on place value.
- **Grade 3 – 3.NS.3:** Fluently add and subtract within 1,000 using place value strategies and algorithms.
- **Grade 5 – 5.DA.1:** Formulate questions and collect, represent, and interpret data.
- **Grade 7 – 7.DSP.4:** Develop probability models and use them to find probabilities of events.
- **High School – PS.P.1:** Understand and use rules to calculate probabilities for events.

COMMON CORE STATE STANDARDS (CCSS) – Mathematics

- **Kindergarten – CCSS.MATH.CONTENT.K.CC.A.4:** Understand the relationship between numbers and quantities.
- **Grade 3 – CCSS.MATH.CONTENT.3.OA.D.8:** Solve two-step word problems using the four operations.
- **Grade 5 – CCSS.MATH.CONTENT.5.NF.B.6:** Solve real-world problems involving multiplication of fractions and mixed numbers.
- **Grade 7 – CCSS.MATH.CONTENT.7.SP.C.7:** Develop probability models and use them to find probabilities of events.
- **High School – CCSS.MATH.CONTENT.HSS.MD.B.5:** Weigh possible outcomes of a decision using a probability model.
- **All Grades – CCSS.MATH.PRACTICE.MP1:** Make sense of problems and persevere in solving them.