



Six Bits

Instructions: For each group of six students in your class, make one copy of this sheet. Cut the six cards along the dotted lines. Distribute a set of cards for each group—one card per person for each group of six. Remind students that they cannot show their cards to each other, but they should share the information verbally.

<p style="text-align: center;">Card 1</p> <p><i>Do not show this card to anyone in your group. You may read the information on the card to your group.</i></p> <ul style="list-style-type: none"> ■ How can we best manage planted pine forests and wood products to reduce atmospheric carbon dioxide? ■ Fertilizer application helps trees grow faster. ■ Forest product substitution is the practice of using wood instead of other products. ■ Lumber is a long-lived, solid wood product; the carbon can stay stored in wood for many years, depending on how the lumber is used. 	<p style="text-align: center;">Card 2</p> <p><i>Do not show this card to anyone in your group. You may read the information on the card to your group.</i></p> <ul style="list-style-type: none"> ■ Substituting wood products for more carbon-intensive products leads to additional reductions in atmospheric carbon dioxide. ■ For buyers to choose lumber over concrete, lumber must be available and sold at a competitive cost. ■ Growing trees faster is one way to sequester more carbon. ■ After trees are harvested, carbon in the wood can be stored in forest products, such as paper and lumber.
<p style="text-align: center;">Card 3</p> <p><i>Do not show this card to anyone in your group. You may read the information on the card to your group.</i></p> <ul style="list-style-type: none"> ■ Forest product substitution is a carbon pool. ■ Trees that grow on pine plantations are harvested for forest products. ■ The average useful lifespan of a wood house is 80 years. ■ Harvest cycles of 25 to 35 years provide a steady supply of solid wood products. 	<p style="text-align: center;">Card 4</p> <p><i>Do not show this card to anyone in your group. You may read the information on the card to your group.</i></p> <ul style="list-style-type: none"> ■ As trees grow, they remove atmospheric carbon dioxide and store it in their trunks, leaves, and roots. ■ Recycling paper is one way to keep carbon out of the atmosphere. ■ Lumber can be used instead of other construction materials, such as concrete or steel, to build houses and buildings. ■ Young, growing pine trees up to about 25 years old sequester significantly more carbon than mature trees.
<p style="text-align: center;">Card 5</p> <p><i>Do not show this card to anyone in your group. You may read the information on the card to your group.</i></p> <ul style="list-style-type: none"> ■ Forest carbon (stored in trunks, leaves, and roots) is an important carbon pool. ■ Concrete and steel production release a great deal of carbon dioxide—making these products carbon-intensive. ■ For landowners to manage their forests for lumber, there must be a market to sell their wood. ■ Mature southern pine trees over 40 years old maintain the carbon they have sequestered, but do not add a lot of additional carbon. 	<p style="text-align: center;">Card 6</p> <p><i>Do not show this card to anyone in your group. You may read the information on the card to your group.</i></p> <ul style="list-style-type: none"> ■ Paper is a short-lived wood product; the carbon in these products returns to the atmosphere when they decay or are burned. ■ When only considering the forest carbon pool, carbon storage is maximized by maintaining old, mature trees. ■ Life cycle assessments of concrete and wood reveal that concrete contributes significantly more atmospheric carbon than wood. ■ Forest products (such as lumber and paper) are an important carbon pool.