

Fig. 3. icon設計—「小石頭」

V. 角色介紹與遊戲關卡發想

C. 角色介紹

1) 文雄: 《清 乾隆

玉熊形尊》的器形仿自《西清古鑑》之「唐飛熊表座」，其外表如熊形，張口翹舌、左肢前伸、右肢向側後拉展、掌上執一丸，似正蓄勢擲出。頸背之處突出一管。此App運用《清乾隆 玉熊形尊》的概念，以設定「文雄」一角。

文雄斯文聰穎且喜愛詩書，而文雄平日喜愛上山採藥、吟詩作對，也因此立志成為醫生懸壺濟世。一派附庸風雅且文質彬彬氣息深受乾隆所喜愛。



Fig. 4. 「文雄」角色發想

2)

翠翠公主:

《翠玉白菜》是中國的一種玉器雕刻，利用翠玉天然的色澤雕出白菜的形狀，後世進而衍生出白菜寓意清白，象徵新嫁娘的純潔。此外，葉尖兩隻昆蟲寓意多產，祈願皇室子孫綿延的意念，讓作品的內涵更趨圓滿。豐富的寓意與逼真的外型使翠玉白菜成為故宮典藏的重要文物，並廣為大眾所熟知，成為觀眾心中故宮的重要印象連結。因此此App運用《翠玉白菜》的概念，以設定「翠翠」角色。

其中，此App將《翠玉白菜》設定為白菜國公主——

翠翠，其個性害羞內向且溫柔婉約，成為世人眼中典型的大家閨秀。翠翠公主擁有兩隻寵物，即為蝗蟲與螽斯。在平日的的生活當中，翠翠公主最喜歡洗澡與泡湯，把自己打扮得白白淨淨。



Fig. 5. Screenshots of Woodman Diary

D. 遊戲關卡發想

1)

『乾隆皇下江南』:

本APP中的『乾隆皇下江南』關卡即參考《乾隆南巡紀程圖》以及《玉熊形尊》兩個文物的形象，為乾隆皇與玉雄發展出一段故事：乾隆因賞識文雄的文采，故邀而陪同皇上一同搭乘下江南的舟船，並一路上解說沿岸的風光與景色；殊不知，機靈的文雄不僅具有文采，更擁有出人的好眼力與觀察力！一路上在為皇上解說沿岸景色文物之外，亦精明地協助避開沿途遭遇的岩石、暗流以及變化多端的河岸。

根據此概念發想，本團隊開發出一個簡單的舟船過關遊戲，讓使用者透過智慧型載具的陀螺儀感應，控制舟船閃避下江南中所遭遇到的障礙，為使用者提供簡單的遊戲趣味，也同時培養幼童的視覺與方向協調能力。

2)

『白菜園除害蟲』:

『白菜園除害蟲』的關卡設計即發揮對於原創角色翠翠的想象：翠翠雖貴為全國上下寵愛的白菜公主，但總想要透過自己的力量為白菜國帶來貢獻，正巧在花園中發現了害蟲的存在，於是一心決定要趕走害蟲，讓白菜們可以順順利利地長大長胖！

在此關卡中本團隊採取簡單的設計，將傳統遊戲打地鼠的概念搭配嶄新設計的形象，並藉由智慧型載具的觸控點選功能達到簡單有趣的遊戲效果。為增加遊戲挑戰性，亦增加了善蟲的設計，讓一般使用者能夠在遊戲過程中享受到更多的趣味，也有助於幼齡學童對於色彩與形狀的辨識能力以及手眼協調。

E. APP操作方式

「清宮秘寶

-國寶歷險記-

」兼具遊戲互動與教育意義，在本版本中提供『乾隆皇下江南』以及『白菜園除害蟲』兩個遊戲關卡，透過智慧型載具的特性應用，在刺激的過程中提供一般使用者簡單的遊戲趣味，並亦能夠藉由遊戲互動方式訓練與培養幼童使用者的手眼協調。此外為推廣故宮文物背後歷史與文化意涵，本APP的『多寶格系統』讓使用者能夠以簡單的觸控方式操作，輕鬆選取閱讀感興趣之文物背景故事，在遊戲之外更提供文化傳遞與幼童學習教育的效果。以下將分別針對遊戲關卡與文物展示依序作介紹：

1)

基本操作:

本APP為求操作便利並減少複雜的學習過程，多數功能皆以手指或電容式觸控筆點選即可，首先在程式開啓後即會進入主畫面，使用者可以透過『開始遊戲』或『多寶格』兩個文字項目點選分別進入遊戲關卡或文物展示模式。

2)

遊戲關卡:

使用者在主畫面點選『開始遊戲』後即會進入遊戲模式，接著藉由在大地圖畫面上對『文雄』角色點選即可進入『乾隆皇下江南』關卡，對『翠翠公主』角色點選則可進入『白菜園除

害蟲』關卡。



Fig. 6. 遊戲大地圖

F. 『乾隆皇下江南』遊戲規則與操作說明

本遊戲關卡中使用者操作的是在河上行駛的小船，遊戲目的為避開過程中障礙物順利到達終點。根據智慧型載具內建的陀螺儀設計，使用者簡單透過欲行駛之方向左右擺動，即可對應於遊戲中小船的行進方向。每一次的遊戲中使用者皆有三次的機會，每碰撞倒岩石、激流或突出的江岸等障礙物即會扣除一次機會，三次機會皆使用完畢（碰撞障礙物三次）則遊戲失敗。

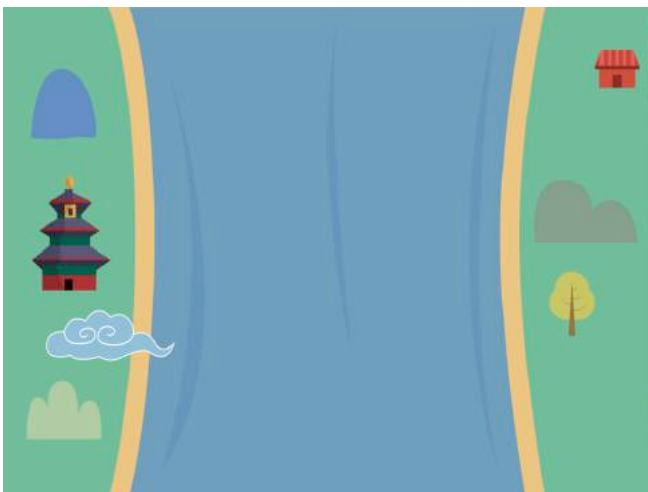


Fig. 7. 乾隆皇下江南遊戲中截圖

G. 『白菜園除害蟲』遊戲規則與操作說明

此關卡中的遊戲目的為在一分鐘內消除害蟲保護菜園，並避免誤觸善蟲。使用者須觀察隨機出現於畫面上十棵白菜的害蟲，並以手指或電容式觸控筆觸點來去除蟲害，若未能夠在害蟲消失前觸點則會扣除愛心條。為增加遊戲的挑戰性，過程中亦會有翠翠公主所鍾愛的螽斯與蝗蟲寶寶誤闖菜園，使用者應避免誤觸此二角色，否則亦會扣除愛心條。若在一分鐘內因未能去除害蟲或誤觸善蟲，導致愛心條遭扣除完畢則遊戲就算失敗，可以再次重新挑戰。

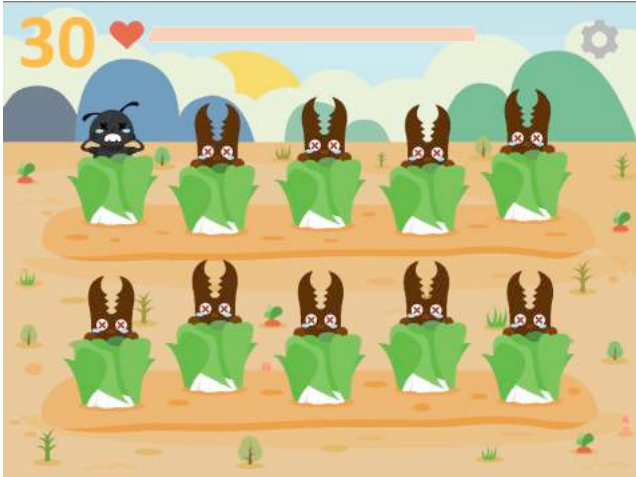


Fig. 8. 白菜園除害蟲遊戲中截圖

H. 多寶盒文物展示

使用者在主畫面點選『多寶格』文字選項即會進入『多寶格文物展示』模式，接下來使用者只要進一步觸點欲深入認識之角色，即會出現角色介紹畫面並同時展現該角色對應故宮文物之歷史文化介紹。

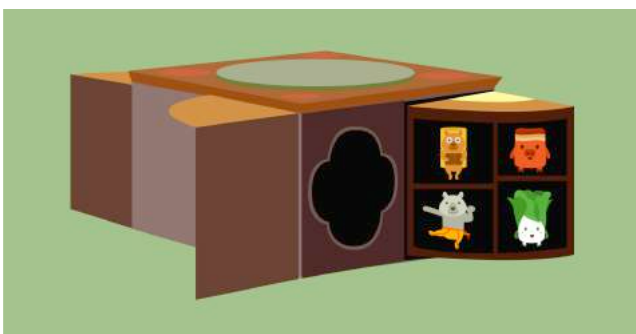


Fig. 9. 多寶格系統

V. Introduction to the Game Characters and Inspiration for the Game Barricades

C. Introduction to Characters

1) Literary Champion: as a replica of the “Flying Bear Bronze Statue from the T'ang Dynasty” in the Hsih-ch'ing-ku-chian, a 40-volume catalogue of Chinese ritual bronzes in the collection of the Ch'ien-lung Emperor, the shape of the “Jade Bear Figurine from the reign of the Ch'ien-lung Emperor in the Ch'ing Dynasty” bears a resemblance to a bear with an open mouth, a protruding and raising tongue, a left limb reaching forward, a right limb stretching backward, a globe on its palm which is ready to be hurled out, and a tube protruding from the back of its neck. Based on the concept of the Jade Bear Figurine, the character “Literary Champion” in the application is herewith designed.

Literary Champion is a cultured man who is intelligent and fond of poetry and literature. Taking an interest in collecting herbs in the mountains in addition to reciting poems and writing couplets, Literary Champion also aspires to be a doctor to practice medicine and save people around the world. Associating with other cultivated men and acting with a decorous manner, Literary Champion is greatly adored by the Ch'ien-lung Emperor.



Fig. 4. The inspiration of the character “Literary Champion”

2. Jadeite Princess: as a Chinese jadeite sculpture, the “Jadeite Cabbage” is a piece of jadeite carved into the shape a Chinese cabbage by utilizing the natural color of jadeite, and is considered an allegory of the pureness and innocence of a bride by people in later generations due to the symbolic meaning of Chinese cabbage which denotes purity. In addition, a design of a locust and a katydid on the tips of the cabbage leaves enriches the symbolic meaning of the Jadeite Cabbage by denoting “fertility and abundance” and a wish for the eternally flourishing imperial descendants. The prolific meaning and lifelike shape of the Jadeite Cabbage not only makes it an important cultural artifact among the collection of the National Palace Museum, but also an key icon of the National Palace Museum in the public’s mental image. In light of its popularity, the character “Jadeite Princess” in the application is designed based on the prototype “Jadeite Cabbage”.

In specific, the Jadeite Cabbage is used as the prototype for the creation of the princess of the Kingdom of Cabbage – Jadeite, who is a typical girl of noble birth due to her shy, introverted, soft, and elegant character in the public eye. Jadeite has two pets – a locust and a katydid. In the daily life of Jadeite Princess, her favorite interest is taking a bath and a spa treatment, preening herself, and keeping her fair and clear skin.



Fig. 5. The screenshot of the Woodman Diary

D. *The inspiration for the game barricades*

1. The Ch'ien-lung' Emperor's Journey to the Jiang-nan area: the design of the game "the Ch'ien-lung Emperor's Journey to the Jiang-nan area" in the application is inspired by the images of the two cultural artifacts: the "Routing Atlases of the Ch'ien-lung' Emperor's Surveillance Journeys to the South" and the "Jade Bear Figurine", to develop a story for the Ch'ien-lung' Emperor and Literary Champion. The story line goes that: the Ch'ien-lung' Emperor, who is impressed by the literary talent of Literary Champion, invites Literary Champion to join his journey to the Jiang-nan area, and to explain the scenery and landscapes along the riverbanks as their boat sails by. Little does the Ch'ien-lung Emperor know that the clever Literary Champion is also remarkably observant and insightful in addition to his notable literary talent. Besides expounding the scenery and cultural artifacts along the riverbanks to the Ch'ien-lung' Emperor, Literary Champion also wisely assists their boat to circumvent rocks, undercurrents, and riverbanks of various shapes and forms.

Brainstorming based on the concept, our team develop a simple game of boats sailing through barricades, in which users of smart digital devices can use the sensor of a gyroscope on their devices to command the boat to circumvent all barricades on the way to the Jiang-nan area. In addition to providing users the fun of playing a game of a simple concept, the game also cultivates children's eye-hand coordination and sense of direction.

2. "Exterminate pests in the cabbage garden": the design of the game barricade "Exterminate pests in the cabbage garden" originates from an imagination of the original character Jadeite Princess: despite her position of being the beloved princess of all in the Kingdom of Cabbage, Jadeite Princess always aspires to contribute to the Kingdom of Cabbage with her own strength. One day as Jadeite Princess is in a garden, she accidentally finds the existence of pests and grows determined to get rid of these pests so that cabbage can grow up and flourish in a pest-free garden!

A simple design is adopted for the barricade where the concept of the traditional hitting shrewmouse game is integrated with an image of a novel design, to achieve a simple and fun effect by using the touchscreen function on users' smart digital devices. To boost the challenge of the game, benign insects also show up in the game so that average users can enjoy more fun in the course of playing the game. In addition, the game is also beneficial for cultivating the abilities of colours and shapes discrimination and eye-hand coordination for young school children.

E. *The mode of operation of the application*

The "Mysterious treasures from the Ch'ing Dynasty- an adventurous Journey in search of national treasures" application is an interactive game with an educational function. Utilizing the features of smart digital devices, the two games "the Ch'ien-lung' Emperor's Journey to the Jiang-nan area" and "Exterminate pests in the cabbage garden" not only provides users with the fun of playing games with a simple design in exciting scenarios, but also trains and cultivates children's eye-hand coordination through playing interactive games. Moreover, to promote the historical background and cultural meaning of the cultural artifacts in the National Palace Museum, the "multi-treasure slots" system of the application allows users to easily select and read background stories of cultural artifacts that they take an interest in by using the

touchscreen function on their smart digital devices, and thus has the functions of disseminating culture and providing a learning opportunity to young children. Descriptions of the barricades and the displayed cultural artifacts in the game are as follows:

1. Basic mode of operation: to make the application easy to operate and to reduce the complicated parts in the process of learning, most functions can be selected by using fingers or a compatible stylus touchscreen pen. After the program is started, the main screen of the game would show up, where users can select from the two options: “game starts” or “multi-treasure slots” to enter the barricades of the game or the cultural artifacts display model respectively.
2. Barricades in the game: users would enter the game model after selecting the “game starts” icon on the big map, and subsequently select the characters” Literary Champion ” or “Princess Jadeite” to enter the barricades “the Ch’ien-lung’ Emperor’s Journey to the Jiang-nan area” or “Exterminate pests in the cabbage garden” respectively.



Fig. 6. The big map in the game

F. Rules and operation instruction of the “Ch’ien-lung’ Emperor’s Journey to the Jiang-nan area” game

Users in this game would steer a small sailing boat on a river to reach the destination, i.e. the goal of the game, by evading numerous obstacles along the way. With the build-in design of a gyroscope on smart digital devices, users can easily steer toward the right or the left in line with the sailing direction of the boat in the game. In each game, users are given three chances, which would be taken by one each time the sailing boat hits obstacles such as rocks, rip currents, or protruding riverbanks, and users are deemed to fail the game if all the three chances are used up (hit obstacles three times).

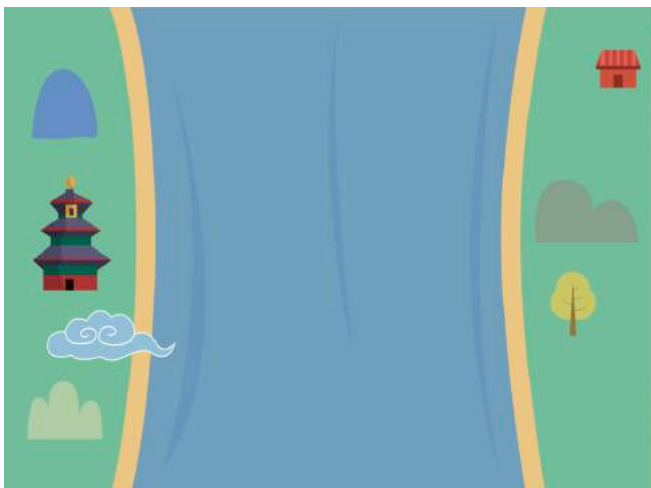


Fig. 7. The screenshot of the “Ch’ien-lung’ Emperor’s Journey to the Jiang-nan area” game

G. Rules and operation instruction for the game” Exterminate pests in the cabbage garden”

The target in the game is to exterminate pests to protect the cabbage garden within one minute’s time while being cautious not to touch the benign insects. A total of 10 pests that are detrimental to cabbage will automatically show up on the screen. Users have to watch these pests carefully and use fingers or a compatible stylus touchscreen pen to exterminate them. During the process, a heart strip (a strip next to a heart shape) on the screen would be shortened if users fail to touch the pests before they disappear. To increase the challenge of the game, the Princess Jadeite’s beloved locust and katydid may occasionally come to the garden, and users should avoid touching the two characters or the heart strip would be shortened as well. Users whose heart strip is slashed to none due to a failure to eliminate the pests or touch the benign insects accidentally within one minute’s time are deemed to fail the game, yet are welcome to retake the challenge.

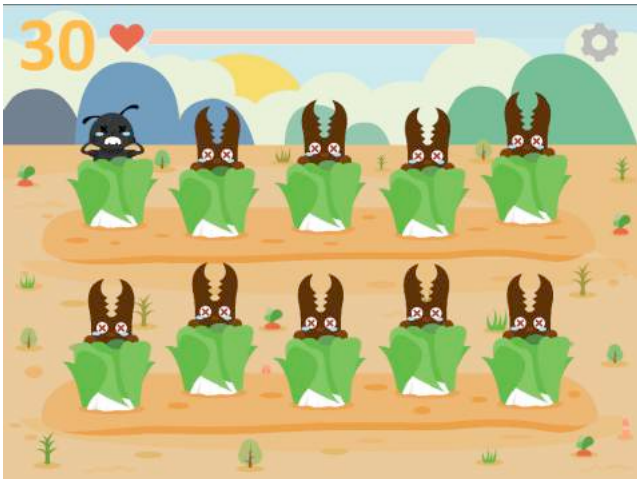


Fig. 8. The screenshot of the “Exterminate pests in the cabbage garden” game

H. The cultural artifacts display in a box with multiple slots for treasures

After selecting the “multi-treasure slots” icon on the main screen, users would enter a “cultural artifacts display in the multi-treasure slots” model. By touching a character that the users wish to have a further understanding, a screen that gives a description of the character would come up, along with the character’s introduction to the historical and cultural background of its corresponding cultural artifacts in the National Palace Museum.

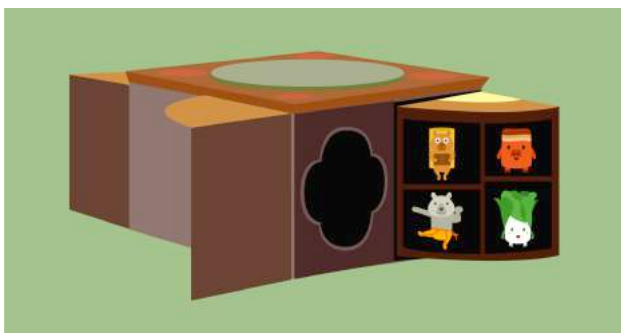


Fig. 9. The “multi-treasure slots” system