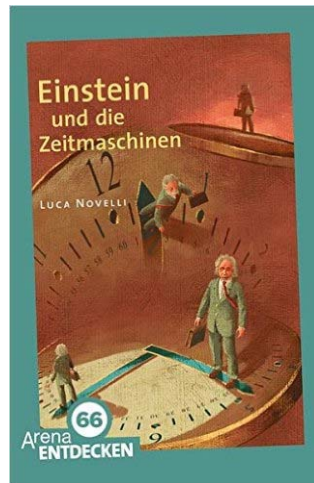


Instructional Materials for *Einstein und die Zeitmaschinen*

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Einstein und die Zeitmaschinen by Luca Novelli

Topic: History of Science

Overarching Theme: Science and Technology, Personal and Public Identities

Global Goals: Students will understand that they are developing into independent readers who adapt to different texts and use appropriate reference sources as needed. Students will understand that they can scan authentic texts in order to locate desired information. Students will be able to make connections across several academic disciplines.

Essential Questions: Was fuer einen Mensch war Einstein? (What kind of human being was Einstein?)

Targeted Proficiency Levels: A2-B1 / Intermediate Low – Intermediate Mid

Length of Unit: fifteen 45 minute periods

Standards and Modes of Communication:

Interpersonal Speaking: Using the target language, students will interact with their partner in small groups and to create their presentations while completing reading activities. Students will interact with teacher throughout the unit in the target language.

Interpretive Text and Audio: Students will read the authentic text.

Presentational Writing: Students will create a poster for a presentation using the target language.

Presentational Speaking: Students will present their posters to classmates.

How Standards are addressed:

Culture: school system in German-speaking countries, music, geography, desiring Italy, hiking

Connections: Topics include: history, physics, math, geography, music, science, politics, religion

Comparisons: Students will compare school and educational systems. Students will compare linguistic features between their native language and the target language.

Language Functions/Objectives

Structures:

Vocabulary: verbs, idiomatic phrases, science-specific, everyday life

Assessments

Summative: Students will create a RAFT writing task. (See Appendix D)

Formative: During the course of the book students will complete various activities and the teacher will interact with the students to determine students' comprehension at various points throughout the unit. Students will also participate in a gallery walk. Upon completion of the

reading the book, students will create and present a poster incorporating information about Einstein's life from the book to the class.

Materials

- The book *Einstein und die Zeitmaschinen* by Luca Novelli
- handouts
- online resources
- art materials for posters
- various technology, including computers, iPads, digital graphic programs
- rubric for R.A.F.T assignment

Warm-up /Setting the Stage / The STEM Connection!

1. Opening question for discussion: "If you could time travel, when and where would you go?"
2. What examples of time travel and time machines do you already know? Discuss examples, show pictures/videos of several from pop culture and literature.
3. Find a picture of your town from the year 1905. Discuss the living conditions at the time, especially in regards to technology.
4. Create a large puzzle from a picture of Einstein from his later years. Students receive the pieces and must work together to put the pieces together. Once students are finished, make a list of associations with Einstein.
5. Discuss the components for $E = mc^2$
6. Book preview- Students will receive their copies of books and preview the formatting and pictures.

Input/Introduction of new language: Students will preview new science-related vocabulary in the book's glossary.

Guided participation/practice: In order to prepare the class for independent reading, vocabulary acquisition and presentation, the reading of the first few chapters will be teacher directed. The teacher will read the chapter with the students using circumlocution to explain unknown vocabulary to make the text accessible to the students. To facilitate understanding, students will ask or answer content questions.

Once students have completed several chapters with the teacher, the remaining chapters of the book will be divided among partners. Students will identify four components in each chapter: relationships, conflicts, work/school, important life events. (See Appendix C) This information will be displayed

throughout the classroom and students will participate in a gallery walk to complete their understanding of the book.

Using the guidelines, students will in groups to create a poster illustrating Einstein's life, values, and contributions to civilization. Students will choose their posters' format, using traditional poster materials or digital applications. Groups will present posters to the class.

At the end of the unit, students will create a RAFT writing assignment, using the information from the book and presentations.

Enabling activities: Students will create a gallery walk based on the information they collect from their chapters.

Application: Students will be able to determine what events shaped Einstein's life and world view and apply these ideas to their own world view.

Extension activities: Students can investigate one of Einstein's theories and create a live demonstration to explain the theory.