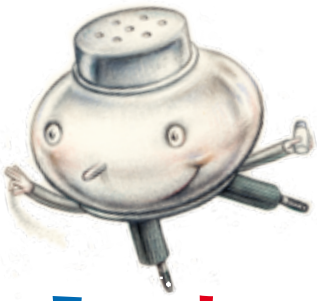
Ana Alonso

The Steam Castle



ANAYA ENGLISH

Teacher's Book

Science

Primary Education

A PINCH OF SALT

A LITTLE BIT

This Teacher's Book is part of the complementary materials of the Reading Plan for *The Steam Castle,* which is included in the PINCH OF SALT collection.

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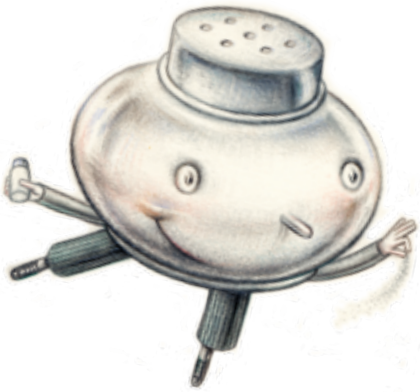
Summary



The PINCH OF SALT collection

As part of its ongoing commitment to the encouragement of reading and teaching innovation, Anaya presents the **PINCH OF SALT** collection as a response to the new challenges of the education system. Intended for Primary Education, the collection combines literature with contents from different curriculum subjects. Each book handles these contents via a fictional story with a captivating and fun plot, using language appropriate for the age of the readers. The attractively designed and generously illustrated books are accompanied by ten work cards with proposed activities that may be completed individually or in groups, either at home or in the classroom.

The author, Ana Alonso, is a writer, poet and teacher, with a long literary background. In recent years she has published numerous books for children and young adults, including the prestigious series *La llave del tiempo (The Key of Time)* and *Versos piratas, piratas en verso (Pirate Verses, Pirates in Verse)*, in Anaya, and she has received important awards, including the Hiperión Poetry Prize and the Barco de Vapor Children's Literature Award.

The **PINCH OF SALT** Reading Plan offers a new focus, based on the most recent studies on the acquisition of reading habits at an early age, as well as on the experience of numerous teachers. Thought-provoking and stimulating (with dramatisations and complementary materials written by the author herself), it has been carefully designed to encourage reading efficiently at all levels of Primary Education.

We hope that both pupils and teachers will find in these books the "pinch of salt" necessary to stimulate creativity and add excitement to our daily routine.

PINCH OF SALT materials

For the pupils

The reading book

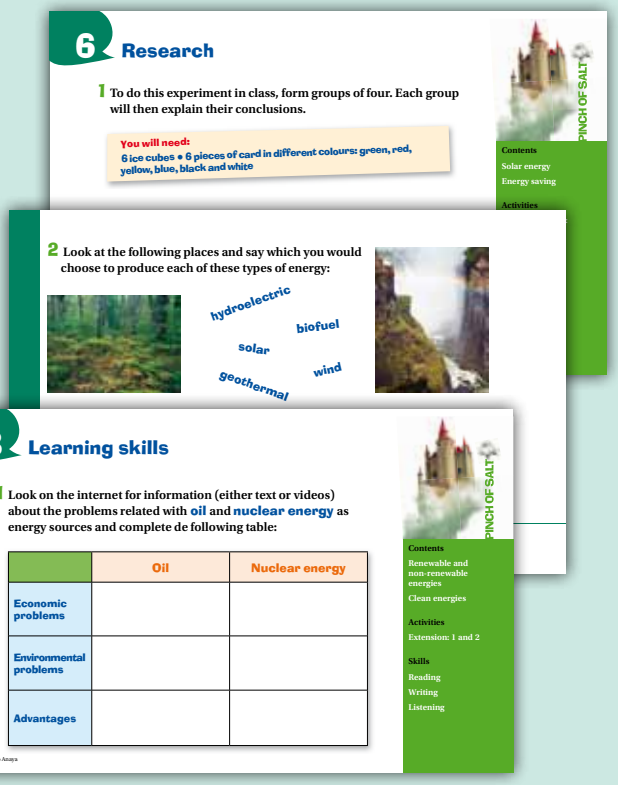
Through the story of the magical Princess Enid, her interest in science and her confrontation with the witch, Malena, pupils of the third cycle of Primary Education will be able to consider **different energy sources** and evaluate **renewable** and **non-renewable energies.** At the same time, they will consolidate their reading habits, acquire new vocabulary and a better understanding of written language.

The work cards

The book includes **ten work cards** in colour that will allow pupils to complete **activities**, inside and outside the classroom. These activities are intended to complement their reading and reinforce the curriculum contents covered in the story, as well as to cover the specific needs of each pupil. The postcard included at the end of the book can be used to write to the author (preferences, suggestions...).

The audio CD

The book includes an **audio MP3** that contains the recording of all the chapters. By listening to the text, read by a native professor, the students will be able to work on their word pronunciation and verify their listening comprehension skills.



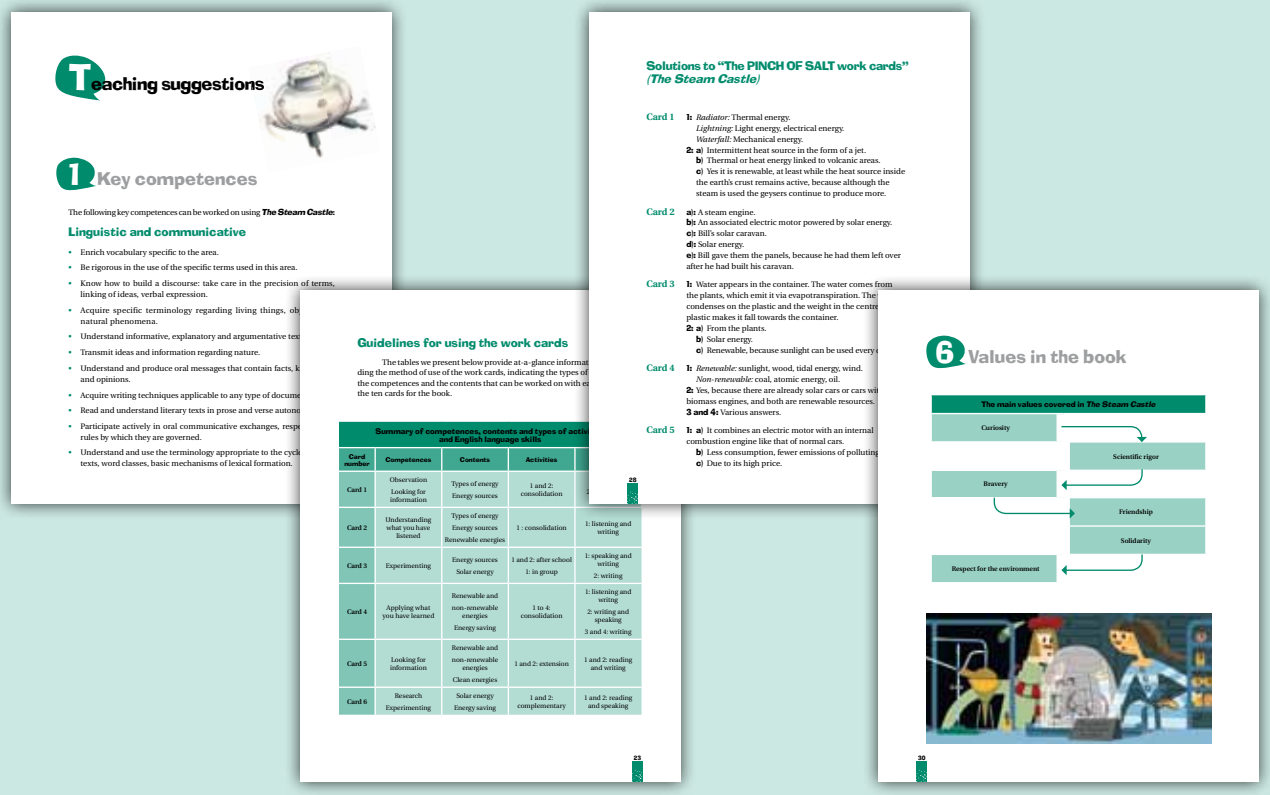
For the teacher

The Teacher's Book

The Teacher's Book includes **teaching suggestions** and a number of strategies to help teachers make the most of the reading of the book and the work card activities, by offering **guidelines** for their use, organised in practical tables. It also contains others **complementary materials** (assessment work, various dramatic games and a vocabulary list).

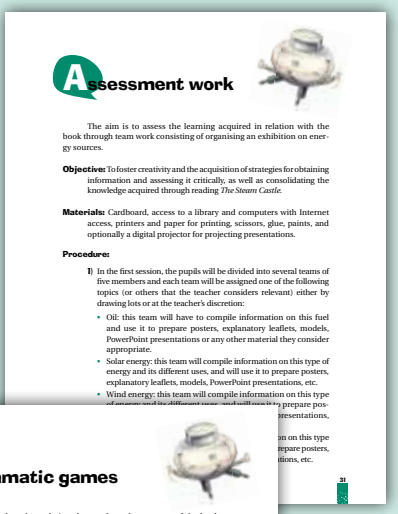
Teaching suggestions

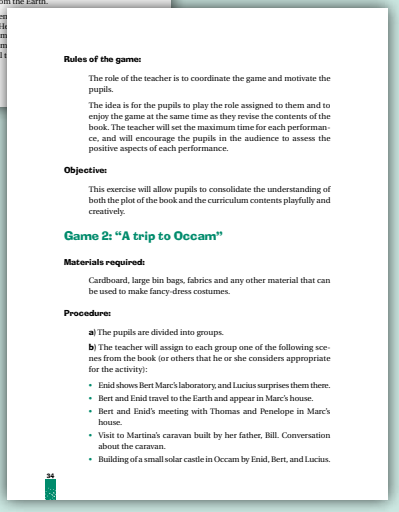
- Key competences
- Area objectives
- Curriculum contents
- Methodology
- Using the work cards (including practical **tables** and **solutions**)
- Values in the book



The assessment work

In order to assess the acquisition of the different competences worked on via this book, we suggest that the pupils should complete some **assessment work** appropriate for their age and intended to combine the assessment of the progress made with an **entertaining** and at the same time **educational ativity**. The assessment work will allow the pupils to look in greater depth at aspects covered in the reading and to become familiar with different techniques for compiling and processing information, which they will find very useful throughout their academic life.

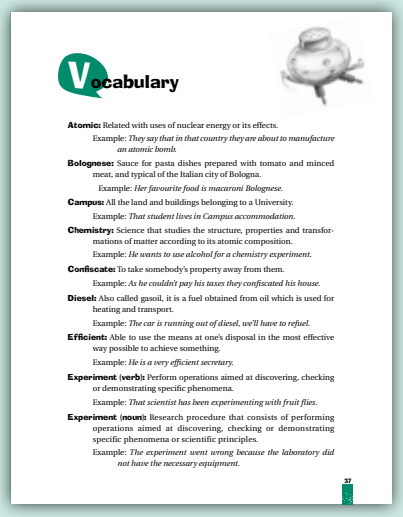




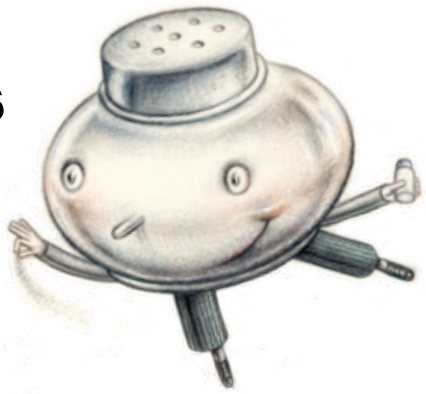
Dramatic games

To work on reading comprehension and support the acquisition of curriculum contents, we offer a series of **dramatic games** that will assist pupils to revise what they have learned through reading the book.

Vocabulary



Teaching suggestions



1 Key competences

The following key competences can be worked on using ***The Steam Castle***:

Linguistic and communicative

- Enrich vocabulary specific to the area.
- Be rigorous in the use of the specific terms used in this area.
- Know how to build a discourse: take care in the precision of terms, linking of ideas, verbal expression.
- Acquire specific terminology regarding living things, objects and natural phenomena.
- Understand informative, explanatory and argumentative texts.
- Transmit ideas and information regarding nature.
- Understand and produce oral messages that contain facts, knowledge and opinions.
- Acquire writing techniques applicable to any type of document.
- Read and understand literary texts in prose and verse autonomously.
- Participate actively in oral communicative exchanges, respecting the rules by which they are governed.
- Understand and use the terminology appropriate to the cycle: types of texts, word classes, basic mechanisms of lexical formation.

- Show an interest in reading, writing, listening and speaking as instruments for relating with others and for learning.
- Adapt the meaning of words to the context.
- Look up, compile and process information.
- Evaluate literary texts as a form of communication, a source of knowledge and a resource for personal enjoyment.
- Express ideas and emotions appropriately.
- Put into practice knowledge and strategies for writing correctly, via the study of basic spelling rules, punctuation and word stress rules and the study of all the word classes.
- Understand and be able to communicate the rules for language use.
- Use language as an instrument for oral and written communication.

Knowledge and interaction with the physical world

- Interpret the physical world via the concepts learned.
- Be able to define problems, consider solutions and prepare strategies.
- Design small research projects.
- Analyse results and communicate them.
- Observe the physical world, obtain information and act accordingly.
- Participate in taking decisions regarding local and global problems posed.

Information and communication technologies (ICT)

- Use different search, selection, and organisation procedures and apply them in the area.
- Be able to use a computer at a basic level.
- Be able to search on the internet with guidance.
- Transform information into knowledge.

- Search for, select and save information.
- Work in collaborative environments.
- Use communication and information technologies to obtain an up-to-date view of scientific activity.

Social and civil

- Become aware of feelings and emotions in interactions with others.
- Develop attitudes for dialogue and conflict resolution.
- Create one's own value system based on respect.
- Use language as a tool for coexistence, respect and understanding.
- Learn to communicate with others and understand what they transmit.
- Put an end to discriminatory uses of language.
- Become aware of the role of society in scientific advance.
- Know how essential debates have been produced for the advance of science in order to understand the evolution of society.

Learning to learn

- Develop techniques for learning, organising, memorising and recalling information.
- Reflect on what has been learned and how.
- Acquire procedures for the analysis of causes and consequences.
- Handle the resources for intellectual work efficiently.
- Encourage motivation and the love for learning.
- Manage learning processes efficiently.
- Access knowledge and the construction of knowledge via language.
- Acquire essential concepts linked to our natural knowledge to incorporate information originated in the pupils' own experience or from documents or audiovisual materials.

Cultural and artistic

- Know the cultural manifestations of our environment.
- Read, understand and evaluate literary works.
- Use library resources responsibly.
- Express oneself with imagination and creativity.

2 Area objectives

Objectives in Science for the third cycle of Primary Education

- Acquire and use correctly the specific vocabulary of the area in speaking and writing.
- Read and understand scientific, historical and geographic texts.
- Know some of the most important scientific advances and their consequences for the improvement of the lives and well-being of human beings.
- Show an attitude of acceptance and respect towards individual differences (age, gender, physical and mental characteristics, etc.).
- Participate in group activities in a constructive, responsible and supportive manner, respecting the basic principles established.
- Adopt an attitude of respect and the evaluation of one's own contributions and those of others, according to common objectives.
- Promote situations of encounter, communication, knowledge and understanding of others, as a foundation for empathy, sympathy, mutual respect and solidarity.
- Develop an attitude of respect towards the characteristics and traits of other groups, valuing differences and rejecting any kind of discrimination.
- Observe and appreciate the value of different elements (cartographic, numeric, graphic, technical: museums, libraries, archives, etc.) of the historical, social, natural and cultural heritage of Spain, which represent and express facts, concepts, procedures and attitudes.
- Develop a communicative and critical attitude in the performance, assessment, exhibition and presentation of the work done, applying one's own criteria of self-assessment and analysing its practical, entertainment and educational importance.

- Practise the basic qualities of scientific thinking: objectivity, reflection, planning, rigor, causality, etc.
- Analyse the impact of some human activities on the natural and social environment (urban landscape, agricultural landscape, alteration of river courses, dumping of waste, pollution, etc.), distinguishing between positive and negative actions.
- Adopt attitudes that contribute actively to the conservation and improvement of the environment and natural heritage.
- Value the efforts of those who dedicate themselves, altruistically, to the care and improvement of natural and cultural heritage.
- Identify the main elements of one's natural environment, analysing the most relevant characteristics.
- Identify some significant objects and technical resources of the environment, and describe their contribution to satisfying certain human needs, valuing their orientation towards peaceful uses and for a better quality of life.
- Understand and evaluate the usefulness of objects and technological resources in the life of human beings.
- Develop attitudes of appreciation and respect towards the objects and technological resources applied in daily life and which contribute to an improvement in the quality of life.
- Evaluate technological contributions from an ethical perspective, distinguishing between beneficial and harmful contributions.

Objectives in English as a Foreign Language for the third cycle of Primary Education

- Understand and correctly represent the spoken commands and the written expressions being studied.
- Understand the general and specific information from short oral and written texts that refer to already known objects, situations and events.

- Use spoken English to communicate with the teacher and classmates in everyday school activities, paying attention to the rules of interpersonal communication.
- Show respect for their classmates' contributions in English class.
- Create correctly written texts about known topics, expressing their opinion about these and respecting the grammar rules that have been studied.
- Classify words into different categories.
- Read and understand short simple texts related to their own experiences and interests, which have previously been worked with orally.
- Read and understand their own written production.
- Read and understand the most habitual signs, notices and messages in their surroundings and in the media.
- Use new technologies to express themselves in English.
- Reflect on the use of non-verbal resources as tools to express themselves in English.
- Value the importance of communicating in a foreign language, and their own ability to learn it.
- Respect the customs and traditions of people from different cultures, showing an understanding and respectful attitude.
- Show interest in learning English as a foreign language, with a receptive and confident attitude about their own ability to learn.
- Remember what has already been learnt in other languages to learn and practise new expressions in English.
- Become aware of the importance of the resources used to learn other languages in order to apply them to the learning of the foreign language.
- Establish connections between the meaning, pronunciation and graphic representation of the new vocabulary, and learn how to use it in simple sentences, by recognising the sounds, rhythm and intonation of the English language.

3 Curriculum contents

Contents of Science 5 (Year Five)

- Relationships between economic activities and elements of the physical environment.
- Energy, its forms and its transformations.
- Energy sources.
- Human beings and energy consumption.
- Some machines and apparatuses frequently used in the environment: their main characteristics and basic rules for use.
- Machines for energy use.

Contents of Science 6 (Year Six)

- Relationships between economic activities and elements of the physical environment and their role in the configuration of landscapes.
- The main factors and activities that pollute and degrade the environment.
- Electricity production and use.
- Energy resources.
- Energy transformations.
- Some machines and apparatuses frequently used in the environment: their main characteristics and basic rules for use.
- Machines for energy use.

4 Methodology

Introduction

The objective of the **PINCH OF SALT** Reading Plan is to present the reading of each book as a game focused on learning and the consolidation of the reading habit.

For this reason, we have included in this Teacher's Book a selection of materials designed to motivate pupils before, during and after reading. The materials included in the Book to make the most of this focus are as follows:

Assessment work: A complementary activity that will allow the pupils to consolidate the knowledge acquired via the reading of the book and to look in greater depth at some aspects related to it, at the same time as fostering the use of study techniques and information processing.

Dramatic games: A selection of entertaining activities based on the most recent teaching studies, designed to work on reading comprehension and support the acquisition of curriculum contents via the book.

Vocabulary: A photocopiable selection of terms that appear in the book, with clear and simple definitions, that can be used as a guide for the children during reading.

Some guidelines are provided below regarding how to approach reading, as well as on how to make the most of the complementary materials after reading the book. Teachers can adapt them to their teaching practice where they feel this to be necessary, since they are the ones who have the most knowledge of the educational requirements of their pupils.

Before reading: Presentation of the book

Before starting to read ***The Steam Castle***, the teacher can ask the pupils to make a list of all the activities they performed the previous day, and to make a note of the type of energy they consumed in each one. For example, if they mention breakfast, the teacher can ask them to note the type of electrical appliance used for its preparation (toaster, microwave, ceramic hob, etc.) and to explain the energy source used by the appliance and where it comes from. The same approach can be taken with journeys (cars, buses, underground), lighting, computers, television, hot water, etc.

After commenting on the replies to the previous activity, we can sound out the children regarding their knowledge of alternative energies by asking them, for example, whether they have ever seen wind generators or solar panels, and whether they know what they are for. We will try to chat with them regarding the problems of fossil fuels or nuclear energy and guide them towards the distinction between energy problems related with pollution and those related with sustainability.

In short, the idea is to find points of connection between the pupils' knowledge and the book that induce them to read it with enthusiasm and curiosity.

During reading: Two possible alternatives

Once the teacher has prepared the pupils to immerse themselves in the book, it is time to begin reading it. There are two ways of approaching the reading, depending on the time available and the educational use that the teacher wishes to give the text:

Reading in the classroom: The book can be read directly in class, using the sessions necessary for this. To encourage the pupils to acquire a habit of reading, the best way would be to combine three strategies during these sessions:

- Reading aloud by the pupils, to foster reading fluency and work on intonation.
- Listening of audio MP3s.
- Silent reading.

During these sessions, teachers can interrupt the reading whenever they consider it necessary in order to comment on the story with the pupils, ask and answer questions on the text or make observations relating to it. This task can also be delegated to some of the pupils (a different group in each session). In addition, the photocopiable vocabulary included in this Teacher's Book may be used to work on those aspects of the Science curriculum that appear in the text and to resolve doubts regarding vocabulary.

Individual reading at home: After presenting the book in class, the teacher can recommend that the pupils read it as a complementary activity to be performed at home. This will encourage the habit of continued reading, the incorporation of reading in their leisure activities and individual responsibility. To support the pupils in this task, it would be ideal to give them the photocopiable vocabulary included at the end of this Teacher's Book, and to monitor the reading process on an individual basis by means of informal questions regarding the book. The students will be able to use the MP3 files included in the book as a guide to overcome their pronunciation problems and to improve their intonation and comprehension skills.

A period of one month can be set to finish reading the book, after which some of the aspects covered in it can be worked on using the work cards.

Another alternative is to make the whole activity voluntary, and allow the pupils to choose which activities included in the teaching resources they prefer to do.

After reading: Dramatic games and work cards

Whether the book is read in class or at home, once the pupils have finished reading, the teacher will organise a session of revision and assessment of the pupils' reading comprehension using for this the **dramatic games** offered among the resources of the Reading Plan.

Through these games, the pupils will be able to act out some of the situations that appear in the story and look more deeply at their meaning, exploring the curriculum contents tackled in the book in an entertaining and enjoyable manner, which will allow them to develop their creativity and use it as a support for learning.

After the session of “dramatic games”, teachers can hand out the **work cards** and use them as they consider appropriate to carry out compulsory and voluntary activities. In the following section, some indications are given regarding the use of these resources in and out of the classroom.

5 Using the work cards

Each title of the **PINCH OF SALT** series is accompanied by ten work cards with various activities that allow pupils to work on the contents of the book either in class or at home. Furthermore, each card includes information on the curriculum content, the competences, the types of activities that can be worked on and the skills to be practised. The activities are designed to cover a wide range of uses, and, according to the different uses, we have classified them as follows:

Consolidation activities: To consolidate curriculum contents and contribute to a better assimilation of these by the pupils. They can also be used as assessment activities and as revision activities for pupils who are not reaching the stage objectives.

Extension activities: To look at curriculum contents in greater depth, or to deal with the special needs of pupils who have already assimilated the basic curriculum contents.

Complementary activities: Extracurricular activities that are performed voluntarily, either at school or at home.

After school activities: Extracurricular activities that are performed outside school and which require monitoring by an adult.

In group activities: To form working groups and encourage collaboration and task distribution within the group.

Interdisciplinary activities: To allow the simultaneous handling of curriculum contents from two different areas.

Activities for education in values: Activities of a transversal nature which, based on the contents of a specific area, allow pupils to work on educational aspects related with the acquisition of healthy habits and attitudes of cooperation, integration and solidarity.

Structure of the work cards

Information on the competences and abilities to be worked on

7 Think and answer

1 **Say whether the following statements are true (T) or false (F):**

- ☐ Renewable energies are those that do not pollute the environment.
- ☐ Coal is a non-renewable energy source.
- ☐ Biofuels are renewable energies.
- ☐ Energy from the tides is called wind energy.

Contents

Energy sources

Renewable and non-renewable energies

Activities

Consolidation : 1

Extension: 2

Skills

Reading

Writing

Information about the skills to be practised

Information on the method of use

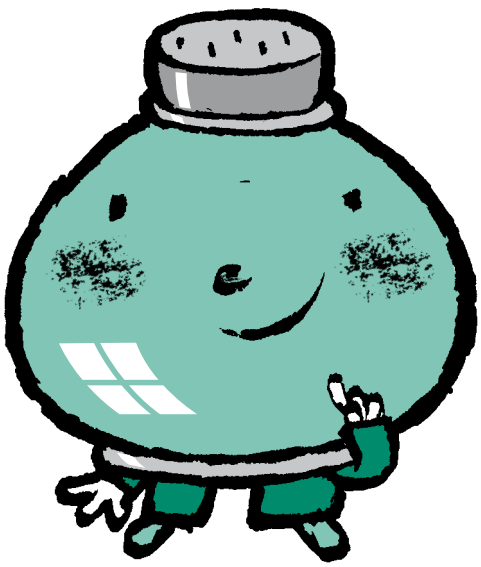
Information on the content

Guidelines for using the work cards

The tables we present below provide at-a-glance information regarding the method of use of the work cards, indicating the types of activities, the competences and the contents that can be worked on with each one of the ten cards for the book.

Summary of competences, contents and types of activities and English language skills				
Card number	**Competences**	**Contents**	**Activities**	**Skills**
Card 1	Observation Looking for information	Types of energy Energy sources	1 and 2: consolidation	1: writing 2: reading and writing
Card 2	Understanding what you have listened	Types of energy Energy sources Renewable energies	1 : consolidation	1: listening and writing
Card 3	Experimenting	Energy sources Solar energy	1 and 2: after school 1: in group	1: speaking and writing 2: writing
Card 4	Applying what you have learned	Renewable and non-renewable energies Energy saving	1 to 4: consolidation	1: listening and writing 2: writing and speaking 3 and 4: writing
Card 5	Looking for information	Renewable and non-renewable energies Clean energies	1 and 2: extension	1 and 2: reading and writing
Card 6	Research Experimenting	Solar energy Energy saving	1 and 2: complementary	1 and 2: reading and speaking

Summary of competences, contents and types of activities and English language skills				
Card number	**Competences**	**Contents**	**Activities**	**Skills**
Card 7	Applying what you have learned	Energy sources Renewable and non-renewable energies	1: consolidation 2: extension	1 and 2: reading and writing
Card 8	Looking for information	Renewable and non-renewable energies Clean energies	1 and 2: extension	1: reading, writing and listening 2: reading
Card 9	Expressing yourself in writing	Renewable and non-renewable energies Clean energies	1 and 2: extension, interdisciplinary with Language 2: interdisciplinary with Art	1 and 2: writing
Card 10	Understanding what you have listened	Renewable and non-renewable energies Energy saving	1 and 2: extension 1: in group	1: listening, writing and speaking 2: writing



Types of activities performed using the work cards	
Interdisciplinary activities with Language and Literature	Card 9: activities 1 and 2
After school activities	Card 3: activities 1 and 2
In group activities	Card 3: activity 1
	Card 10: activity 1
Complementary activities	Card 6: activities 1 and 2
Interdisciplinary activities with Art	Card 9: activity 2
Extension activities	Card 5: activities 1 and 2
	Card 7: activity 2
	Card 8: activities 1 and 2
	Card 9: activities 1 and 2
	Card 10: activities 1 and 2
Consolidation activities	Card 1: activities 1 and 2
	Card 2: activity 1
	Card 4: activities 1 to 4
	Card 7: activity 1

Competences worked on using the work cards	
Experimenting	Card 3: activities 1 and 2
	Card 6: activities 1 and 2
Observation	Card 1: activity 1
	Card 7: activity 2
Listening comprehension	Card 2: activity 1
	Card 10: activities 1 and 2
Written expression	Card 9: activities 1 and 2
Looking for information	Card 1: activity 2
	Card 5: activities 1 and 2
	Card 8: activities 1 and 2
Applying what has been learned	Card 4: activities 1 to 4
	Card 7: activities 1 and 2
Creativity	Card 9: activities 1 and 2

Contents worked on using the work cards	
Energy sources	Card 1: activities 1 and 2
	Card 2: activities 1a), 1b), 1c) and 1d)
	Card 3: activities 1 and 2
	Card 7: activities 1 and 2
Renewable and non-renewable energies	Card 2: activities 1b), 1c), 1d) and 1e)
	Card 3: activities 1 and 2
	Card 4: activities 1 to 4
	Card 5: activities 1 and 2
	Card 7: activities 1 and 2
	Card 8: activities 1 and 2
	Card 9: activities 1 and 2
	Card 10: activities 1 and 2
Clean energies	Card 5: activities 1 and 2
	Card 8: activities 1 and 2
	Card 9: activities 1 and 2
Types of energy	Card 1: activities 1 and 2
	Card 2: activity 1
Energy saving	Card 4: activity 4
	Card 6: activity 2
	Card 10: activities 1 and 2
Solar energy	Card 3: activities 1 and 2
	Card 6: activities 1 and 2

Solutions to "The PINCH OF SALT work cards" *(The Steam Castle)*

Card 1

1: *Radiator:* Thermal energy.
Lightning: Light energy, electrical energy.
Waterfall: Mechanical energy.

2: a) Intermittent heat source in the form of a jet.
b) Thermal or heat energy linked to volcanic areas.
c) Yes, it is renewable, at least while the heat source inside the earth's crust remains active, because although the steam is used the geysers continue to produce more.

Card 2

a) A steam engine.
b) An associated electric motor powered by solar energy.
c) Bill's solar caravan.
d) Solar energy.
e) Bill gave them the panels, because he had them left over after he had built his caravan.

Card 3

1: Water appears in the container. The water comes from the plants, which emit it via evapotranspiration. The water condenses on the plastic and the weight in the centre of the plastic makes it fall towards the container.

2: a) From the plants.
b) Solar energy.
c) Renewable, because sunlight can be used every day.

Card 4

1: *Renewable:* sunlight, wood, tidal energy, wind.
Non-renewable: coal, atomic energy, oil.

2: Yes, because there are already solar cars or cars with biomass engines, and both are renewable resources.

3 and 4: Various answers.

Card 5

1: a) It combines an electric motor with an internal combustion engine like that of normal cars.
b) Less consumption, fewer emissions of polluting gases.
c) Due to its high price.

2: a) It has an electric motor associated with a rechargeable battery.

b) They are powered by renewable energy, low energy cost, and they do not emit polluting gases.

c) Less range and less power.

Card 6 **1 and 2:** Various answers.

Card 7 **1:** F T T F.

2: *Forest:* Biofuel.
Volcanic area (below left): Geothermal.
River: Hydroelectric.
Desert: Solar.
Cliff (high and windy): Wind.

Card 8 **1 and 2:** Various answers.

Card 9 **1 and 2:** Various answers.

Card 10 **1:** Biofuels are components obtained from cultivated plants which produce energy when they are burnt. One of the crops most used for the production of biofuels is maize. The problem is that, to obtain biofuels from maize, a large area of land is necessary for its cultivation, and this cannot be used for food production.

2: The correct answer would be **c),** since fertile land is necessary to produce biofuels, but if there is a high population this land will need to be used for food production.

6 Values in the book

The main values covered in *The Steam Castle*

- Curiosity
- Scientific rigor
- Bravery
- Friendship
- Solidarity
- Respect for the environment

Assessment work

The aim is to assess the learning acquired in relation with the book through team work consisting of organising an exhibition on energy sources.

Objective: To foster creativity and the acquisition of strategies for obtaining information and assessing it critically, as well as consolidating the knowledge acquired through reading ***The Steam Castle***.

Materials: Cardboard, access to a library and computers with Internet access, printers and paper for printing, scissors, glue, paints, and optionally a digital projector for projecting presentations.

Procedure:

1) In the first session, the pupils will be divided into several teams of five members and each team will be assigned one of the following topics (or others that the teacher considers relevant) either by drawing lots or at the teacher's discretion:

- Oil: this team will have to compile information on this fuel and use it to prepare posters, explanatory leaflets, models, PowerPoint presentations or any other material they consider appropriate.
- Solar energy: this team will compile information on this type of energy and its different uses, and will use it to prepare posters, explanatory leaflets, models, PowerPoint presentations, etc.
- Wind energy: this team will compile information on this type of energy and its different uses, and will use it to prepare posters, explanatory leaflets, models, PowerPoint presentations, etc.
- Nuclear energy: this team will compile information on this type of energy and its different uses, and will use it to prepare posters, explanatory leaflets, models, PowerPoint presentations, etc.

- Biofuels: this team will have to compile information on this fuel and use it to prepare posters, explanatory leaflets, models, PowerPoint presentations or any other material they consider appropriate.
- Coal: this team will have to compile information on this fuel and use it to prepare posters, explanatory leaflets, models, PowerPoint presentations or any other material they consider appropriate.
- Hydroelectric energy: this team will have to compile information on this type of energy and use it to prepare posters, explanatory leaflets, models, PowerPoint presentations or any other material they consider appropriate.
- Tidal energy: this team will have to compile information on this type of energy and use it to prepare posters, explanatory leaflets, models, PowerPoint presentations or any other material they consider appropriate.

2) The teams will be given time to compile information, organise and prepare the materials that they are going to contribute to the exhibition.

3) One session will be dedicated to mounting the exhibition by all the groups.

4) Guided tours of the exhibition will be prepared, in which one member of each group will present the materials that they have contributed.

Assessment criteria: For the assessment of the work, it is suggested that the following criteria should be taken into account:

- Accuracy and scope of the investigation presented by each team.
- Efficient organization of the work done and equitable distribution of tasks.
- Creativity.
- Capacity to transmit the knowledge acquired by means of the work performed and the oral presentation that accompanies it (during the guided tour).

Dramatic games

These games have been designed to work on the contents of the book, while encouraging the pupils' creativity and imagination.

The first thing that the participants need to understand is that there are no "correct" or "incorrect" answers to the game. It uses an open approach where many different interpretations are possible, provided that the basic rules are respected. In this way the games not only serve as instruments for learning, but also contribute to developing the pupils' self-sufficiency with regard to the interpretation and application of rules, as well as their sense of responsibility with regard to applying them.

According to the most recent educational studies, this is, without any doubt, the most valuable contribution that the dramatic game makes to education: that of fostering self-control and the acquisition of values by interiorising a particular role within a defined game situation.

Game 1: "Magic or Science?"

Materials required:

Photographs of thermal, hydroelectric and nuclear power stations, solar panels, wind generators, hybrid and electric cars, petrol cars, old steam trains, household appliances, battery-powered toys.

Procedure:

a) The pupils are divided into two groups: half will be citizens of Occam and the other half people from the Earth.

b) The teacher will call in turn a member of the Occam group and another from the terrestrial team. He or she will give them one of the photographs mentioned in the materials section and ask them to discuss it. The inhabitant of Occam must try to explain the object shown in the photograph in magical terms, the terrestrial person in scientific terms.

Rules of the game:

The role of the teacher is to coordinate the game and motivate the pupils.

The idea is for the pupils to play the role assigned to them and to enjoy the game at the same time as they revise the contents of the book. The teacher will set the maximum time for each performance, and will encourage the pupils in the audience to assess the positive aspects of each performance.

Objective:

This exercise will allow pupils to consolidate the understanding of both the plot of the book and the curriculum contents playfully and creatively.

Game 2: "A trip to Occam"

Materials required:

Cardboard, large bin bags, fabrics and any other material that can be used to make fancy-dress costumes.

Procedure:

a) The pupils are divided into groups.

b) The teacher will assign to each group one of the following scenes from the book (or others that he or she considers appropriate for the activity):

- Enid shows Bert Marc's laboratory, and Lucius surprises them there.
- Bert and Enid travel to the Earth and appear in Marc's house.
- Bert and Enid's meeting with Thomas and Penelope in Marc's house.
- Visit to Martina's caravan built by her father, Bill. Conversation about the caravan.
- Building of a small solar castle in Occam by Enid, Bert, and Lucius.

- Journey in Malena's false steam castle.
- Malena is unmasked.

c) The children will prepare the performance of the scene assigned to them and the corresponding costumes, as well as the staging and even the lighting. Various groups can work on the same scene, in this way the different interpretations can be observed. It will be emphasised that the objective is not to play the scene literally, but to do so in a free and creative manner.

d) The different groups will take turns to go to the front and play their scene.

Rules of the game:

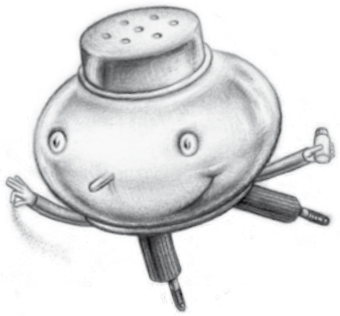
The teacher's role is to coordinate the game and motivate the pupils.

The children should express themselves in their own words and mix the preparation of the scene with improvisations that arise.

Objective:

Revise the contents of the book in an entertaining way.

Vocabulary



Atomic: Related with uses of nuclear energy or its effects.

Example: *They say that in that country they are about to manufacture an atomic bomb.*

Bolognese: Sauce for pasta dishes prepared with tomato and minced meat, and typical of the Italian city of Bologna.

Example: *Her favourite food is macaroni Bolognese.*

Campus: All the land and buildings belonging to a University.

Example: *That student lives in Campus accommodation.*

Chemistry: Science that studies the structure, properties and transformations of matter according to its atomic composition.

Example: *He wants to use alcohol for a chemistry experiment.*

Confiscate: To take somebody's property away from them.

Example: *As he couldn't pay his taxes they confiscated his house.*

Diesel: Also called gasoil, it is a fuel obtained from oil which is used for heating and transport.

Example: *The car is running out of diesel, we'll have to refuel.*

Efficient: Able to use the means at one's disposal in the most effective way possible to achieve something.

Example: *He is a very efficient secretary.*

Experiment (verb): Perform operations aimed at discovering, checking or demonstrating specific phenomena.

Example: *That scientist has been experimenting with fruit flies.*

Experiment (noun): Research procedure that consists of performing operations aimed at discovering, checking or demonstrating specific phenomena or scientific principles.

Example: *The experiment went wrong because the laboratory did not have the necessary equipment.*

Firm: Reluctant to change one's posture or attitude with regard to a specific matter.

Example: *Her mother is firm about time limits: she has to be home by ten o'clock.*

Foolish: Not sensible, crazy.

Example: *Instead of being careful with the fire, he behaved foolishly.*

Gadget: Mechanism, artefact, especially if it involves a degree of complication.

Example: *Enid had never seen that gadget for toasting bread.*

Inkwell: Recipient for holding liquid ink, which was used in the past for writing.

Example: *In the past, people used quills and inkwells instead of pens for writing.*

Innocent: Not guilty of any fault.

Example: *They think he ate the crisps from the bag, but he swears he is innocent.*

Insignificant: Without importance.

Example: *That wound on your knee is insignificant.*

Photoelectric cells: Devices able to transform solar energy into electrical energy.

Example: *This apparatus works with a photoelectric cell.*

Photovoltaic: Belonging to or relative to the production of electricity by the action of light.

Example: *She wants to save energy by installing photovoltaic panels on the roof of her house.*

Piston: Piece of a pump or cylinder of an engine that moves up and down propelling a fluid or receiving its propulsion.

Example: *The engine doesn't work. I think it's a problem with the piston.*

Potion: Medicinal or magic liquid for drinking.

Example: *That sorceress was famous for her love potions.*

Prosperous: Favourable, propitious, advantageous.

Example: *John has managed to set up a very prosperous business all on his own.*

Protocol: Ceremonial rule established by decree or by custom.

Example: *Protocol requires that women should wear long dresses when they attend the gala dinner.*

Steam: Gaseous fluid at a temperature close to condensation point (temperature at which a gas becomes liquid).

Example: *The water began to boil, giving off steam.*

Switch: Mechanism used to turn a lamp on or off or to activate or deactivate an electric circuit.

Example: *The room was dark and I couldn't find the light switch.*

Talisman: Object, sometimes with a figure or inscription, to which magic powers are attributed.

Example: *According to her, that medallion is a talisman that protects her from illnesses.*

Tax: Money paid by people or companies to the state according to how much they earn.

Example: *Due to the recession, they say that taxes will soon go up.*

PINCH OF SALT
A LITTLE BIT
Add some flavour to your reading!

ANAYA ENGLISH