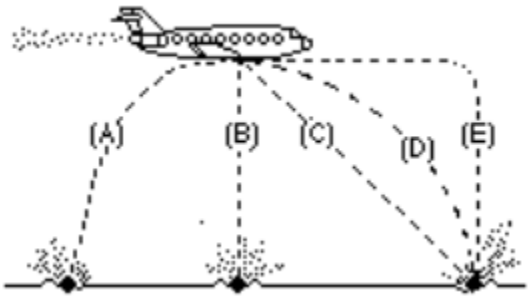
The X-15 was a research aircraft created by the agency that would eventually become NASA. It set a number of records for speed and altitude of flight. In this clip, the X-15 is released from a B-52 “mother plane” and falls back to Earth.

Before showing the clip, ask your students, if a package is dropped from a plane, which of the following paths will it take if air resistance is negligible:



Of course, the correct answer to this is D. The package maintains the same x-component of velocity as it had in the plane. This is demonstrated as well in the X-15 clip. The X-15 remains under the B-52 as they both travel forward at the same speed.

In addition, ask your student how the dropped package would appear to someone inside the plane? (The package will appear to drop straight down.)