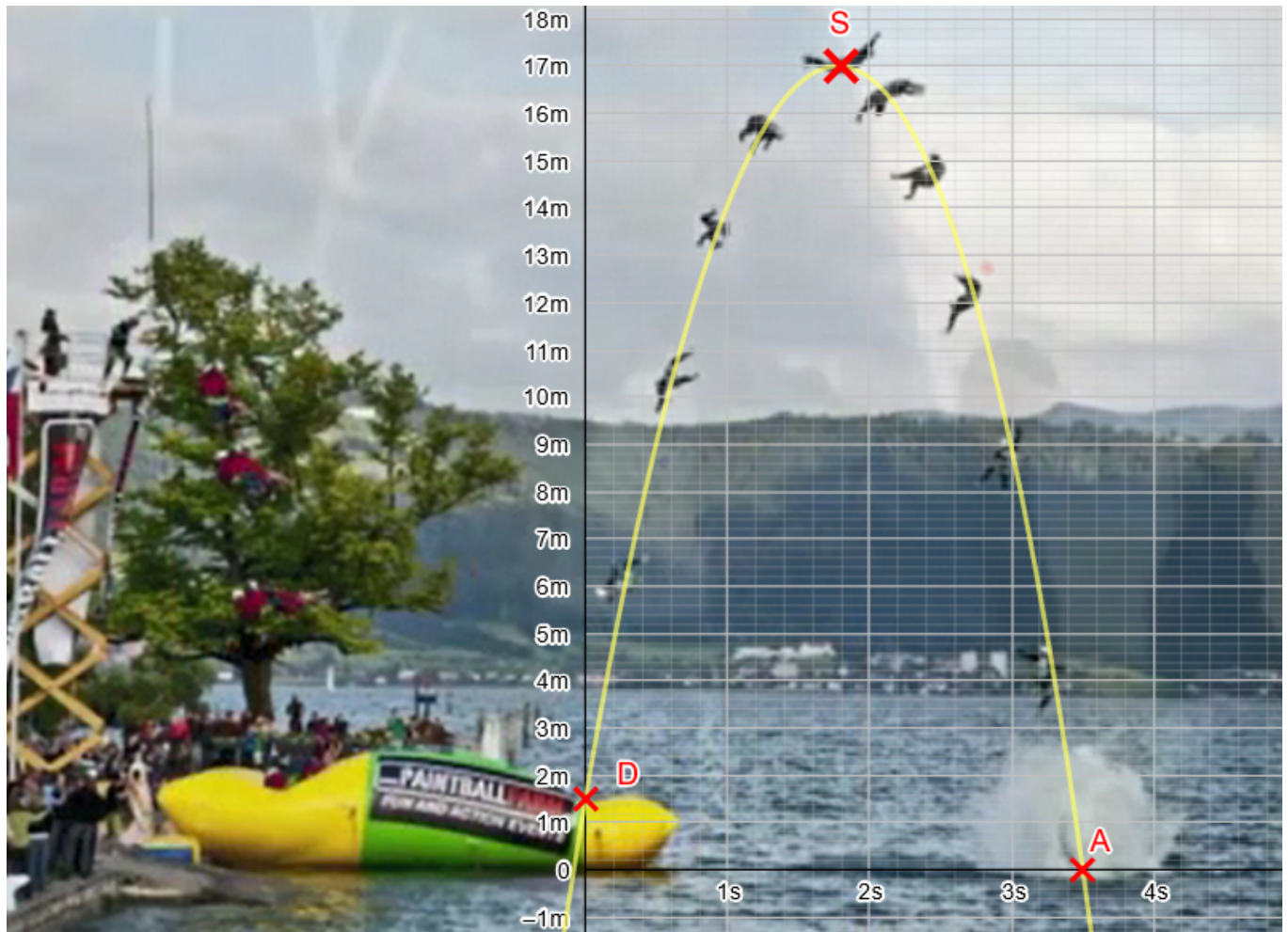# BLOB JUMP WORLD RECORD

## What goes up must come down
### (Isaac Newton)

**Problem solving in pair work**

The graph below shows height reached by the jumper versus time



1. What trajectory does the jumper follow?

2. Read as precisely as possible the coordinates of points D, S and A.

3. Give a concrete interpretation for the coordinates of each point.

4. Give the equation of the axis of symmetry of the trajectory.

5. Assuming that $y = a(t - \alpha)^2 + \beta$ is an equation of this trajectory in the coordinate system, find the numbers $a, \alpha \; and \; \beta$.

6. Using the equation above, find how long the jumper spends above 8 meters high.