



Day 2: Imagination





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Interactive Story Ideas!



Storytelling Role-Play: 5 sand dollars each

(2 Students to help cut out props and 6 students to role play)

Choose 3 girl volunteers and 3 boy volunteers to be Albert, his mother, Maja, the boys at the entrance exam, and the professor. Tell students to listen for their parts.



New word: 1-5 sand dollars

Physicist: A physicist studies matter and the way things move through space and time. They ask questions about things like gravity, light, and time. Studying physics also helps us understand heat, energy, and electricity.

*Remind the students that they can earn a sand dollar if they tell you at the end of the story what the new word means. If they get it wrong remind them of the definition and have them try again in a few minutes.

Day 2 Albert Einstein



Background scene:

Play this video on silent in the background only while reading this page. Model Railway Layout with Steam Locomotive and Diesel Railcars from Prussia in HO Scale. <https://www.youtube.com/watch?v=kJHqWAa3fUw>

Just like the compass needle pointing north, Albert knows his purpose isn't fighting in a war or memorizing a book. He leaves the scowliest headmaster's school before he finishes his senior year, never to return.

It is 1894, and 15-year-old Albert clammers on a train and rides for 10 hours to reunite with his family. "Albert!" shouts his two years younger sister, Maja, as she runs to him and gives him a giant high-five.

Maja and Albert are the best of friends, and she has missed him dearly. When she was about to be born, Albert's parents had told him there would soon be a new baby in the house to play with. Their grandmother remembered that Albert had expected a toy, and the first time he saw his baby sister, he asked, with great disappointment, "Fine, but where are her wheels?" During the term he has been away from his family, he has missed her the most.

"Oh, dear Albert! What will you do now?" asks his mother, wringing her handkerchief and dabbing her eyes when she finds out he isn't in school anymore. (Handkerchief prompt, dab your eyes and be worried about Albert's future). "Where will you get all the knowledge you need?"

"I can study on my own. And remember Mama, imagination is more important than knowledge," Albert says, reminding his mother of all the fairytales they read together, and the fun thought experiments they dreamt up. "Knowledge is limited. Imagination encircles the world."

After staying for a while in Italy, Albert gets on another train that takes him to Switzerland. He tries to take the entrance exam to the Swiss Polytechnic Institute, where the minimum age for the test is 18. The boys at his side look curiously at the younger boy humming Bach and Mozart to himself as he blazes through the math section of the exam and turns it in to his teacher early. (Sit on the floor or desks with students on Albert's side. Albert hums and writes in his own little world). Even though he is only 16, Albert does very well on the Math and Science sections of the test, although his Language and Art scores are a bit behind.

"It's okay," he tells himself, holding his handy compass that was nestled in his pocket, "I'll just work harder!" He completes high school and comes back in 1896.

These schools teach things differently from the school he had left behind in Germany. Albert loves that the students are seen as individuals, and encouraged to think and ask questions. He feels right at home. At the age of 16, he writes his first scientific paper... and of course, it is about magnetism. (Magnet prompt, test out different things in class to see if they are magnetic).

Day 2 Albert Einstein

He sends the paper, along with a letter, to his uncle Caesar Koch. (Albert paces back and forth trying to decide what to do next). “I hesitated about sending you this. For it deals with a very specialized topic, and is besides, as you would expect from such a young chap as me, still rather naive and unfinished,” he writes in the letter. But Albert’s journey of discovery is only beginning.

The next year, he boards another train to attend the University in Switzerland, just as he had planned. (Ticket prompt, hand the ticket to Albert) He makes many friends that will become friends for life. He also meets a physicist from Serbia named Mileva Maric. A few years later, they get married and have two sons. Their names are Hans Albert and Eduard.

After graduation, Albert tries to get a job as a teacher but finds no luck. His professors, though impressed by his talent in certain subjects, don’t see his genius yet, and are reluctant to recommend him for a job.

“You don’t seem like the right fit,” Albert’s professor says, “I don’t think I can hire you for a lab assistant. Perhaps you could... sell insurance instead?” Albert knows he can’t give up on his dream of being a physicist.

His father dies around this time and Albert is sad because he knows he has so much more to achieve in life. He just wishes his father could be around to see it.



Questions/Reading discussion: 1-5 sand dollars

Ask: How much younger was Albert than the other students taking the entrance test?

Example: 2 years younger.

Ask: What was Einstein’s first scientific paper about?

Example: It was about magnets.

Ask: What did Einstein like about his later schools?

Example: He liked the way everyone could ask questions and were treated like individuals.

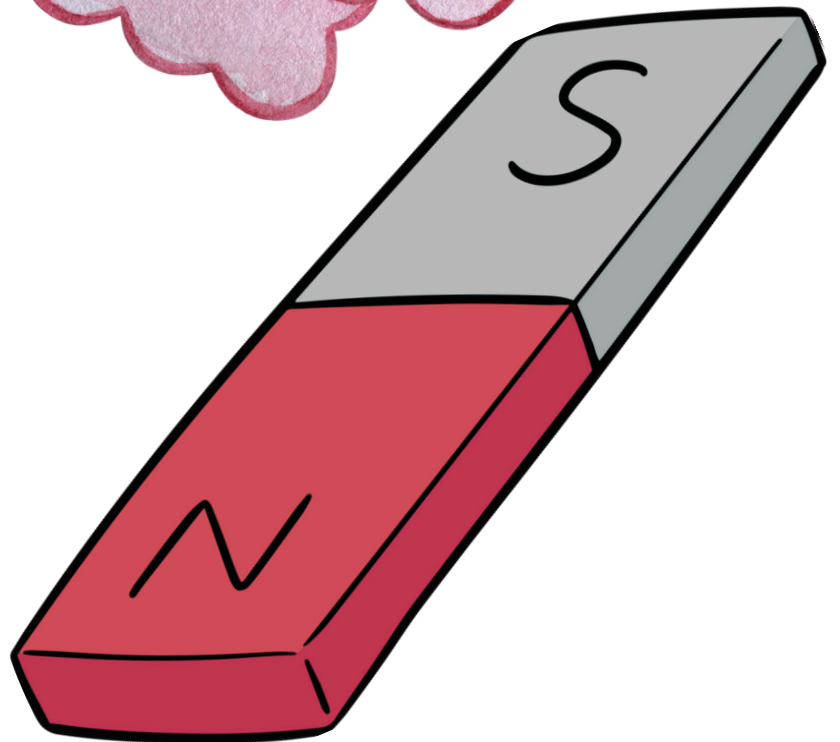
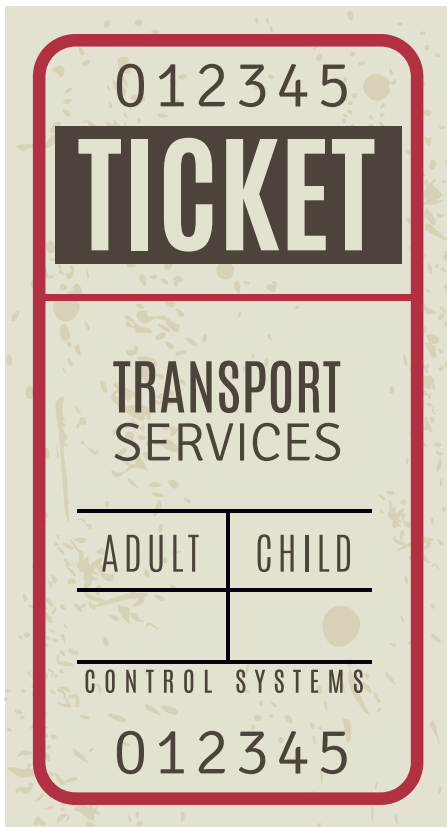
Ask: In what ways do you think Einstein showed courage?

Example: Answers will vary, such as making the journey alone, trying out for the test early, and not giving up on his dreams.

Cut out this handkerchief for Mother.



Cut out this ticket for Einstein.



Cut out this magnet for Einstein to explore.

Pauline: Dab your eyes and look worried.

Albert: Use the magnets to explore and check what is magnetic.

Albert: Take the ticket and board the train.