

At least 7 archaeological labs realized

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REGIONE DEL VENETO

Regione Emilia-Romagna



Project Acronym	VALUE
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Project Title	EnVironmental And cuLtUral hERitage development
Priority Axis	Environment and cultural heritage
Specific objective	3.1
Work Package Number	4
Work Package Title	Development of the districts (including Pilot Action)
Activity Number	4.9
Activity Title	Cross-border Archaeological labs
Partner in Charge	LP Municipality of Comacchio
Partners involved	All
Status	Final
Distribution	Public

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Summary

All partners involved implemented the activity through the organization of the cross-border archaeological labs aimed at promoting new forms of alternative tourism and the valorisation of the cultural and archaeological heritage of the project areas.

Municipality of Comacchio – archaeological excavations and labs

The Municipality of Comacchio organized the implementation of the activity with the Universities of Ferrara, Bologna and Venice, which carried out the archaeological investigations and organized the archaeological laboratories (4).

Archaeological investigations

University of Ferrara

The investigation was developed in two phases. The first, the archaeological study, was devoted to the framing of the survey area in the geomorphological and historical context and to documenting the known evidence. This axis represented a preliminary study that through bibliographic and cartographic research allowed us to build the cartographic basis of the project for a proper planning of the investigations and a punctual location of the evidence. The second phase of the project is the non-invasive surveys, these included a photogrammetric survey of the area for an initial detailed reading of the traces within which topographic cornerstones were designed and prepared. The drone survey and the location of the strongholds were functional for the detailed planning of geophysical surveys and surface reconnaissance. Among the operations carried out during the first phase, the bibliographic research and the acquisition of cartography constituted an indispensable basis for proper contextualization of the site through which to systematize the past documentation (excavations, reconnaissance, bibliographic and archival data) and to position and geo-reference the new archaeological acquisitions that have resulted from the aero-photogrammetric, geophysical and autopsy analysis of the territory. The identification and acquisition of basic cartographic tools was directed in the first instance to cadastral surveys in order to better define the ownership of the major lots in question and to be able to transmit the permit applications to the relevant bodies to access private property. Access to this documentation was provided by the online cadastre, which can be found within the Single Geographic Map of the Province of Ferrara (at <http://www.cgu-ferrara.it/it/home-page>), in relation to reference systems adopted in the territorial databases shared between different entities, local and national, operating in the territory of the province of Ferrara.

In the elaboration of the base cartography, functional for the implementation of the activities to be carried out, the intention was to acquire and elaborate a standardized documentation in technical, organizational and institutional that would allow the integration of topographical data and the mutual dissemination of information geography, pertaining to all planning activities of both general and sectoral scope. Through the Emilia-Romagna geoportal (<https://geoportale.regione.emilia-romagna.it/it>), which represents the database for the Regional Technical Maps (CTR), available georeferenced it has been possible to contextualize the archaeological information already acquired, plan analysis and reconnaissance activities, and systematize the spatial information acquired during the new investigations, dialoguing with the latest procedures of surveying satellite, aerophotogrammetric and GPS. Within this database it was possible to retrieve aerial photos of the area of interest, a valuable tool for observing the transformations of the area over time, such as phenomena related to the visibility of the area and photointerpretation, and an update of the actual state present. These acquisitions have all been instrumental in the preparation of cartography useful for planning and the implementation of reconnaissance activities. In fact, in the first case, having acquired all the technical details related to the property, it was possible to plan the timing of the activities in relation to land use (both in terms of identifying the best visibility conditions functional to archaeological research, and in relation to the land use needs of the owner); in the second case, thanks to measurements on a cartographic basis, it is possible to establish a timetable of reconnaissance activities in relation to the activities teaching. Thanks to the calculations made on the basis of established methodologies in the practice of research archaeology was designed the routes and scales of detail of the spatial analysis, as well as the documentation to be drawn up.

University Ca' Foscari – Venice





The new campaigns, launched as early as summer-autumn 2021 (under grant DGABAP 223 of 03/26/2021), aimed to deepen several study themes:

- transformation of the delta settlement between late antiquity and the early Middle Ages, i.e., in the historical hairpin bend that saw the affirmation of the center of Comacchio as a port of primary importance in the Po Valley network;
- dynamics of the relationship between man and the environment in the context of the transformations of the Po river network and, consequently, of the delta;
- internal articulation of the Comacchio settlement, with particular reference to the location of the settlement;
- in-depth study of issues related to material culture in the context of Mediterranean exchanges;
- setting up a paleo-bio-geographical research on the basis of the study of skeletal remains found in different necropolis of the hinterland but also of the early medieval settlement of Comacchio.

The investigations were focused in the area of the Pieve di Santa Maria in Padovetere, located about 5 km west of Comacchio, along the banks of a paleoalveum of the Po directly connected to Comacchio, during the chronologies of interest, by an artificial canal (the Motta della Girata Canal); and on the southern outskirts of the town center, in the area of the former monastery of San Mauro/S. Augustine.

The activities were conducted under the direction of the writers: Dr. Claudio Negrelli co-managed the excavation areas and supervised the study of the materials; Dr. Alessandro Alessio Rucco, PhD, a first-rank archaeologist, co-managed the excavation areas, directed the photogrammetric survey and in-depth geoarchaeological investigation; Dr. Roberto Rizzo co-managed the excavation areas and supervised the topographical survey during the course of the work; Dr. Francesca Mombelli supervised the initial cataloging of the materials being surveyed and excavated; Dr. Tommaso Frattin, PhD, who specializes in physical anthropology, supervised the recovery and cataloging of human remains; and Dr. Onofrio Gasparro conducted the photogrammetric survey. As usual, bachelor's and master's degree students, postgraduates and PhD students participated in the excavation.

The investigations accounted for in this report included:

1. UAV survey with production of the first photogrammetric DSM of the Santa Maria in Padovetere area; the area covered amounts to about 9 hectares. The activity took place between May and June 2021;
2. Hand core geoarchaeological survey; the area covered amounts to about 15 hectares. The activity took place in June 2021;
3. Intensive surface reconnaissance; the area covered amounts to about 16 hectares; the activity took place in September and October 2021;
4. Stratigraphic excavation in the area of Santa Maria in Padovetere. The excavation essay was opened at the N corner of the Pieve roof and covered an area of about 100 m². The activity took place between September and October 2021;
5. Stratigraphic excavation in the area in front of the former complex of San Mauro/S. Agostino in Comacchio. The excavation essay was opened in the northern portion of the Piazza Roma garden and covered an area of about 60 m². The activity took place in October 2021.

University of Bologna

The aims of the activities carried out by the University of Bologna were:

1. The collection and systematization of all cartographic and archival documentation to make it possible to produce an updated cartography of the archaeological potential; the database data associated with it represents not only the starting point for the research carried out under the present project, but a solid basis for all future studies.
2. Non-invasive investigations to obtain new data on the structuring interior of the settlement, complementing the fragmentary landscape offered by the research already conducted. Indeed, the interpretation of the results obtained allows the acquisition of new information on the internal articulation and to deepen the relationship in particular with the burial areas.
3. The processing of all the newly collected data leading to a necessary historical synthesis, based on a comparison of the different settlement patterns that emerged from the reconstruction of the ancient landscape and the work already published on other sites in the same territorial compartment, bringing an innovative and original contribution to the knowledge of the Adriatic in its pre-Roman phase.

Therefore, the activities carried out included:

- the preliminary operation to prepare the field action involved a thorough perusal of archival documentation at the headquarters of the ABAP Superintendency in Bologna and at the National Archaeological Museum in Ferrara, which took place during January-March 2020. All the data obtained were reprocessed in a GIS environment, going to integrate the work already done for the necropolis of Valle Trebba by the University's working team for the study project of the necropolis.
- agreement with the Ferrara Land Reclamation Consortium (prot. 9827): accessibility to the archives cartographic and historical records and to the SITL platform, which brings together a network of institutions, including the Region-Cartographic Service, Province, Municipality of Comacchio, IBC, ARPAE, GAF); possibility to make use of the Consortium's instrumentation; possibility of implementing the SITL platform as a cartographic database for planned field research and management of all data. The creation of such an infrastructure, which is considered fundamental for a project of this type, serves in fact, to facilitate the reading and comparison of data, as well as being a system capable of dialoguing ongoing research and open to the possibility of implementation with future research
- 1st Campaign at the Spina site (Oct. 5-23, 2020). The first field research campaign, which took place between October 5-23, 2020, was concentrated in the area of the Trebba, Pega and Mezzano Valleys with the aim of obtaining new data on the Spina site and the surrounding area by adopting various methodologies peculiar to non-invasive, such as surface reconnaissance, drone photography and surveying, prospecting geophysical surveys. These activities, combined with the study of past investigations, are essential to achieve a better understanding of the archaeological and geomorphological context and to plan with greater awareness future excavation assays. In particular, surface reconnaissance activities and drone flights made it possible to obtain an extensive mapping of the survey area, enabling a better contextualization of many of the evidence already known in the literature and the acquisition of new data of interest on the basis of which to plan the subsequent operations. Similarly, the first results of geophysical prospecting have proved to be definitely promising: for this reason, in the planning of subsequent activities, it was decided to invest more resources on geophysical survey, which was considered fundamental for a more in-depth knowledge depth of ancient geomorphology.
- On 09/07/2021 the concession was renewed for non-invasive surveys (effective 12 months; Class. 34.61.01/127.18), with the extension of about 10 sq. km. southward.
- 2nd Campaign at the Spina site (April 7 - 9, 2021). In this short campaign, in which a small number of researchers and Ph. (also due to travel restrictions caused by emergency health measures), the following the following activities were conducted:

1. Review of the materials collected in the previous campaign in function of the study of the same and in view of the forthcoming publication of the first research results.

2. Photogrammetric drone surveys in Valle Trebba and at Punta Montirone.

3. Additional geophysical prospecting in areas adjacent to those investigated in the previous campaign previous one, in order to further investigate some of the working hypotheses advanced as a result of the previous research.



Archaeological laboratories - UNIFE

The staff of the University of Ferrara who took part in the project consists of:

- Carmela Vaccaro, Associate Professor, Department of Environmental and Prevention Sciences Scientific contact person for the project; coordination and design activities
- Ursula Thun Hohenstein, Associate Professor, Department of Humanities Scientific contact person for the project: coordination and design activities
- Brunella Muttillio: Research Assignee, Department of Humanities Coordination and organization of workshop activities (online and in-person); conception and design of editorial products

- Elena Marrocchino, Fixed-term Researcher, Department of Environmental and Preventive Sciences Design and coordination activities of educational workshops and characterization of the ceramics and stone artifacts collected at Bocca delle Menate

- Chiara Parisi: Ph.D. student, Department of Humanities Preparation and delivery of teaching activities; support for logistical organization of workshops; conception, design and implementation of publishing products

- Maria Nicoli, research fellow, Department of Physics and Earth Sciences Support for the preparation of teaching laboratories on archaeometry

- Stefano Bertola, research fellow, Department of Humanities Support for the preparation of teaching activities on archaeological research methodologies

- Alexandre Lazarou, research fellow, Department of Humanities Support for the volodrone and geomorphological analysis of the Bocca delle Menate area

- Elena Zambello, research fellow, Department of Physics and Earth Sciences Execution of 2 drone flights in support of the Bologna Field Unit, Spina excavation area, and the Ferrara Unit in the Bocca delle Menate area

Methodology The activities carried out were directed to a reorganization of the planned teaching laboratories, in compliance with regulatory limitations due to the health emergency from Covid-19. Considering the impossibility of conducting in-person laboratory activities due to the restrictions, alternative modes of teaching to traditional ones were explored, supported by the most widely used digital technologies. The specificity of the way the labs were conducted required a thorough study and documentation phase on the most useful and effective digital tools, techniques and resources for remote dissemination. Specifically, the following activities were carried out:

a) Bibliographic and sitographic documentation: analysis of the state of the art in the field of laboratory teaching in presence and at a distance; analysis of some case studies useful for the planning of teaching units; in-depth study of the potential and limitations of digital tools and resources for distance teaching;

b) Identification of the most useful and suitable digital tools for our needs and in relation to the context, based on the bibliographic review and case studies at the national and international level. The use of Cospaces, an application that allows us to create immersive and interactive activities in Augmented Reality and Virtual Reality, inserting images, audio, 3D elements, animations and games, facilitated learning because it allowed to emphasize the playful part as well;

c) 3D digitization of archaeological finds: through 3D photogrammetry and laser scanning, three-dimensional models of some archaeological finds were made that are useful for enriching the experience of fruition at a distance.

Activities carried out

Distance learning archaeological laboratories on the Etruscans in Spina and archaeological research methodologies were prepared and delivered to students of elementary school in the province of Ferrara. Two editions were carried out, one in the spring of 2021 and the other in the spring of 2022, in which 10 classes (about 200 students) from elementary school in the province of Ferrara participated (specifically, Istituto Comprensivo di Porto Garibaldi, Istituto Comprensivo Filippo De Pisis di Fondo Reno, Malborghetto di Boara elementary school). The digital teaching units were geared toward engaging students by viewing digitized 3D artifacts and original artifacts. In addition, in order to engage and test the acquired knowledge, students participated in a fun final game-test were remotely enjoyed on the Etruscans in Spina and research methodologies

Implementation of virtual environments UNIFE focused on the programming and preparation of virtual environments that enabled schoolchildren to enjoy educational content remotely in an original, innovative and engaging way. In particular, virtual environments were created in Cospaces on the Etruscans and archaeological research methodologies, which enabled users to enjoy educational content in an original, creative and innovative way.

In-person experimental archaeology laboratories A series of experimental archaeology workshops were organized on the occasion of the opening of the Comacchio Open Air Museum (Foce Station) on June 25, 2022. The activities focused on:

a) Archaeozoology with the collaboration of students from the Master's degree program in Quaternary, Prehistory and Archaeology. Activities: viewing and manipulation of original artifacts and casts of animals that lived in the ancient settlement of Spina; recognition of anthropogenic traces on bone; determination of sex and age of death; recognition of characteristics of teeth; feeding and domestication; educational games for children.

b) Glassmaking in the Iron Age, by "Officina Temporis." Activities: secondary glass melting in the furnace, beadwork and decoration.

Results

Publishing products Two booklets containing games, quizzes and crossword puzzles themed on archaeological research methodologies (particularly archaeozoology and archaeometry) and on the Etruscans in Spina were produced. The booklets, aimed at the very young public, were distributed on

the opening day of the Comacchio Open Air Museum (June 25, 2022) and will be donated to the Museum of the Ancient Delta to enrich the museum's educational activities.

Awareness raising and involvement of the local community The activities carried out, both online and in-person, raised awareness among the local community about the importance of archaeological disciplines for understanding their past. The activities, which involved the number of people predetermined at the planning stage, were aimed particularly at students and teachers. Dialogue with teachers and school referents from some elementary school in the province of Ferrara made it possible to plan ad hoc activities that were calibrated to actual cognitive needs.


Positive feedback from schools Students and teachers who participated in the online workshops were given a satisfaction test, created ad hoc to assess the degree of satisfaction with the proposed activities. Participants liked the proposed in-depth teaching units as a valuable support for the traditional lesson, dense with insights, news and curiosities about little or not well-known aspects. In particular, the playful, playful and interactive approach was appreciated. The fruitful collaboration established with some schools will not end with the VALUE project but is intended to continue in the years to come.

Below: Flyer for the promotion of the didactic laboratories on archaeology and Etruscans in Spina, 2022 edition




Fig. 2. Brochure per la promozione delle unità didattiche digitali sull'archeologia e sugli Etruschi a Spina, edizione 2022.






ARCHEOMETRIA



L'archeometria è una macro disciplina che comprende tutte quelle analisi scientifiche applicabili allo studio dei beni culturali.




Le **analisi archeometriche** sono di grande importanza nel campo archeologico perché permettono di svelare aspetti invisibili ad occhio nudo ma fondamentali per una piena conoscenza dei reperti.

Sono indispensabili anche per individuare le corrette tecniche di conservazione e restauro dei beni.

Dettagli riunione ^

Alza la mano
 CHIARA PARISI sta presentando

L'archeozoologia e la paleontologia sono la stessa disciplina?



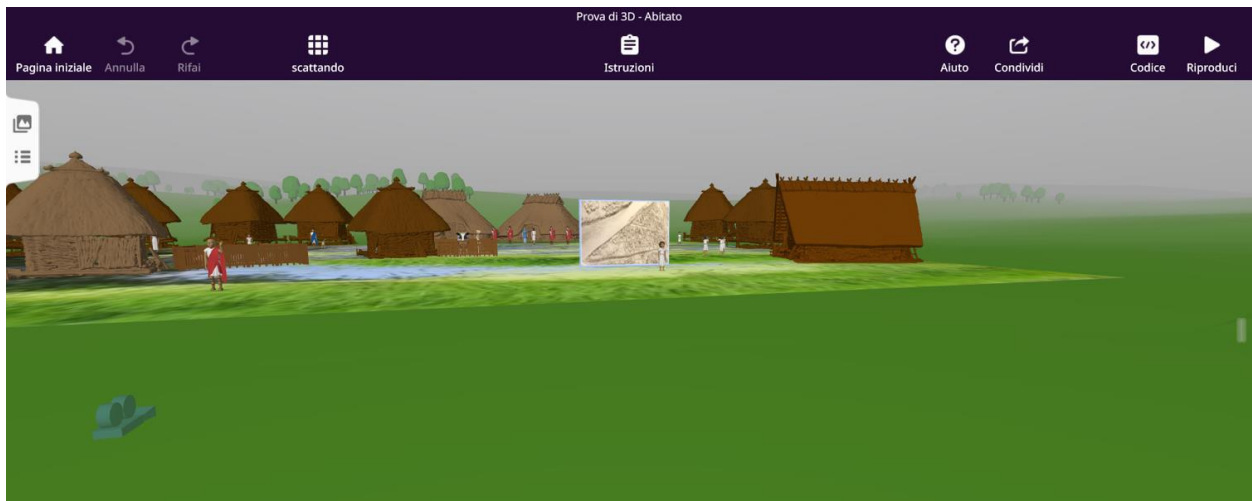
A: No

B: Sì

Dettagli riunione ^

Alza la mano
 CHIARA PARISI sta presentando

Didactic digital laboratories on Etruscans in Spina and on the methodologies of archeological research



Archaeological research in the Ostrog-Balavan locality

Employees of the Museum of Kaštela, in cooperation with students of the University of Zadar and the Museum of Croatian Archaeology Monuments, organized and conducted archaeological research to create an archaeological laboratory on the site of Ostrog.

ARHEOLOŠKI LABORATORIJ LONČARIJA BRONČANOG I STARIJEG ŽELJEZNOG DOBA

Okrugli stol i radionica



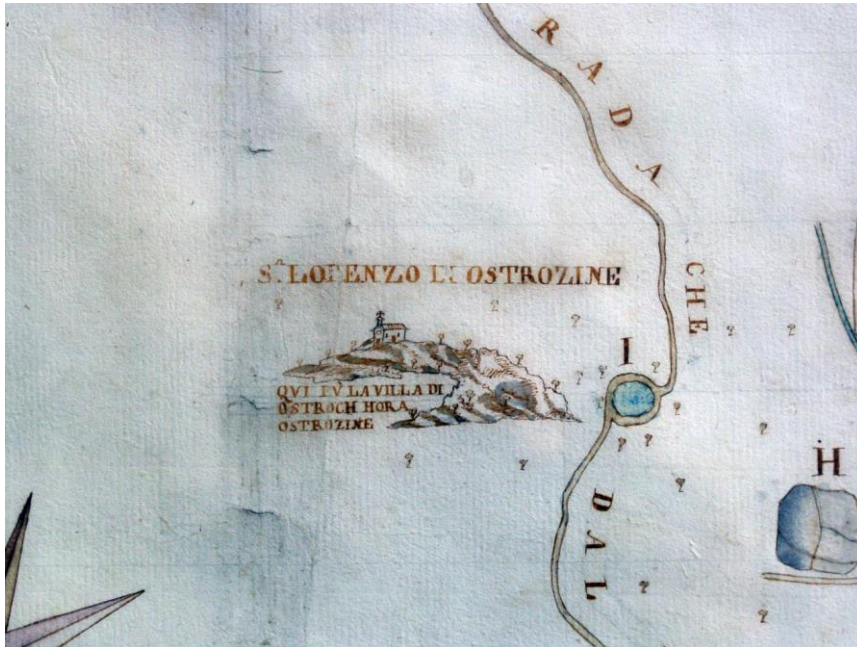







Numerous movable archaeological finds have been collected through research. Laundry and primary conservation were organized at the Museum of the City of Kaštela and at the University of Zadar. These are mostly fragments of ceramic vessels. Most of the ceramic finds can be dated to the prehistoric period, i.e. to the Bronze Age, when the prehistoric hillfort existed here. Ceramic finds have a uniform brownish surface color and calcite admixtures. Fragments with darker gray and reddish-brown tones are rare. The shape of the dishes is mostly pots, jugs and bowls. Fragments of knee-type handles with ax protrusions stand out from the diagnostic material. Tongue handles

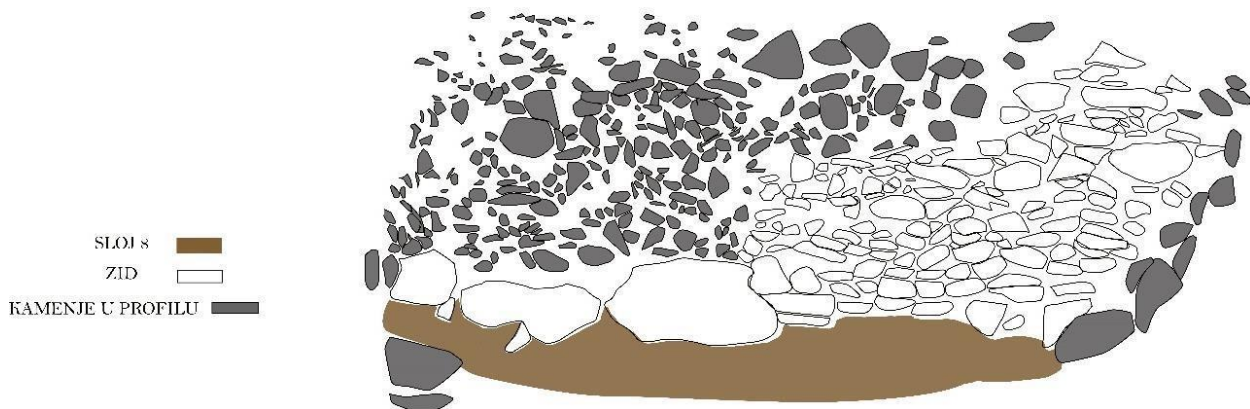
and plastic applications with circular and obliquely incised impressions are also characteristic. From the decorated vessels, fragments of a biconical vessel stand out with rows of obliquely incised lines that form a zigzag motif on the upper part of the vessel's abdomen. A few more fragments contain rows of rectilinear incisions. Since the medieval fortress was partly built over prehistoric hillfort, the difficulty in determining it was the mixing of cultural strata. Thus, fragments of medieval pottery can be found among prehistoric pottery, which is a problem in determination, especially in the category of coarse pottery. Characteristic fragments of medieval pottery, animal bones and a small number of lithic artifacts were also found.







OSTROG





Cres Archaeological Laboratory

The archaeological laboratory for Cres took place on November 20th 2021, in ancient town of Osor and was carried out in association with Ambroz Haračić High School and Lošinj Museum. Contractors for the laboratory were Arheo Kvarner d.o.o., a firm which did the last archaeological excavations in the town of Osor.

Students had the chance to visit the town, led by experts, to explore the Archaeological collection Osor, to learn about archaeology as a science and about the methods of research, as well as to learn about the rich history of ancient Osor and to explore recent excavations. The students also got the chance to experience firsthand what Osor looked like back in the ancient days, by touring the town with VR glasses, thanks to Osor Time Machine project by Lošinj Museum. The archaeological laboratory was done in accordance with Covid-19 measures.

Korčula Island Small School of Archaeology



Korčula Town Museum organized the project “Small school of Archaeology” on 08-23.11.2021. The school was organized as a start of an education path for the local population - with emphasis on youth - on archaeology and archaeological laboratories on the island. The aim was to raise awareness of the local population of the cultural heritage and possibility of sustainable development, as well as of archaeological parks, routes and the valorization of cultural heritage. Given a low level of basic knowledge of archaeology and the fact that only two years prior the museum employed an archaeologist, the event was very well received. Because of that it was decided that first the local population would have to be involved and later students from the nearby areas were invited.

Therefore, the main participants were students at the secondary school, tourist guides and university students. The project manager was Marta Kalebota, custos at Korčula Town Museum. The Museum also invited a series of experts on the subject:

- Dr. Sc. Jacqueline Balen from the Archaeological Museum Zagreb, President of the Croatian Archaeological Society (HAD)
- Dr. Sc. Hrvoje Potrebica, professor at the Department of Archaeology, Zagreb Faculty of Humanities and Social Sciences, President of the Centre for Historical Research, vice-president of HAD
- Dr. Sc. Igor Borzić, assistant professor at the Department of Archaeology, University of Zadar, member of HAD
- Dr. Sc. Dinko Radić, Director at Vela Luka Cultural Centre, member of HAD
- Mag. Archaeologist Miroslav Vuković, documentarian at the Department of Archaeology, Zagreb Faculty of Humanities and Social Sciences, member of HAD
- Mag. Archaeologist Luka Drahtusky Bruketa, doctoral student at the Department of Archaeology, Zagreb Faculty of Humanities and Social Sciences

The project consisted of the following activities:

- Workshop on the field – *What do archaeologists do?*
Archaeology v. archaeology on film
Working on the archeological materials
Working in the field
Models and use of drones
- Get to know archaeology in your area
Working on the field: Lumbarda and Korčula
Tower of All saints and House of Marko Polo
- Lecture: Korčula Island research
Underwater archaeology

In search of Korčula
Pre-history of Korčula
How Romans ruled Korčula

Project promotion

<https://www.gm-korcula.com/hr/novosti/177-mala-arheoloska-skola-otoka-korcule>
<https://magazin.hrt.hr/price-iz-hrvatske/korculanska-mala-skola-arheologije-3478495>
<https://www.korcula.hr/program-projekta-mala-arheoloska-skola-otoka-korcule/>
https://www.kora.hr/hr/novosti_detalji/mala-arheoloska-skola-otoka-korcule-427
<https://web.facebook.com/muzejkorcula>
<https://web.facebook.com/GradKorcula>

Annexes

Annexes to the document include pictures of the archaeological laboratories and of the various activities carried out in relation to the archaeological excavations, as well as didactic materials used during some of the activities.





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MUSEUM

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OSORSKI
VREMEPLOV
OSOR TIME MACHINE

Novo dimenzija predstave
A New Dimension of the Past

















VR HEADSET
CALLE DE LA CULTURA

VR HEADSET
CALLE DE LA CULTURA

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CALLE DE LA CULTURA

CALLE DE LA CULTURA

MUSEUM











NON SOLO ARCHEOLOGIA...

**Giochi educativi sulle professioni
archeologiche
per apprendere divertendosi!**



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Ideazione e testi:

Chiara Parisi, Brunella Muttillo

Progetto grafico:

Chiara Parisi



**Università
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COIACCHIO



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VALUE



EUROPEAN UNION

Stampato in Italia nel mese di giugno 2022

Chi studia cosa?

Collega con delle frecce le diverse discipline archeologiche ai loro campi di studio

ARCHEOLOGIA

Studia i resti fossili dell'uomo estinto per ricostruire la sua storia evolutiva

ANTROPOLOGIA

Ricostruisce il passato dell'uomo partendo dallo studio delle tracce materiali relative alle sue attività e al suo ambiente

ARCHEOZOOLOGIA

Analisi chimiche, mineralogiche e petrografiche per la conoscenza storica e conservativa del patrimonio

ARCHEOBOTANICA

Studia le piante fossili per ricostruire l'ambiente del passato, le variazioni climatiche e lo sfruttamento delle risorse vegetali da parte dell'uomo

PALEOANTROPOLOGIA

Studia il comportamento e le caratteristiche dell'uomo sia dal punto di vista biologico che culturale

PALINOLOGIA

Studia i resti animali rinvenuti in uno scavo archeologico legati alle attività e culture umane

ARCHEOMETRIA

Studia i pollini rimasti imprigionati nel terreno

Trova le parole

Cerchia nel riquadro le 11 parole nascoste

I	A	O	J	S	E	L	X	L	L	B	T	F	O
I	M	S	E	V	O	L	U	Z	I	O	N	E	F
V	V	V	T	U	M	A	R	B	I	K	P	L	P
X	U	P	L	K	N	O	P	E	Y	V	M	Y	Q
I	I	M	G	T	S	C	H	E	L	E	T	R	O
A	C	C	E	R	A	M	I	C	A	B	A	Z	T
I	G	E	V	N	E	C	R	O	P	O	L	I	W
Q	U	Z	W	E	N	J	C	O	R	R	E	D	O
C	G	J	E	Q	G	T	R	A	C	C	E	D	B
I	M	O	S	S	A	T	F	U	R	C	S	N	O
V	N	O	T	A	F	O	N	O	M	I	A	O	O
D	A	N	T	R	O	P	O	L	O	G	O	X	W
N	S	F	M	I	C	R	O	S	C	O	P	I	O
A	R	C	H	E	O	L	O	G	I	A	O	D	M

Cruciverba

Risolvi il cruciverba



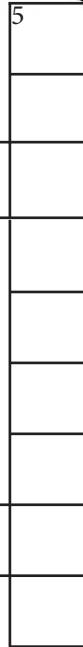
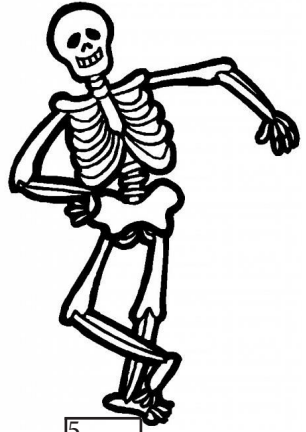
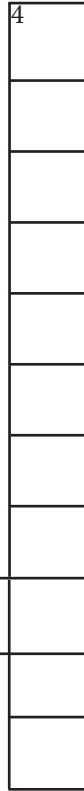
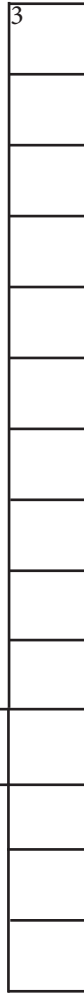
Orizzontali

1. Colui che studia i pollini
2. Segni che l'archeozoologo individua sui resti ossei

Verticali

3. La disciplina che studia i resti animali nello scavo archeologico
4. Colui che studia i resti umani nello scavo archeologico
5. L'antropologo traccia il profilo.....dell'individuo



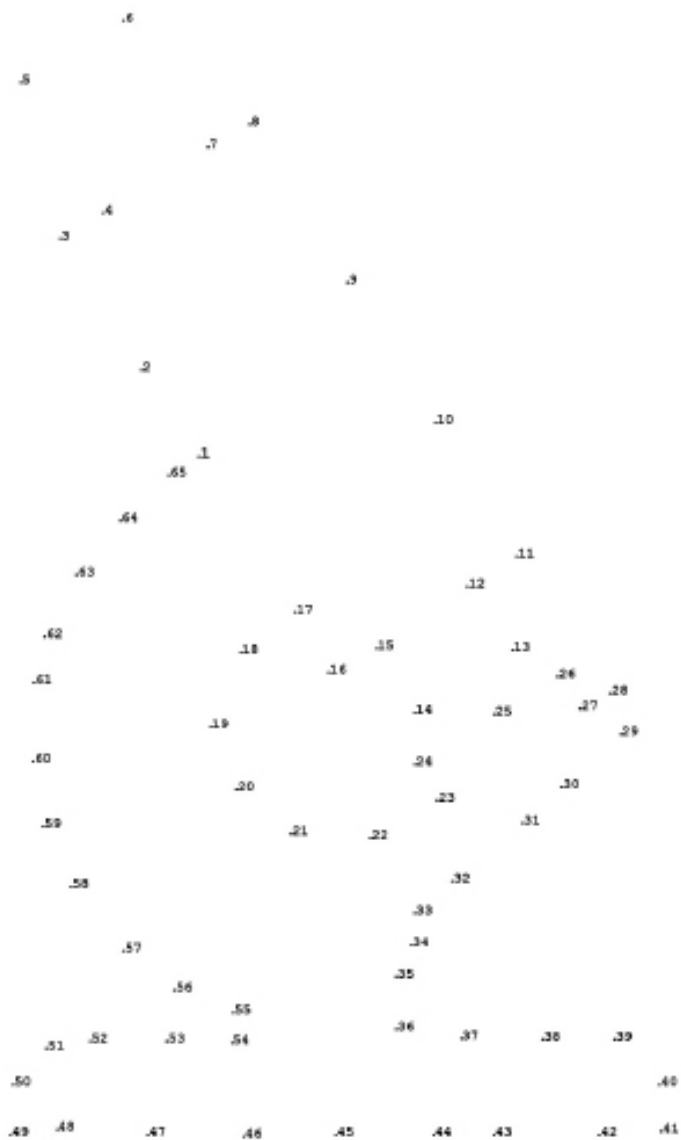


Unisci i puntini

Curiosità:
grazie agli studi dell' archeo-
zoologia sappiamo che la marmotta era uno
degli animali cacciati lungo le Alpi italiane
nella Preistoria.



Unisci i puntini



Trova le differenze

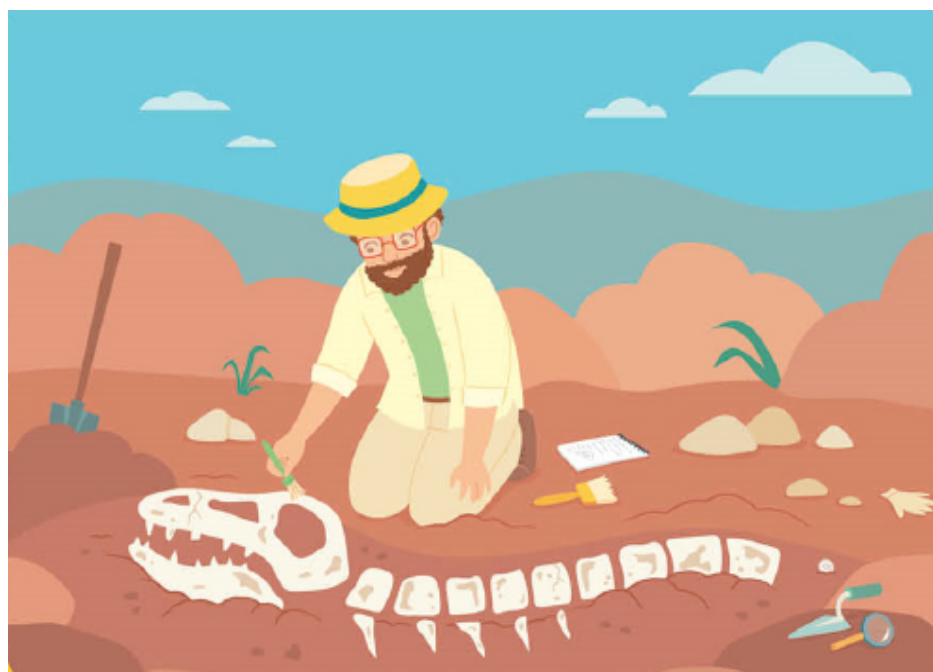
Le due immagini alla pagina a fianco sembrano uguali ma non lo sono!

Come per un'analisi archeometrica, bisogna osservare bene per scoprire i dettagli nascosti.

Aguzza la vista ed individua le 10 differenze!

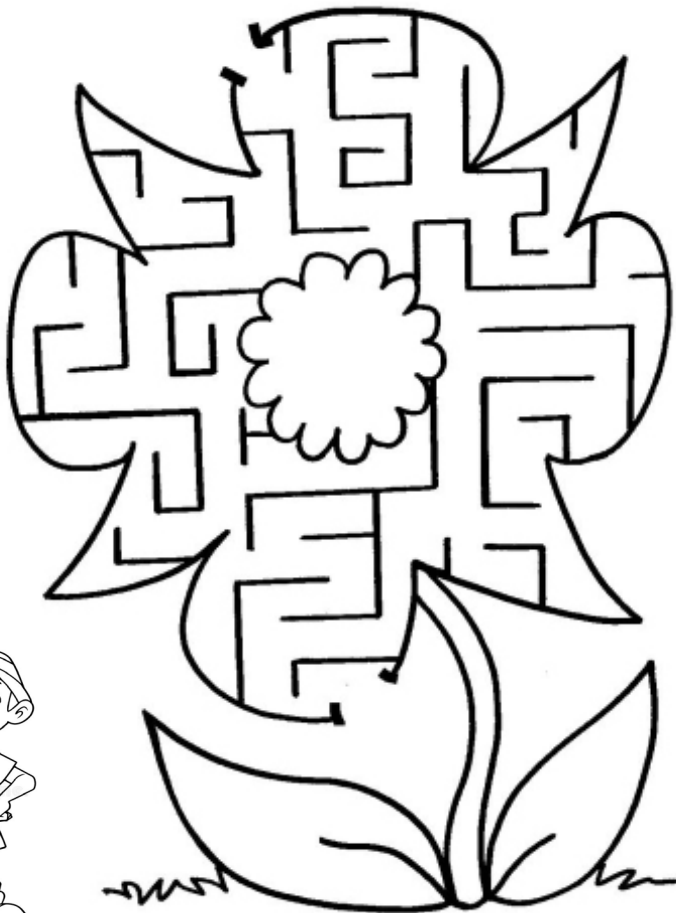
BUON DIVERTIMENTO!





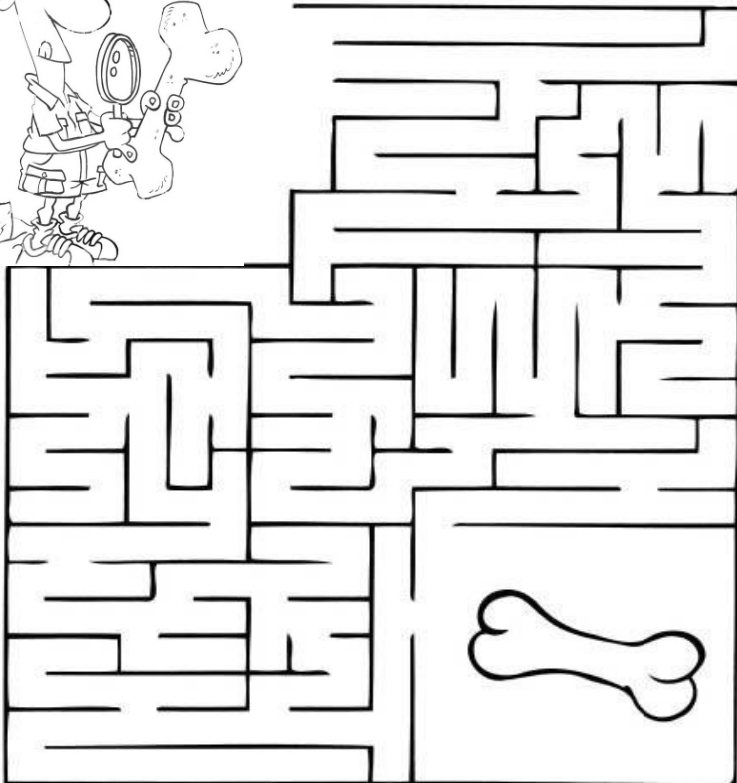
LABIRINTO

Aiuta l'archeobotanico ad uscire dal labirinto



LABIRINTO

Aiuta l'archeozoologo a raggiungere l'osso



Cruciverba

Risolvi il cruciverba

ORIZZONTALI

1. Macro disciplina applicata allo studio dei beni culturali

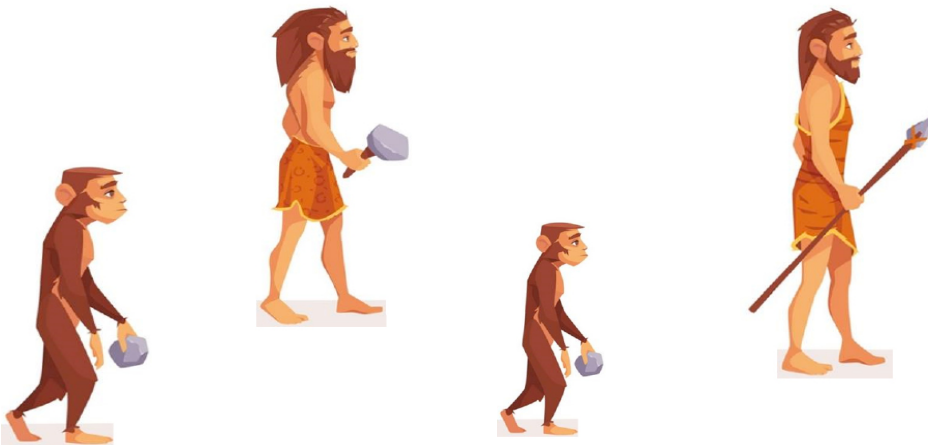
VERTICALI

2. Scienza che studia la storia degli organismi fino al loro ritrovamento fossile

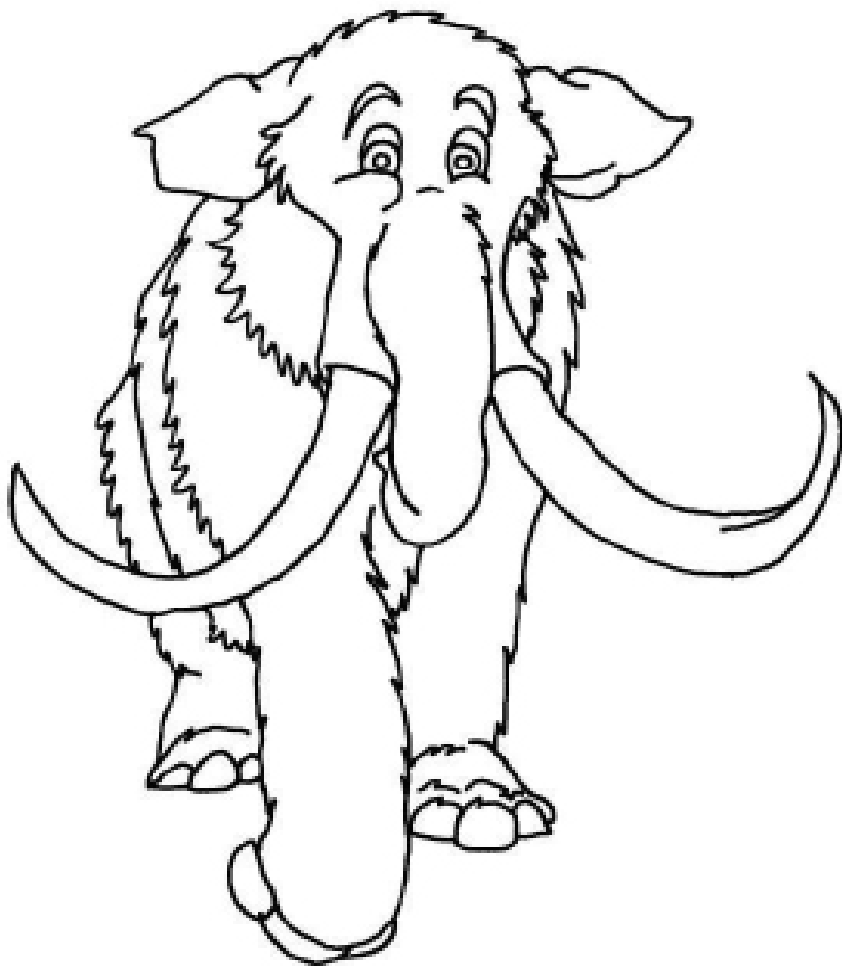
3. Colui che studia l'evoluzione umana

4. Strumento che permette di vedere elementi invisibili ad occhio nudo

5. Il professionista che studia i resti vegetali nello scavo archeologico



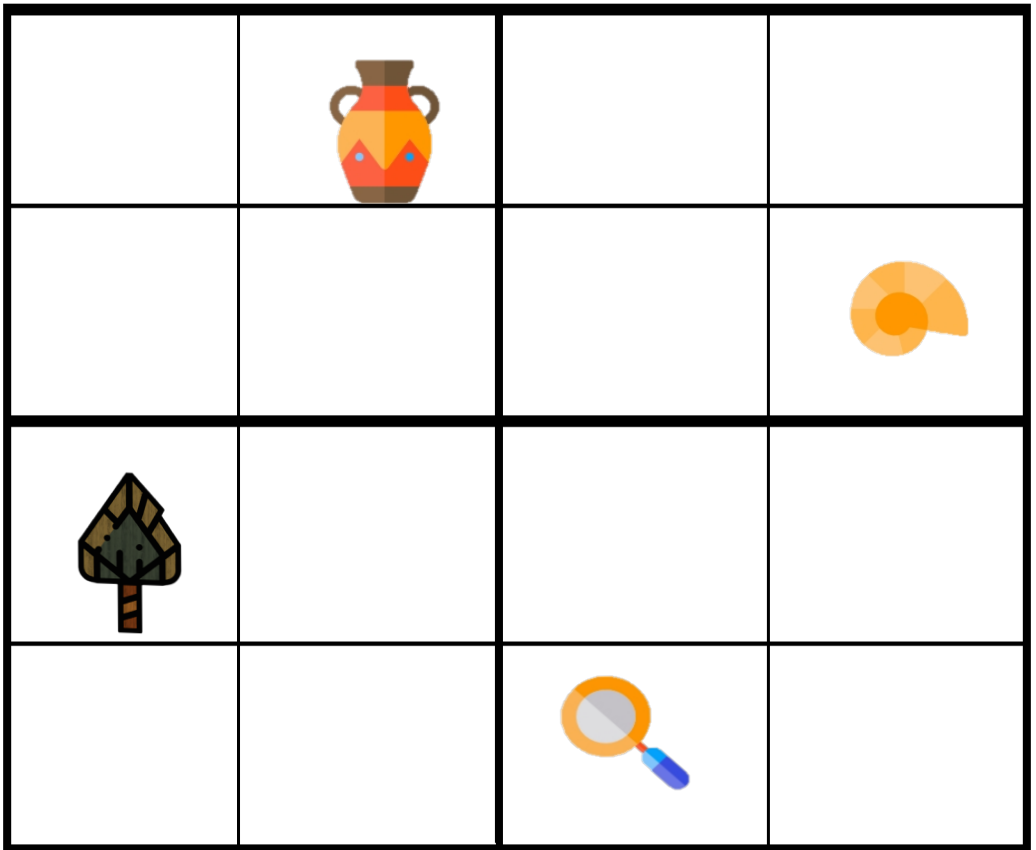
Colora il mammut



Sudoku per immagini

REGOLE:

riempire la scacchiera in modo tale che ogni riga, ogni colonna e ogni riquadro contengano una delle 4 immagini indicate. La condizione è che nessuna riga, nessun riquadro o colonna presentino due volte la stessa immagine!



Soluzioni

Chi fa cosa? pag. 3

ARCHEOLOGIA

Ricostruisce il passato dell'uomo partendo dallo studio delle tracce materiali relative alle sue attività e al suo ambiente.

ANTROPOLOGIA

Studia il comportamento e le caratteristiche dell'uomo sia dal punto di vista biologico che culturale.

ARCHEOZOOLOGIA

Studia i resti animali rinvenuti in uno scavo archeologico legati alle attività e culture umane.

ARCHEOBOTANICA

Studia le piante fossili per ricostruire l'ambiente del passato, le variazioni climatiche e lo sfruttamento delle risorse vegetali da parte dell'uomo.

PALEOANTROPOLOGIA

Studia i resti fossili dell'uomo estinto per ricostruire la sua storia evolutiva.

PALINOLOGIA

Studia i pollini rimasti imprigionati nel terreno.

ARCHEOMETRIA

Analisi chimiche, mineralogiche e petrografiche per la conoscenza storica e conservativa del patrimonio

Trova le parole pag. 4

1. corredo 2. archeologia 3. antropologo 4. microscopio 5. ossa 6. tracce
7. tafonomia 8. ceramica 9. evoluzione 10. necropoli 11. scheletro

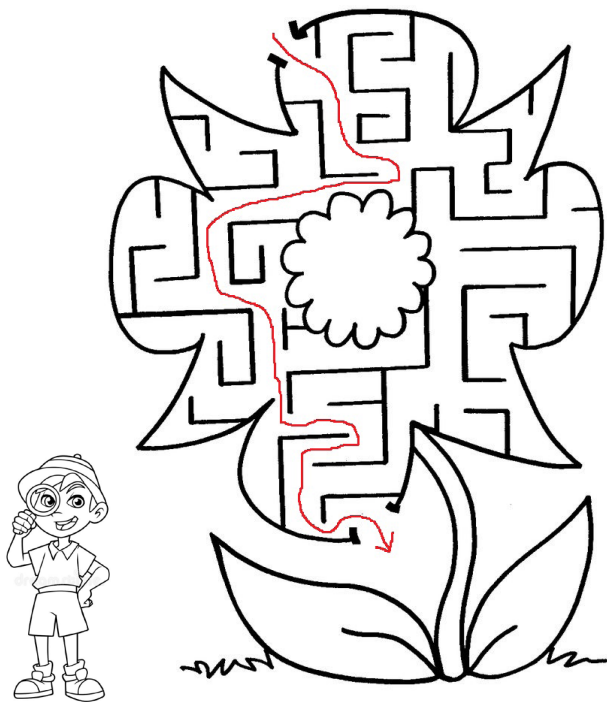
Cruciverba pag. 5-6

1. PALINOLOGO
2. TRACCE
3. ARCHEOZOOLOGIA
4. ANTROPOLOGIA
5. BIOLOGICO

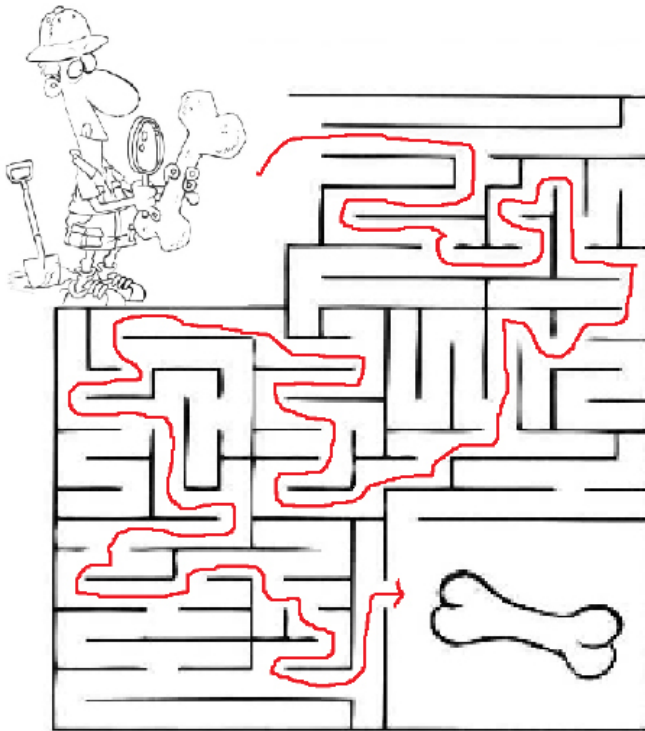
Trova le differenze pag. 9-10

Il piccone - la conchiglia - l'erba - il guanto - la matita - il colore del pennello - la lente d'ingrandimento - la tasca - il colore degli occhiali - il colore della fascia del cappello.

Labirinto pag. 11



Labirinto pag. 12



Cruciverba pag. 13-14

1. ARCHEOMETRIA
2. TAFONOMIA
3. PALEOANTROPOLOGO
4. MICROSCOPIO
5. ARCHEOBOTANICO

Sudoku pag. 16



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COLLIACCHIO



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