

Ana Alonso

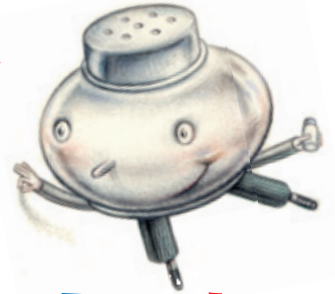
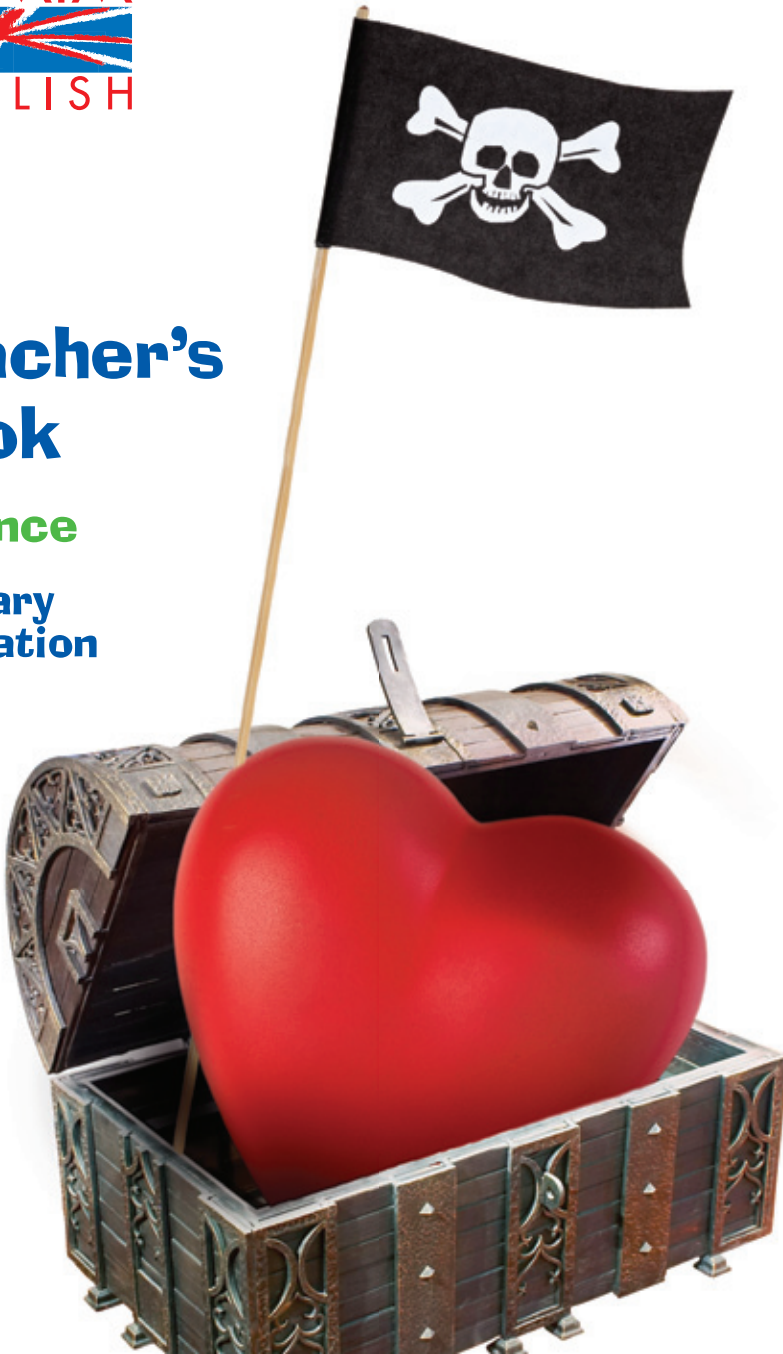
The Heart Cave



Teacher's Book

Science

Primary Education



PINCH OF SALT
A LITTLE BIT

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

Translation: Sharon Prime
Linguistic supervision: David Silles McLaney

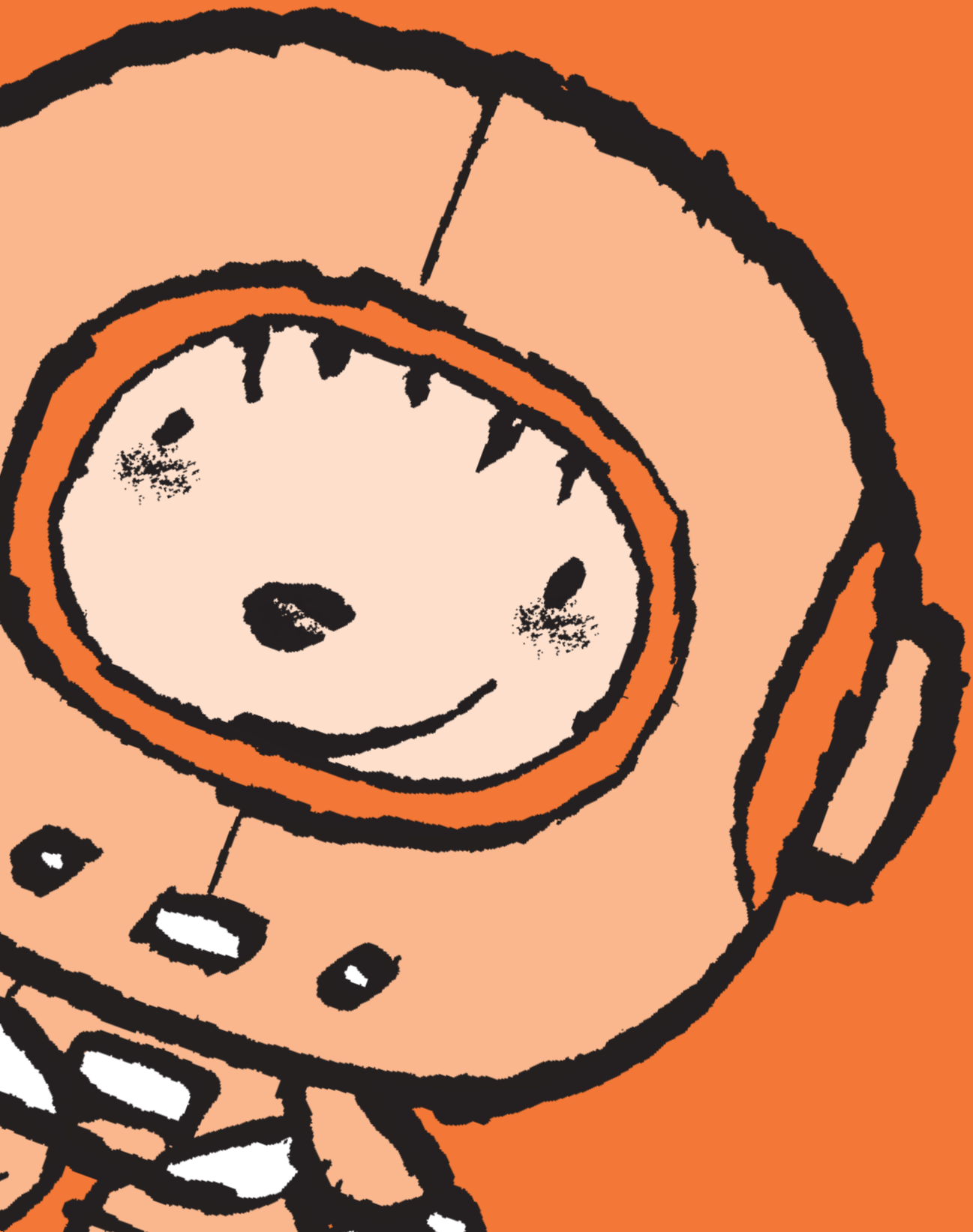
© Text: Ana Alonso, 2013
© Grupo Anaya, S. A., Madrid, 2013
Juan Ignacio Luca de Tena, 15. 28027 Madrid
www.anayainfantilyjuvenil.com
www.pinchofsalt.es
e-mail: anayainfantilyjuvenil@anaya.es

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of the publishers.

Summary



The PINCH OF SALT collection.....	5
PINCH OF SALT materials	6
Teaching suggestions	9
1. Key competences	9
2. Area objectives	12
3. Curriculum contents	15
4. Methodology	16
5. Using the work cards	20
6. Values in the book	29
Assessment game	31
Dramatic games	33
Vocabulary	37



he 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.

The PINCH OF SALT materials

For the pupils

The reading book

Through the adventures of Captain Caribe's school ship, pupils of the second cycle of Primary Education will be able to consider the **function of blood** as a **means of transport** of nutrients, gases and waste, and analyse the work of the **heart** and the **circulatory system**. At the same time, they will consolidate their reading habits, acquiring new vocabulary and a better understanding of written language.

The audio CD

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



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...).

2 Listening and writing

1 Listen to Doctor Scaiola's explanation (Tracks 24 and 25) and complete the following sentences:

a) The blood that enters the left side of the heart is rich in _____, and its colour is _____.

b) The aorta divides into other smaller pipes that are _____.

2 Answer these questions, according to the text you have just read. Work in pairs. Take turns to ask and answer.

a) Which cells make blood red? _____

b) Which cells are most abundant in blood? _____

3 Make this "Sweet blood soup" at home. Explain you conclusions in class.

You will need: Pineapple juice for the plasma • Red jelly sweets for _____

5 Experimenting

1 Doctors listen to heartbeats by using an apparatus called a stethoscope.

To make a homemade stethoscope

To make a homemade stethoscope, all you have to do is take a **cardboard tube like the ones you find in the middle of a roll of kitchen paper** and apply one end of it to the heart of a friend or a member of your family.

Put your ear to the other end and listen. You will hear the beats very clearly!

Contents
The heart
Health of the circulatory system
Activities
Complementary: 1
Extension: 1, 2
Skills
Reading
Writing
Speaking

For the teacher


The Teacher's Book

The Teacher's Book includes **teaching suggestions** 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 other complementary materials (**assessment game**, 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

Teaching suggestions



1 Key competences

The following key competences can be worked on using **The Heart Caves**

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 or phenomena.
- Understand informative, explanatory and argumentative text.
- Transmit ideas in information regarding nature.

Mathematical

- Use mathematical language to quantify natural phenomena or data.

Solutions to "The PINCH OF SALT work cards" (The Heart Cave)

Card 1

1a) In that it has four chambers, and those on the right do not communicate with those on the left. **1b)** In that its walls are made of rock and not of muscle. Furthermore, the liquid that circulates through it is water, not blood. **1c)** In the chambers, tunnels and galleries of the left part of the cave.
2) It is not a ruby mine, but a factory that makes artificial rubies, since the rubies are formed due to a mechanism invented by Captain Zafir.
3) The left part.

Card 2

1a) Oxygen - red **b)** Arteries. **c)** Veins.
2) Various answers.
3a) Through the left part. **b)** Valves.

Card 3

1) Various answers.
2a) The red blood cells. **b)** The red blood cells.
3) Various answers.

Card 4

1) Various answers.
2) Because the muscles need a lot of oxygen, which is supplied by the blood. The faster the heart beats, the more oxygen-rich blood will reach the muscles.
3) The correct answer is b).

Card 5

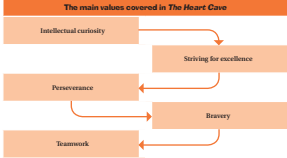

1) Various answers.
2a) A machine to take up, propel or compress a fluid.
b) They are similar in that both propel a fluid towards a cavity. They differ in that, in the heart, the fluid is blood and in a bicycle pump, it is air. Furthermore, the heart propels blood towards the arteries and the bicycle pump propels air towards the inner tube of the tyre.

Card 6

1) *Arrhythmic*: Irregularity of the pulse or the heart by *tachycardia*: Accelerated rhythm of the heart beats. *4 attack*: A condition in which the heart has a reduced supply because one of the arteries becomes blocked. *Cardiologist*: A doctor who specialises in the heart. **2)** a figurative way of saying that, when I saw the tiger so close to us, it gave me a big fright. **3)** It is a figurative way of that I find it very exciting to watch my team (strongly make the rhythm of the heart accelerate).

6 Values in the book

The main values covered in **The Heart Cave**

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

24

25

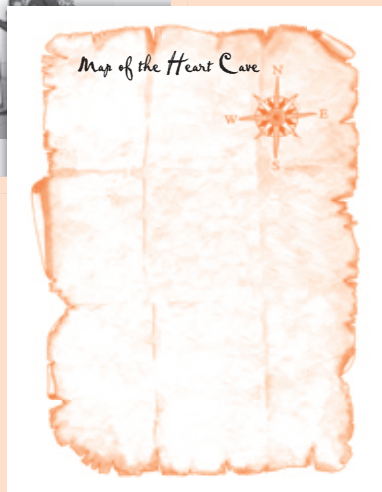
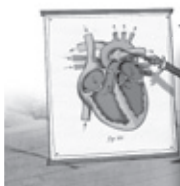
The PINCH OF SALT games

To work on reading comprehension and support the acquisition of curriculum contents, we offer a series of **dramatic games** and an **assessment game** that will assist pupils to revise what they have learned through reading the book. In this case, the “assessment game” consists of drawing a treasure map that represents **The Heart Cave**.

Assessment game

This game consists in drawing a treasure map that represents the “Heart Cave”. Each pupil will have to draw the “cave” with its different chambers and indicate with headings what happened in each one in the book.

To perform this activity, teachers may wish to use the map template (on the following page) or encourage the pupils to prepare the map themselves (painting a sheet of white card with liquid coffee to age it, cutting the edges unevenly and drawing on it once the coffee has dried). It is also recommendable to suggest to them that, to help them, they can take inspiration from the drawing of the heart (page 49 of the book) and Doctor Scialò's explanations.



Vocabulary

Vocabulary



Arteries Tubes in the circulatory system where the blood travels from the heart towards the organs.

Example: *He had an operation because one of his arteries was obstructed.*

Related words: *arterial.*

Bracelet A chain or band of metal or other materials worn as an ornament around the wrist or arm.

Example: *Paolo gave his girlfriend a silver bracelet for her birthday.*

Corsair A pirate who has permission from the governors of his country for his activity. Sometimes it is applied to any pirate, of any kind.

Example: *English corsairs attacked Spanish ships that returned from America loaded with silver.*

Coupon A cut-out voucher that, together with other similar ones, allows you to participate in draws and competitions or to win prizes.

Example: *If I collect two more coupons I'll be able to participate in a draw for a trip to France.*

Lace Decorative fabric with geometric patterns of holes, some more complicated than others.

Example: *The bride wore a veil of very fine lace.*

Main mast The tallest mast of a sailing ship.

Example: *A pirate flag was flying on the main mast of the ship.*

Related words: *municipality.*

37

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: “Guess the scene”

Materials required:

An area of the classroom is cleared to serve as a “stage”.
Card to make four large posters.

Procedure:

- The teacher divides the pupils into groups of four or five.
- Each group will prepare four large posters about scenes from the book: two posters with headings that describe precise locations where

35

T Teaching suggestions



1 Key competences

The following key competences can be worked on using ***The Heart Cave***:

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 in information regarding nature.

Mathematical

- Use mathematical language to quantify natural phenomena and express data.

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.
- Be aware of the body and the relationships between habits and lifestyles and health.

Information and communication technologies (ICT)

- Use different search, selection, an 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.

Social and civil

- Become aware of feelings and emotions in interactions with others.
- Develop attitudes for dialogue and conflict resolution.
- Accept and develop rules for coexistence.

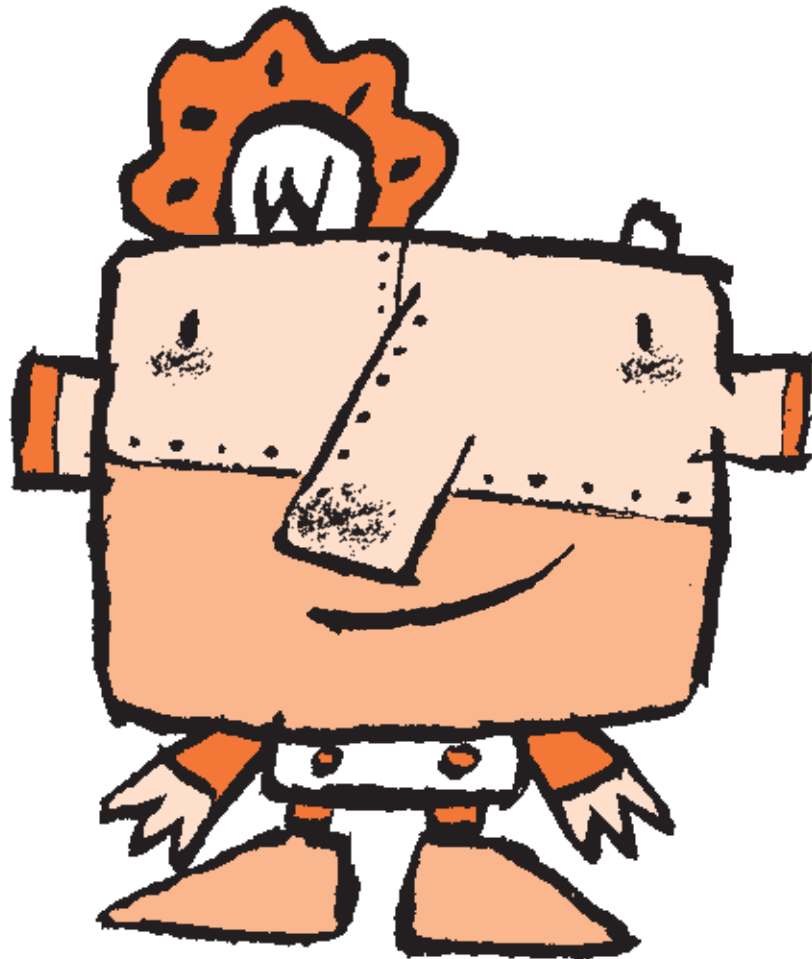
Learning to learn

- Develop techniques for learning, organising, memorising and recalling information.
- Make summaries, outlines or mind maps.
- Reflect on what has been learned and how.

- Acquire essential concepts linked to our natural knowledge to incorporate information originating in the pupils' own experience or from documents or audiovisual materials.
- Acquire procedures for the analysis of causes and consequences.

Personal autonomy, initiative and emotional development

- Take decisions based on self-knowledge (in the school setting and in leisure activities).
- Participate in the construction of solutions.
- Have the ability to initiate and complete projects.



Area objectives

Objectives in Science for the second cycle of Primary Education

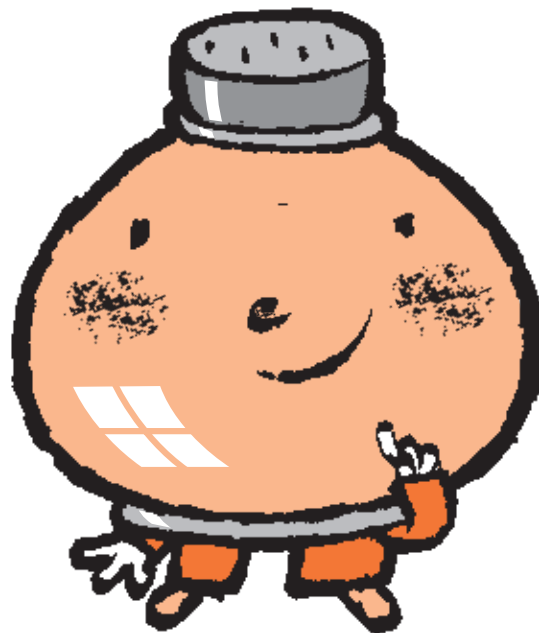
- Identify the main elements of the natural environment (situation, geographical features, weather, vegetation, fauna, etc.), describing their most relevant characteristics, establishing similarities to and differences from other known environments (holiday destinations, places where family and friends live, etc.).
- Apply in daily life habits relating to health and the care of the body that derive from knowledge of the human body.
- Develop an attitude of acceptance and respect towards individual differences (age, gender, physical characteristics, personality, etc.).
- Participate in group activities in a constructive, responsible and supportive manner, respecting the basic principles established (taking turns to speak, paying attention to others, contributing ideas and taking into consideration the decisions and agreements made).
- Adopt an attitude of respect and evaluation of one's own contributions and those of others.
- Analyse some simple relationships of simultaneousness, succession and causality in changes.
- Understand, express and represent via different codes (cartographic, numeric, graphic, technical, etc.) events, ideas and situations in the pupils' social, natural and cultural environment.
- Detect, delimit, define, pose and resolve simple problems related with the most significant elements of the natural and social environment, using increasingly systematic and complex strategies to search for, collect, analyse, save and process information and to formulate hypotheses, testing these and proposing other alternatives.

- Develop attitudes for the appraisal of well-planned, well-produced and well-assessed work, whether performed by oneself or by others.
- Design, build and assess devices and apparatuses with a specific purpose, using one's knowledge of the elemental properties of the materials, substances and objects to be used.
- 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.

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

- Take active part in class activities, respecting the basic rules of oral interaction.
- Answer requests in a simple way. Give instructions or information suited to already known communicative situations.
- Use the English language to communicate with the teacher and classmates in everyday school activities, paying attention to the rules of interpersonal communication and showing respect for their classmates' contributions.
- Show appreciation for everyone's company and cooperation.
- Create correctly simple short written texts about their body, family, home, games, food and animals, expressing their feelings towards people, things, functions or situations.
- Classify words into very simple 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 enjoy the process of doing so.
- Respect the customs and traditions of children from different cultures.
- Become aware of and develop their own personal abilities to learn to use the foreign language as a communicative tool.
- Show interest in learning English as a foreign language, with a receptive and confident attitude about their own ability to learn.
- Use actions to learn and practise new expressions.
- 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.
- Use aspects referring to phonetics, rhythm, stress and intonation as basic communicative elements.
- Identify language structures and lexical features and use them in communication.



3 Curriculum contents

Contents of Science 3 (Year Three)

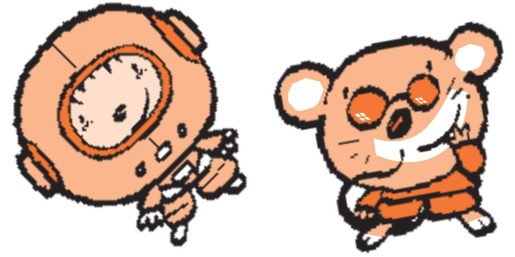
- External parts of the human body. The apparatuses involved in the different vital functions.
- The function of nutrition, reproduction and response to external stimuli in animals and plants.
- Healthy activities (physical exercise, rest, sleep, leisure, play, communicating problems).

Contents of Science 4 (Year Four)

- Vital functions of animals: the function of nutrition of animals (nutrition, circulation, respiration and excretion); organs, apparatuses and systems involved in the function of response to external stimuli.
- Organs of the body involved in the use of strength.



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 game: A leisure activity designed to revise what has been learned. In this case, it consists in the drawing by the pupils of a treasure map representing *The Heart Cave*.

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 (not forgetting the friendly **Biblionauts**, the four characters we introduced in the first cycle to help encourage children to read, and who can also be used as a resource in this cycle if teachers consider this necessary).

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 Heart Cave*, the teacher can present the book, using as a reference to situate the readers some other pirate stories they may know from the cinema, television, comics, etc. One way of focusing this introduction would be to ask the pupils about pirates they know and the adventures they normally have.

After listening to the pupils' replies, the teacher can comment on the differences between the pirates of Captain Caribe's school, who are featured in the book they are going to read, and the pirates that the pupils know, emphasising the fun aspects of the characters they are going to meet, always taking care not to reveal decisive aspects of the plot.

Another aspect that can be dealt with in this presentation of the book is the subject of journeys inside the human body, asking the pupils whether they have seen any films or cartoon series that feature journeys of this kind, whether they think such journeys are possible and, if so, what they imagine them to be like. In this case, it would be necessary to clarify that the characters of the book do not really travel inside a human organism, but a giant replica of our circulatory system in the form of a cave.

In short, the idea is to find points of connection between the pupils' interests and the story they are going to read 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 four strategies during these sessions:

- Reading aloud by the pupils, to foster reading fluency and work on intonation.
- Reading aloud by the teacher, in the form of story-telling.
- Listening of the audio CD.
- Silent reading.

During these sessions, teachers can interrupt the reading whenever they consider it necessary in order to comment on the story with the children, ask and answer questions on the text or make fun observations. 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 audio CD 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 and the types of activities that can be worked on. 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

10 Think and answer

1 What kind of blood circulates through each of these parts of the organism, dirty or clean? Link them with arrows.

Right side of the heart

Veins

Clean blood

Left side of the heart

Venae cavae

Arteries

Dirty blood

Aorta



Contents

The heart

The circulatory system

Activities

Consolidation: 1, 2

Skills

Reading

Listening

© Grupo Anaya

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	Understanding what you have read	The heart The circulatory system	1 to 3: consolidation	1 and 2: reading and writing
Card 2	Applying what you have learned	The heart The circulatory system	1 to 3: extension 2: interdisciplinary with Art	1: listening and writing 2 and 3: writing
Card 3	Understanding what you have read	Blood	1: in group 1 and 2: extension 3: complementary	1: reading and speaking 2: writing and speaking 3: speaking
Card 4	Experimenting Understanding what you have read	The heart Health of the circulatory system	1: complementary 1 and 2: consolidation 3: extension	1: writing 2: writing and speaking 3: reading and writing
Card 5	Experimenting Looking for information	The heart Health of the circulatory system	1: complementary 1 and 2: extension	1: reading 2: reading, writing and speaking
Card 6	Looking for information Expressing yourself in writing	The heart Health of the circulatory system	1 to 3: consolidation 3: in group 1 and 2: Interdisciplinary with Language	1: reading and writing 2: listening and writing 3: speaking

Summary of competences, contents and types of activities and English language skills

Card Number	Competences	Contents	Activities	Skills
Card 7	Looking for information	Health of the circulatory system	1 and 2: complementary	1: reading, writing and speaking 2: listening and writing
Card 8	Thinking and making connections	The circulatory system	1 to 3: extension	1: reading 2 and 3: writing
Card 9	Stimulating creativity Expressing yourself in writing	The circulatory system	1 and 2: consolidation 1: Interdisciplinary with Language 2: Interdisciplinary with Art	1: writing and speaking 2: writing
Card 10	Applying what you have learned	The heart The circulatory system	1 and 2: consolidation	1: reading 2: listening



Types of activities performed using the work cards

Interdisciplinary activities with Language	Card 6: activities 1 and 2
	Card 9: activity 1
Complementary activities	Card 3: activity 3
	Card 4: activity 1
	Card 5: activity 1
	Card 7: activities 1 and 2
In group activities	Card 3: activity 1
	Card 6: activity 3
Interdisciplinary activities with Art	Card 2: activity 2
	Card 9: activity 2
Extension activities	Card 2: activities 1 to 3
	Card 3: activities 1 and 2
	Card 4: activity 3
	Card 5: activities 1 and 2
	Card 8: activities 1 to 3
Consolidation activities	Card 1: activities 1 to 3
	Card 4: activities 1 and 2
	Card 6: activities 1 to 3
	Card 9: activities 1 and 2
	Card 10: activities 1 and 2

Competences worked on using the work cards

Experimenting	Card 4: activity 1
	Card 5: activity 1
Looking for information	Card 5: activity 2
	Card 6: activity 1
	Card 7: activities 1 and 2
Reading comprehension	Card 1: activities 1 to 3
	Card 3: activities 1 to 3
	Card 4: activity 3
Written expression	Card 6: activities 1 and 2
	Card 9: activity 1
Reasoning and relating concepts	Card 4: activity 2
	Card 8: activities 1 to 3
Applying what has been learned	Card 2: activities 1 to 3
	Card 10: activities 1 and 2
Creativity	Card 2: activity 2
	Card 3: activity 3
	Card 9: activities 1 and 2

Contents worked on using the work cards

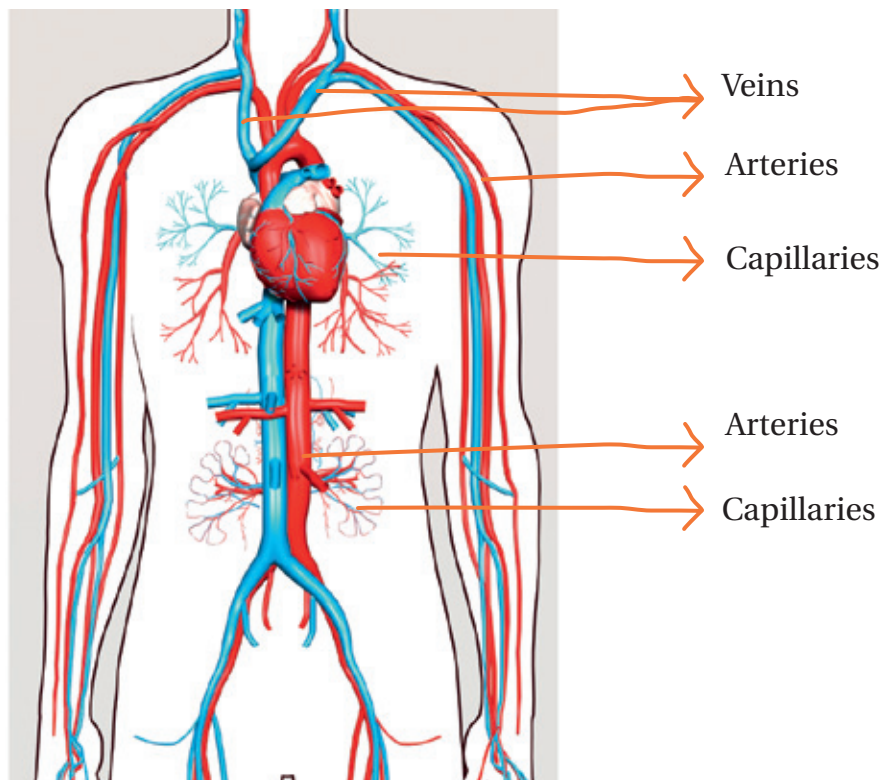
Blood	Card 3: activities 1 to 3
Health of the circulatory system	Card 4: activities 1 to 3
	Card 5: activities 1 and 2
	Card 6: activities 1 to 3
	Card 7: activities 1 and 2
The circulatory system	Card 1: activities 1 to 3
	Card 2: activities 1 to 3
	Card 8: activities 1 to 3
	Card 9: activities 1 and 2
	Card 10: activities 1 and 2
The heart	Card 1: activities 1 and 2
	Card 2: activities 1 to 3
	Card 4: activities 1 to 3
	Card 5: activities 1 and 2
	Card 6: activities 1 to 3
	Card 10: activities 1 and 2

Solutions to “The PINCH OF SALT work cards” (The Heart Cave)

- Card 1** **1: a)** In that it has four chambers, and those on the right do not communicate with those on the left. **b)** In that its walls are made of rock and not of muscle. Furthermore, the liquid that circulates through it is water, not blood. **c)** In the chambers, tunnels and galleries of the left part of the cave.
2: It is not a ruby mine, but a factory that makes artificial rubies, since the rubies are formed due to a mechanism invented by Captain Zafir.
3: The left part.
- Card 2** **1: a)** Oxygen – red **b)** Arteries. **c)** Veins.
2: Various answers.
3: a) Through the left part. **b)** Valves.
- Card 3** **1:** Various answers.
2: a) The red blood cells. **b)** The red blood cells.
3: Various answers.
- Card 4** **1:** Various answers.
2: Because the muscles need a lot of oxygen, which is supplied by the blood. The faster the heart beats, the more oxygen-rich blood will reach the muscles.
3: The correct answer is **b**).
- Card 5** **1:** Various answers.
2: a) A machine to take up, propel or compress a fluid.
b) They are similar in that both propel a fluid towards a cavity. They differ in that, in the heart, the fluid is blood and in a bicycle pump, it is air. Furthermore, the heart propels the blood towards the arteries and the bicycle pump propels the air towards the inner tube of the tyre.
- Card 6** **1:** *Arrhythmia:* Irregularity of the pulse or the heart beats. *Tachycardia:* Accelerated rhythm of the heart beats. *Heart attack:* A condition in which the heart has a reduced blood supply because one of the arteries becomes blocked. *Cardiologist:* A doctor who specialises in the heart. **2: a)** It is a figurative way of saying that, when I saw the tiger so close to us, it gave me a big fright. **b)** It is a figurative way of saying that I find it very exciting to watch my team (strong emotions make the rhythm of the heart accelerate).

Card 7 **1:** *Main causes:* hardening of the arteries that may be due to an unhealthy diet, lack of exercise, obesity, high blood pressure and smoking, among other causes. *Main risks:* stroke, heart attack, other diseases of the circulatory system.
2: *First question:* answers c) and d) are correct.
Second question: answer c) is correct.
Third question: answers b) and d) are correct.

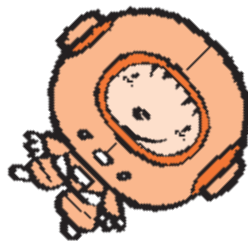
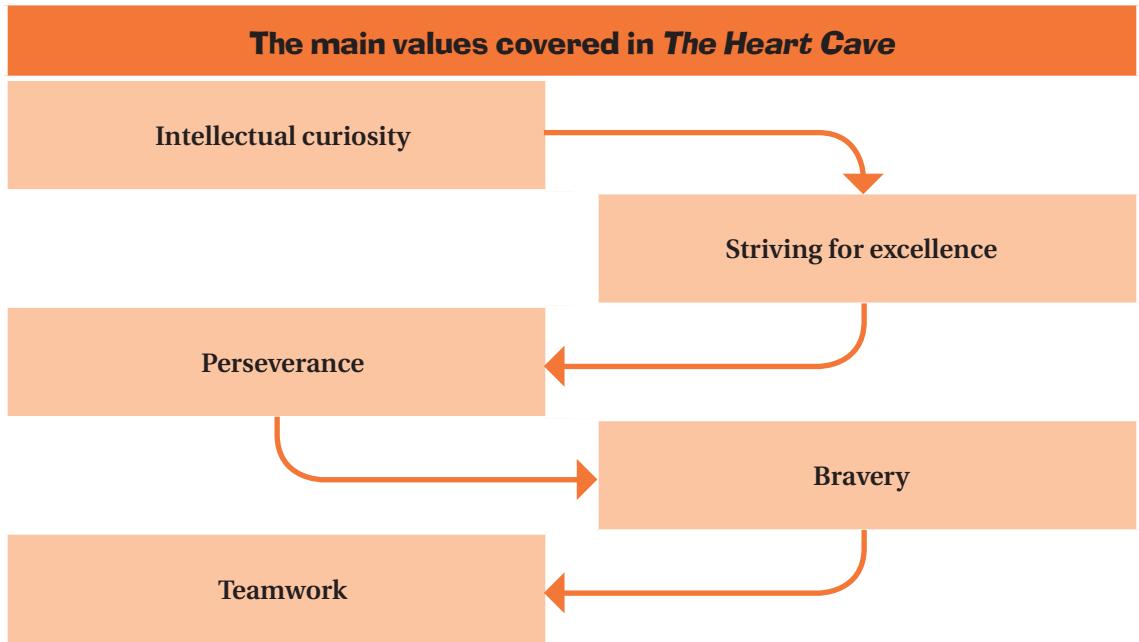
Card 8 **1:** Various answers.
2: Arteries: aorta, pulmonary. Veins: venae cavae, pulmonary.
3:



Card 9 **1:** Right ventricle, pulmonary artery, lung (arteries, capillaries and veins of the lung), pulmonary vein, left atrium, left ventricle, aorta, arteries that lead to the foot.
2: Various answers.

Card 10 **1:** Lungs, left side of the heart, aorta, arteries, veins, venae cavae, right side of the heart.
2: T F F F F.

6 Values in the book

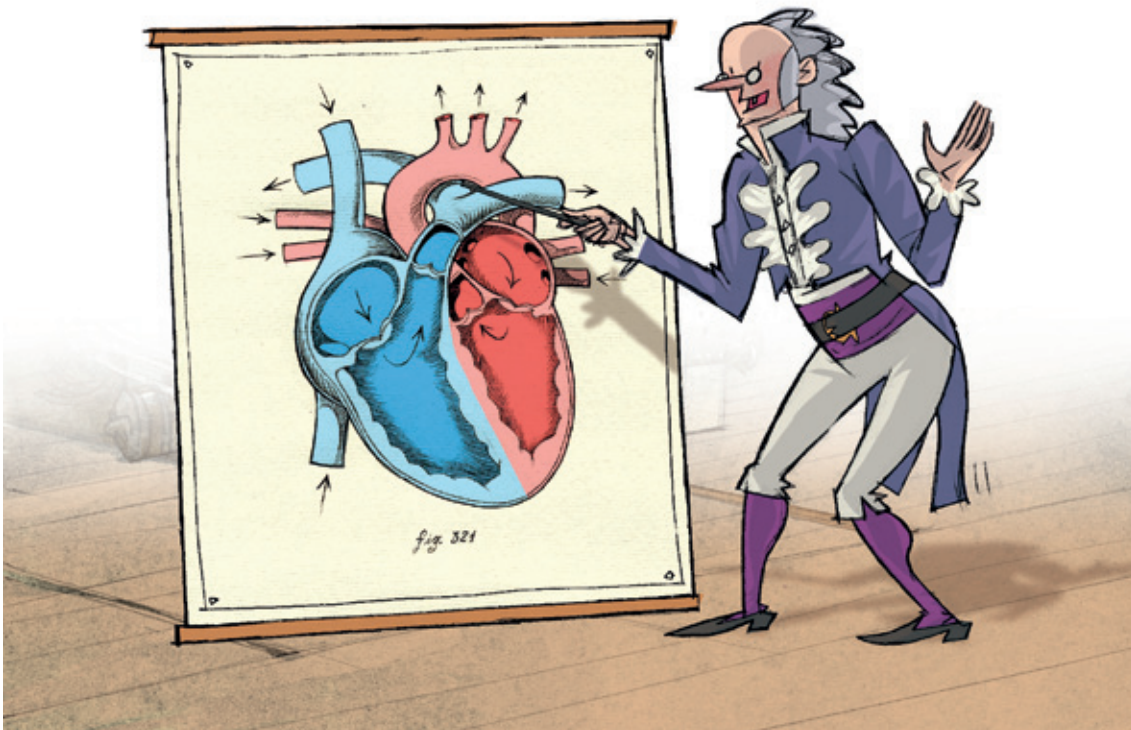




Assessment game

This game consists in drawing a treasure map that represents the “Heart Cave”. Each pupil will have to draw the “cave” with its different chambers and indicate with headings what happened in each one in the book.

To perform this activity, teachers may wish to use the map template (on the following page) or encourage the pupils to prepare the map themselves (painting a sheet of white card with liquid coffee to age it, cutting the edges unevenly and drawing on it once the coffee has dried). It is also recommendable to suggest to them that, to help them, they can take inspiration from the drawing of the heart (page 49 of the book) and Doctor Scaiola’s explanations.



Map of the Heart Cave



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: "Guess the scene"

Materials required:

An area of the classroom is cleared to serve as a "stage".

Card to make four large posters.

Procedure:

- a) The teacher divides the pupils into groups of four or five.
- b) Each group will prepare four large posters about scenes from the book: two posters with headings that describe precise locations where

the scene in question takes place, and another two posters with headings that contain time references (“before such occurrence” / “after such occurrence”, etc.).

c) Once the posters are finished, the teacher will make one of the groups (A) take the stage. Group A, in turn, will choose another group of pupils (B).

d) In silence, and without the rest of the class seeing, group A will show its posters to group B, one at a time. Every time they show them a poster, group B will perform to the whole class the scene from the book that takes place at the precise time or in the precise place shown on the poster. The other groups will have to guess the scene.

e) All the groups will go on stage and, sooner or later, they will all show their posters to another group.

Optional: The pupils can be given a “treasure chest” with items for dressing up as pirates (patches, scarves, toy swords, etc.) and some of the objects mentioned in the book (maps, toy telescopes, textbooks, etc.) to make the game more fun.

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 express themselves in their own words and improvise their performances using speech and body language.

Objective:

To revise the plot of the book and some of the curriculum contents playfully and creatively.



Game 2: “Improvisations”

Materials required:

The sheets of card from the previous game.

Procedure:

- a) The same group structure as in the previous activity is maintained.
- b) Now the teacher will share out among the groups some of the posters from the previous activity, so that each group will represent a scene from the book.
- c) The groups will be given time to prepare their scenes.
- d) Once the preparations are complete, the teacher will call a member of each group onto the stage. Then, he/she will tell one of the pupils to start performing his/her role in the scene.
- e) The members of the other groups who are on stage at the same time will have to “play along”, interpreting the other characters in the scene and responding to the lines of dialogue.
- f) The exercise is then repeated with characters of the rest of the groups.

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 improvise their performances using speech and body language.

Objective:

This exercise, as well as stimulating the improvisation and oral skills of the pupils, encourages active listening and helps exercise the memory.



Vocabulary



Arteries: Tubes in the circulatory system where the blood travels from the heart towards the organs.

Example: *He had an operation because one of his arteries was obstructed.*

Related words: *arterial.*

Bracelet: A chain or band of metal or other materials worn as an ornament around the wrist or arm.

Example: *Pedro gave his girlfriend a silver bracelet for her birthday.*

Corsair: A pirate who has permission from the governors of his country for his activity. Sometimes it is applied to any pirate, of any kind.

Example: *English corsairs attacked Spanish ships that returned from America loaded with silver.*

Coupon: A cut-out voucher that, together with other similar ones, allows you to participate in draws and competitions or to win prizes.

Example: *If I collect two more coupons I'll be able to participate in a draw for a trip to France.*

Lace: Decorative fabric with geometric patterns of holes, some more complicated than others.

Example: *The bride wore a veil of very fine lace.*

Main mast: The tallest mast of a sailing ship.

Example: *A pirate flag was flying on the main mast of the ship.*

Related words: *municipality.*

Oxygen: Gas that is found in the air and which is essential for the functioning of our organism.

Example: *The patient had to be given oxygen because he had difficulty breathing.*

Related words: *oxygenate, oxygenation, oxygenated.*

P.O. Box: Compartment reserved at a post office for letters received by a specific person, organisation or company.

Example: *To win the prize, send this form to P.O. Box 13444, Valencia.*

Publicity: Dissemination of favourable opinions regarding a product, person or group of people, using different communications media.

Example: *Carlos has decided to put an advertisement on television to give publicity to his company.*

Related words: *publicist.*

Pump (verb): Extract or propel liquid.

Example: *The heart pumps blood to the rest of the organism.*

Related words: *pump (noun).*

Rum: A drink with a high alcohol content made from sugar cane.

Example: *The pirate drank so much rum that he got drunk.*

Vein: A tube of the circulatory system where blood travels towards the heart.

Example: *Some swollen veins could be seen through the skin of her hands.*

Related words: *veined.*

Waste (noun): What is left over after removing the best of something.

Example: *Our organism eliminates some waste products via the urine.*

Related words: *waste (verb).*



PINCH OF SALT
A LITTLE BIT

Add some flavour to your reading!

