A fundamental question about human memory is why some experiences are remembered whereas others are forgotten. Brain activation during word encoding was measured using blocked and event-related functional magnetic resonance imaging to examine how neural activation differs for subsequently remembered and subsequently forgotten experiences. Results revealed that the ability to later remember a verbal experience is predicted by the magnitude of activation in left prefrontal and temporal cortices during that experience. These findings provide direct evidence that left prefrontal and temporal regions jointly promote memory formation for verbalizable events.