

Lesson 1

Down by the River

Possible Student Responses

The expected answer that would manifest satisfactory reasoning is the selection of Side B- 1st bullet (Dustin's suggestion to Brad). Most students, based on experience and/or perceived logical direction of the force of water, reasoned out that "the force of water will push outward". Some reasoned that "flooding may occur on Side A because water will overflow in that direction". Yet other students will instinctively know the direction of the water but could not use the correct vocabulary to explain the prediction.

A few students gave Side A as the "safer" house due to misconceptions and an off tangent explanation for the river movement. The most believable and logically sound misconception was "...the river is going to cut-off a part to make an oxbow lake, and the course of the river will go towards Side B". This may occur if the speed and/or the volume of water moving through the river increases, therefore causing the bends in the inner bank to break to form an oxbow lake on the outer bend. Without that detail the natural course of the river is to widen on the outer bend. Other students mentioned deposition in the inner bend but thought it "bad for Side B house". Other responses included "wind", "fish", "fish food", all of which have no effect on the surface changes that are expected.

A well thought of response to this prompt may also be "neither side is safe". The acceptable explanation would be that the movement of the river is, to a certain degree, unpredictable, and therefore building a house anywhere near a river may prove to be disastrous.