New Year's Puzzle

Overview: This is a really fun calendar riddle I learned back when I was a student that really had me going for days before I figured it out. This one really seems like a paradox at first. It's a math logic puzzle that will really blow your mind. Are you ready?

Materials

- Pencil
- Paper

Activity: On New Year's Day (Jan. 1st), some friends came over to visit and they asked you, "How old are you?"

To which you replied, "The day before yesterday, I was nine years old. And next year I am going to be 12."
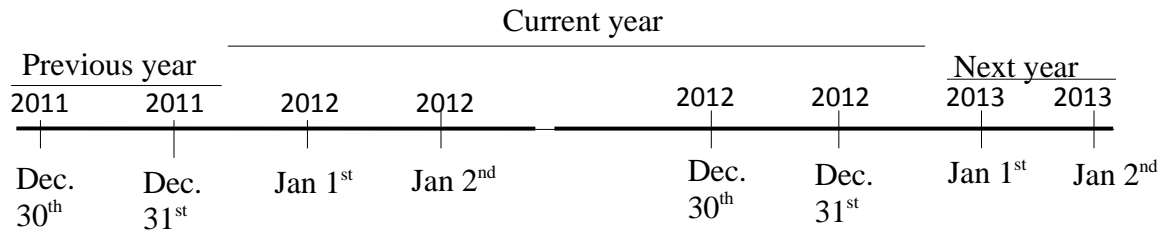
And this is totally true.

How can this be?

I'll give you a hint… your birthday is on Dec. 31st. Can you explain the rest?

Use the space below to figure out what's going on. When you're ready for the solution, turn the page. *(No peeking until you've tried it first!)*

Need a hint? Try sketching out a timeline right around Dec. 31 and Jan. 1, keeping track of the year.

Did you solve it yet? Let me give you a little help if you need it. Assume today is Jan. 1st (New Year's Day) in the year 2012. Your birthday on Dec. 31st. Now check out the diagram:

Remember you said, "The day before yesterday, I was nine years old." Which day are you referring to?

The day before yesterday is Dec. 30th, 2011. That's the day you were 9.

The following day (yesterday, Dec. 31st, 2011) you turned 10. With me so far? Good.

How old will you be on Dec. 31st, 2012? Eleven years old. But that's not what you were referring to, is it? Because you also said, "And next year I am going to be 12." You said that *on* Jan. 1, 2012, so you couldn't have been talking about your birthday in 2012, but rather your birthday in 2013!

How old will you be on Dec. 31st, 2013?

You'll be 12 years old. *Ta-daa!*

Exercises

Your exercise for this lesson is to not only challenge someone else with this problem, but be able to explain it to them in a way that they understand the solution. Go for it!