

The activities and topics are as follows:

Activity	Topic
Activity 1 – Tower of Hanoi	Students will solve the ancient Tower of Hanoi problem, understanding the secret behind the problem and introducing students to the concept of exponents.
Activity 2 – Soma Cube	Students will examine the curious shapes of the soma cube pieces and use them to create hundreds of different shapes.
Activity 3 – River Crossing	Students will solve a river crossing puzzle using logic and problem solving skills to move objects from one side of the river to the other.
Activity 4 – Tangrams	The Chinese shapes of the tangram will be used to create figures and characters to visualize patterns.
Activity 5 – The Weighting Game	Students will use a balance with known and unknown masses to predict and measure the weights of various objects. This activity introduces students to the concepts of algebra.
Activity 6 – Tilings	Students will examine various geometric shapes and use them to generate repeating patterns. Students will learn what makes a repeating pattern, will finish incomplete tilings, and create their own.
Activity 7 – The Probability Game	Students will use experimental and theoretical probabilities to move around the probability game board. Students will investigate probabilities using a spinner, dice, the quarry and various shapes to determine the likelihood of events.