PUZZLING CARTOON

- LOGAN'S ADVENTURE -

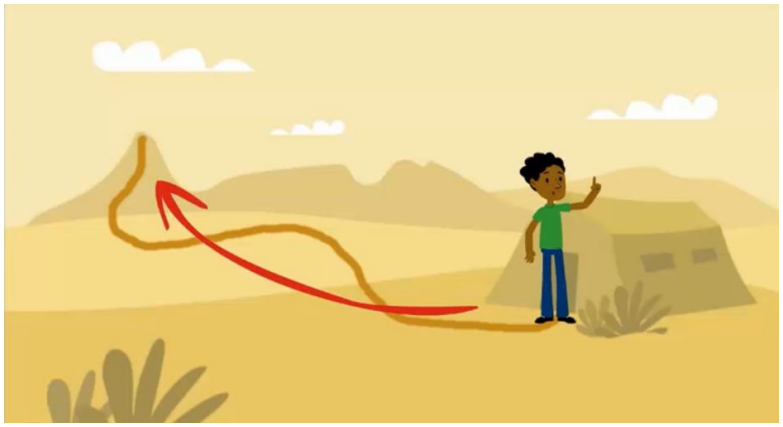
AMAZINGMATHS

Materials:

- Video of the puzzle
- Sheets of paper
- Pencils

The puzzle

Logan is passionate about adventures and the outdoors. This morning, he decides to climb a mountain in the desert. Logan leaves at 10 a.m. and he reaches the top at 5 p.m.



He spends the evening enjoying the view and decides to sleep under the stars. The next morning, Logan decides to go back to the bottom of the mountain, using the same path. He leaves at the same time and arrives once again at 5 p.m. Logan knows that he did not walk at the same speed during the two journeys and that he sometimes took breaks.

Can you assure Logan that there is a spot on the path he passed by at the same time on both days?

PUZZLE SOLUTION

The answer:

To be convinced he passed by the same spot each day, we can imagine two people that leave at the same time. One starts at the bottom of the mountain and the other one starts at the top of the mountain. The first person represents Logan the day he climbed up and the second one represents Logan the day he came down.

If the two people take the same path, it is certain that they will pass each other. Then, they will be exactly at the same place on the path at a moment in the day. This place represents the place where Logan will have been at the same time on both days.

To illustrate the solution efficiently, you may ask two students to take place at both ends of a staircase of the school. The student at the bottom must go up the stairs and the one at the top must go down the stairs. Both students must start walking at the same time. There will necessarily be a *moment* when the two children will pass each other.