

Learning & Teaching Expo 2021

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Play to Learn: Facilitate Language Learning and Creative Thinking with A New Game

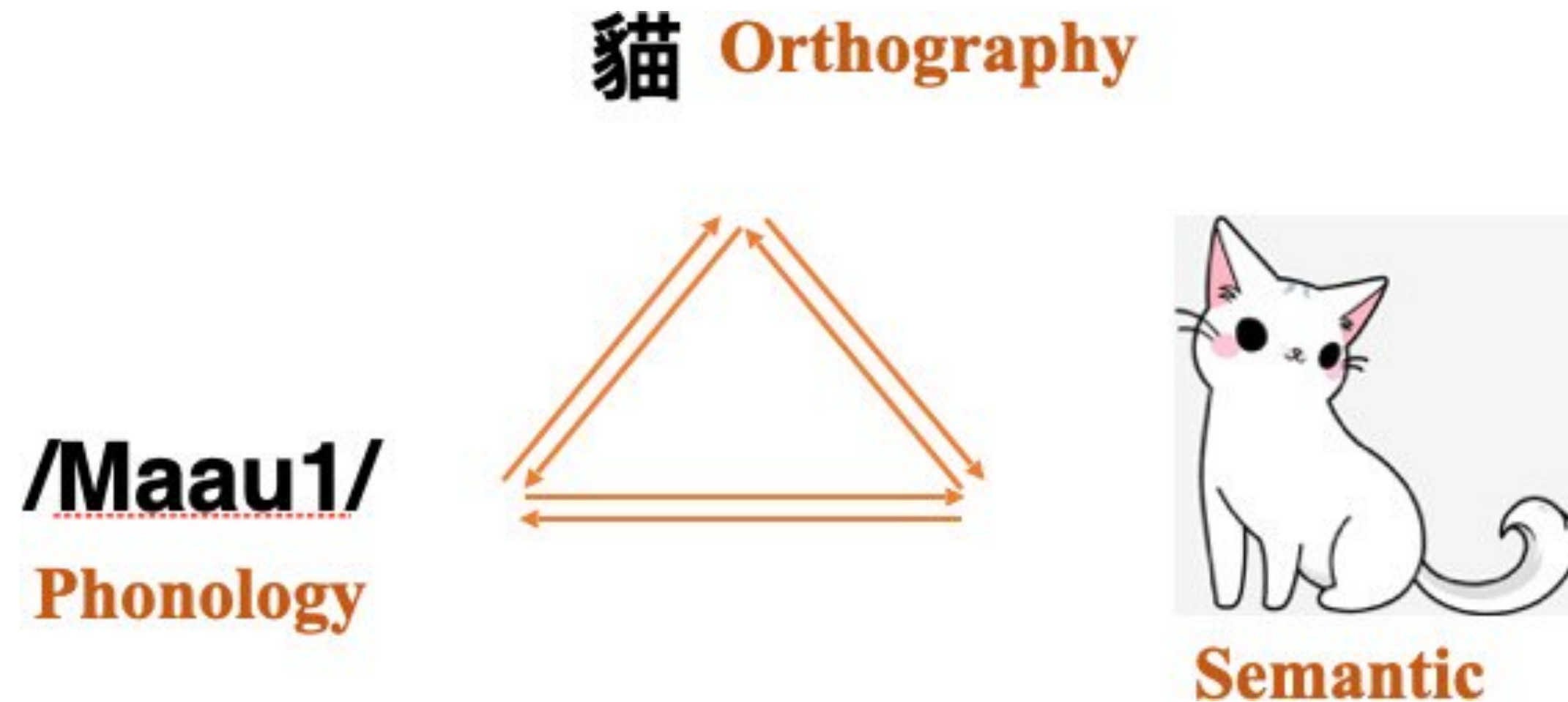
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Today's Focus

- The research background of Bumper Cards™
- Understand what is creativity
- Introduction of Bumper Cards™ - how it facilitates language learning through creativity
- Different ways to play Bumper Cards™

Research background of Bumper Cards™

- Word learning refers to three interlinked dimensions of words-phonology, semantics, and orthography (Coltheart et al., 2001)



Research background of Bumper Cards™

Morphemes across languages

A morpheme is the smallest unit of meaning expressed in a language.

It can refer to a semantic concept

e.g.,

毛 =



腦 =



or

It can also refer to a syntactic function

e.g., “-s” added to a noun in English creates a plural: “cars”

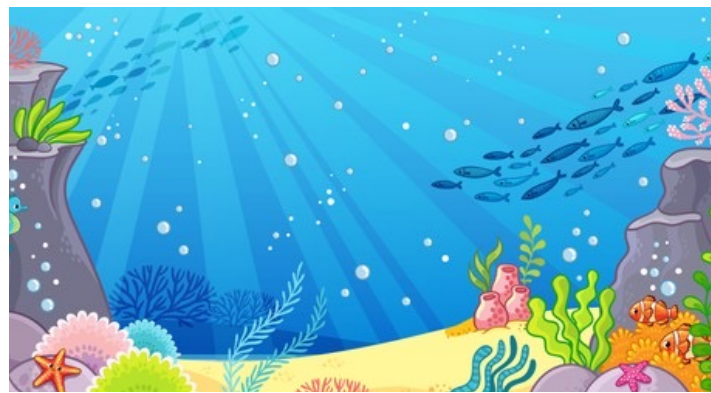
“-ing” added to a verb marks aspect: “hitting”

了 in 吃了 ; 完 in 吃完

Research background of Bumper Cards™

What is Morphological Awareness?

Morphological awareness is defined as children's conscious awareness of the **morphemic structure** of words and their **ability to reflect on and manipulate** that structure (Carlisle, 1995; McBride-Chang et al., 2003)



海
Sea

+
+



馬
Horse

=
=



海馬
Seahorse

The knowledge of how to create words from morphemes is essential for vocabulary learning and reading development (McBride-Chang et al., 2003, 2008).

Research background of Bumper Cards™

- Compound words are prevalent in Chinese and English

e.g. 電+腦 電腦
 雪+人 雪人

snow+ man snowman
cup + cake cupcake

Research background of Bumper Cards™

- Over 75% of Chinese words are comprised of two or more characters (Sun et al., 1996)
- There are five main categorizations of compound structures in Chinese (Liu & McBride-Chang, 2010)

- Subordinate

雪人

- Coordinative

男女

- Subject-predicate

地震

- Verb- object

騎車

- Verb/adjective-complement

擴大

Research background of Bumper Cards™

- Lexical compounding and word learning
 - Children with better ability to reflect upon and manipulate the morphemes and word structure develop **better vocabulary knowledge** and **word reading skills**
 - Children who understand how to create real words/new concepts (novel words) are **better readers or learners**. Creating novel words is also a manifestation of creativity

Research background of Bumper Cards™

Many influential studies in Chinese (e.g., McBride-Chang et al., 2003; Shu et al., 2006; Zhang et al., 2012) and other languages (e.g., Kim et al., 2019; Zhang et al., 2014) consistently demonstrate that children who have greater abilities to **create novel words** perform better in **word reading, vocabulary knowledge, and reading comprehension**.

One example of how to measure children's ability to create real/ novel words in the studies:

日頭出嚟, 我地會叫佢做日出 /yat6 ceot1/; 咁月亮出嚟, 我哋會點叫佢啊?

The sun rising is called a sunrise. What would we call it if the moon rises?

The correct answer is 月出 (*moonrise*).

Research background of Bumper Cards™

Training children about how to combine character/word together to **create compound words** facilitates their **development of vocabulary and word reading** (Zhou et al., 2012).

An example of lexical compounding training in previous study:

Present 明/ming4/ 園/jyun4/ 花/faa1/ 天/tin1/

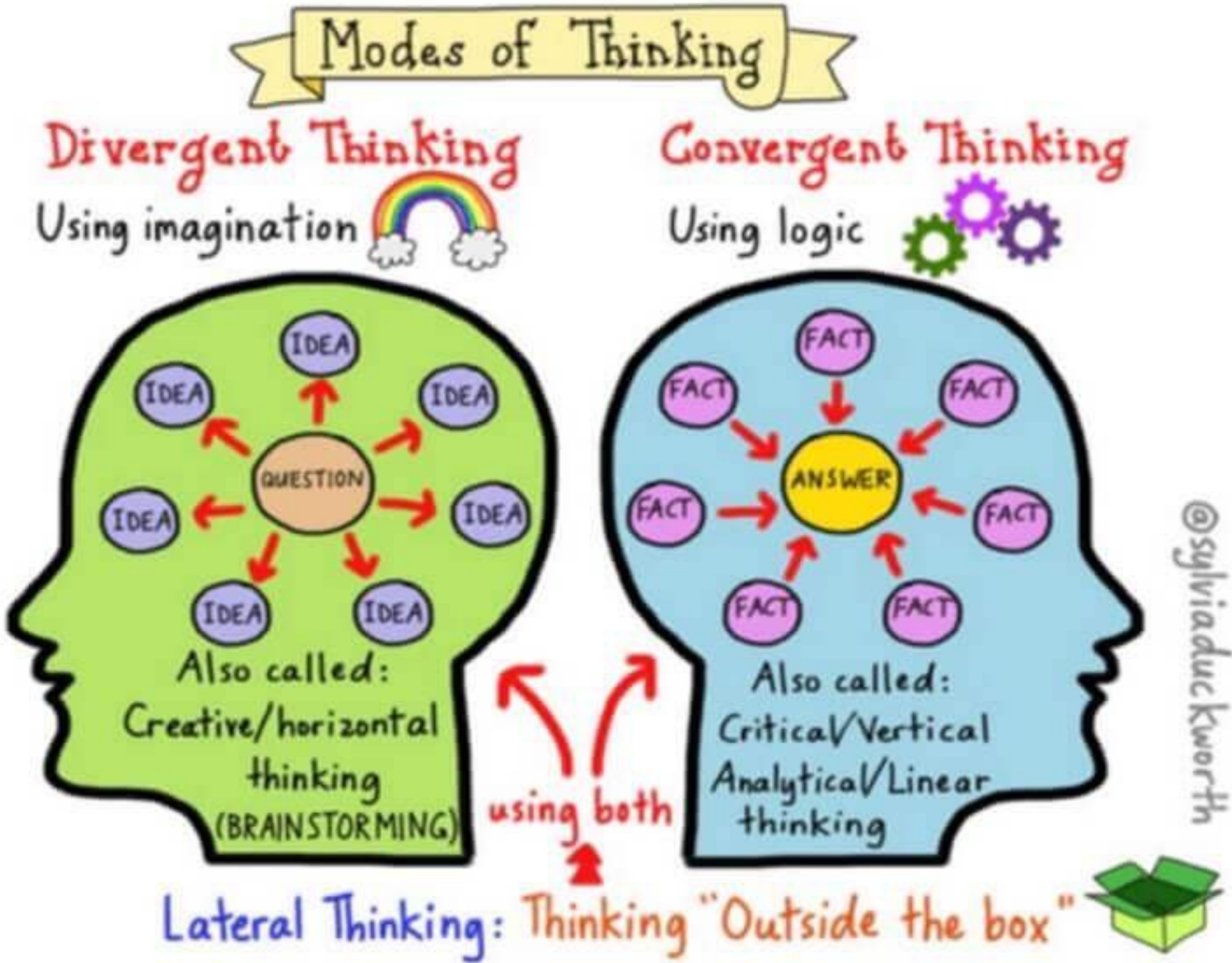
Ask children to pair up the characters so as to form two pairs of meaningful real words: 明天 and 花園.



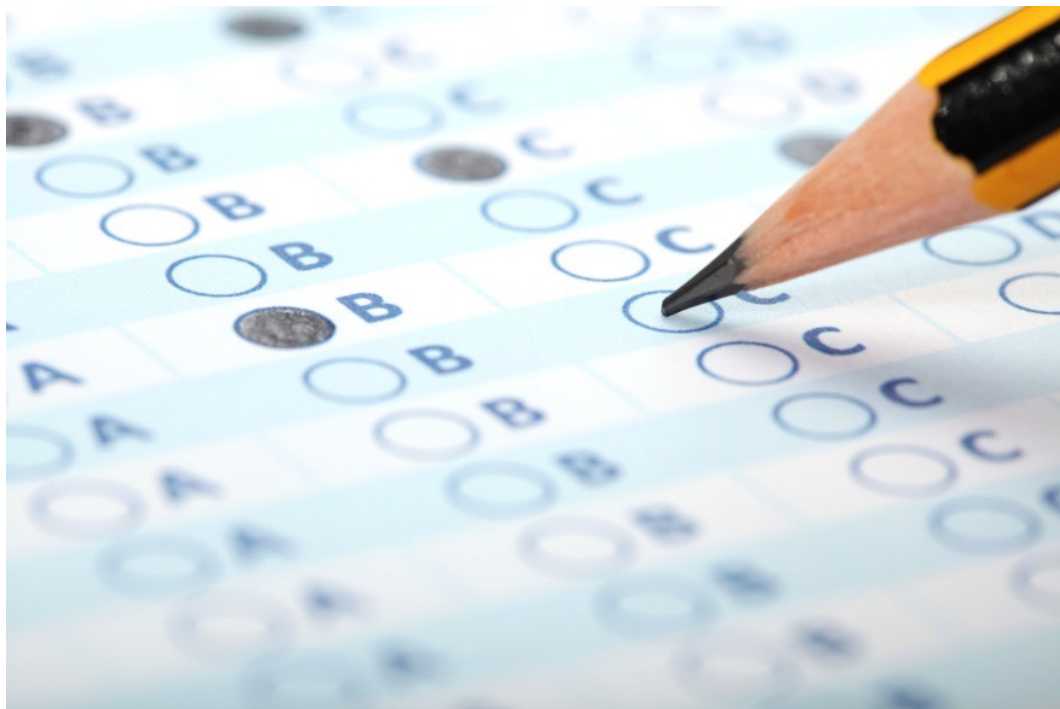
What is creativity?

from Kingston University
(<https://www.youtube.com/watch?v=trUVJfu3XGE>)

Two broad types of thinking: Convergent & Divergent Thinking



Convergent Thinking: Getting the Right Answer



Doing multiple choice tests
→ Either right or not!



Spelling words
→ Either right or not!



Divergent Thinking: Creativity





Why do children need creativity?

- From Child Creativity Lab
(<https://www.youtube.com/watch?v=RwGlaCTnNys&t=33s>)

Creativity through language

- Encourage language flexibility → Better language development
- Encourage divergent thinking → Better problem solving skill
- Engaging experience → Have fun while learning



Bumper Cards™ Cartoon

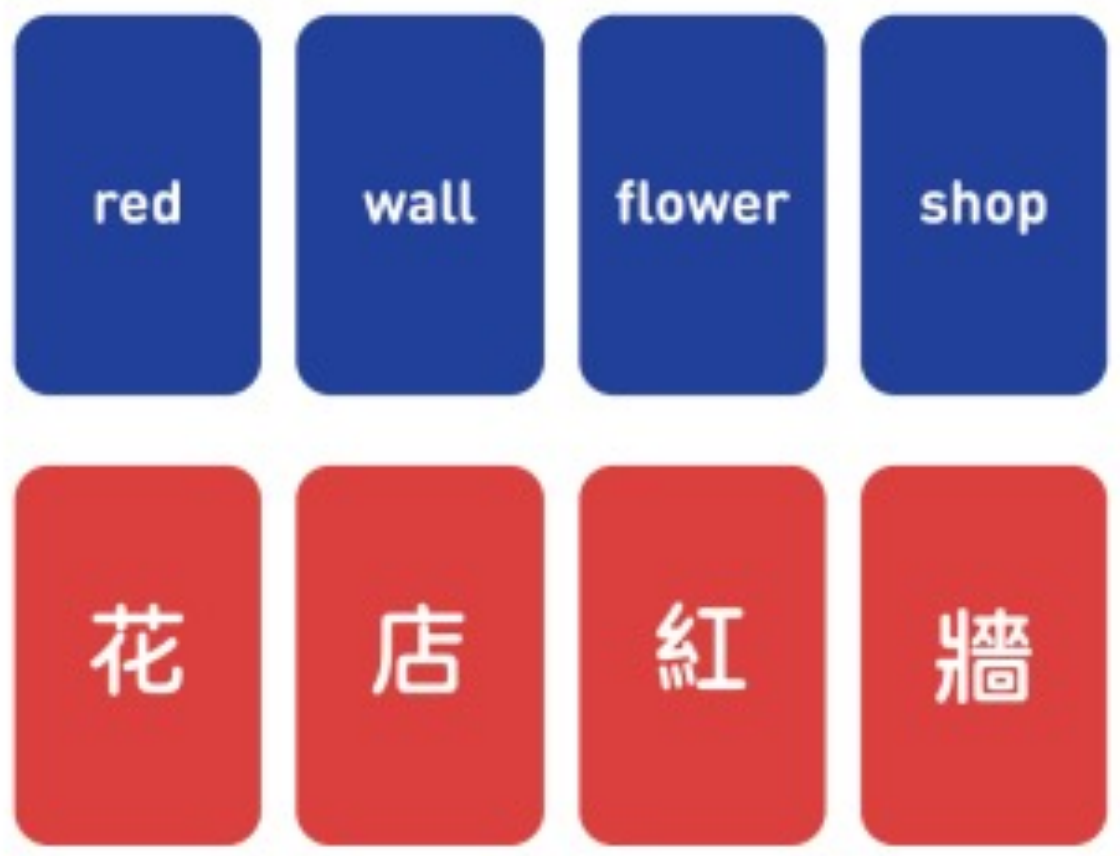
- From Cayan Educational Design Limited
- Supported by a social impact grant from CUHK

Game 1 – Memory Game

No. of players: 1-6

Difficulty: 1

Number of cards needed: 202

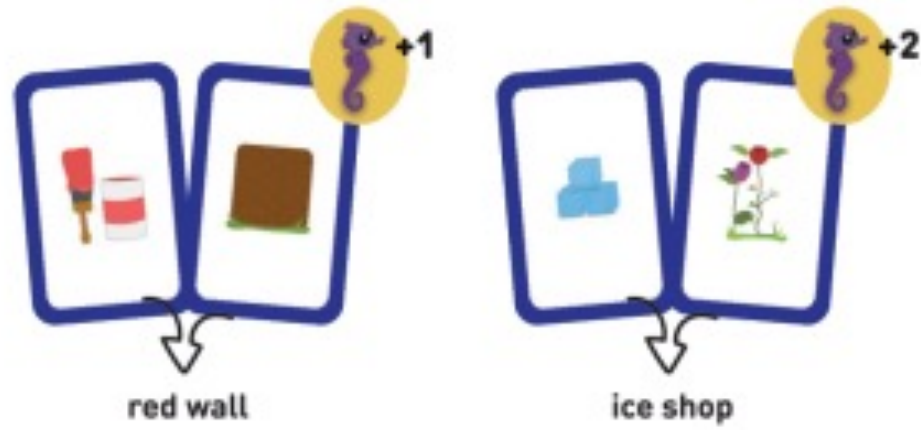


Game 2 - Bumper Cards

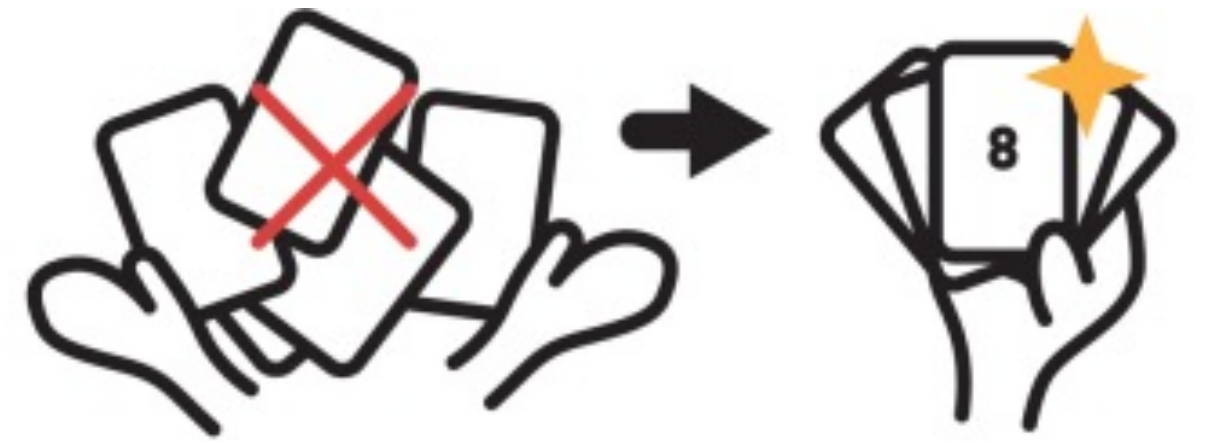
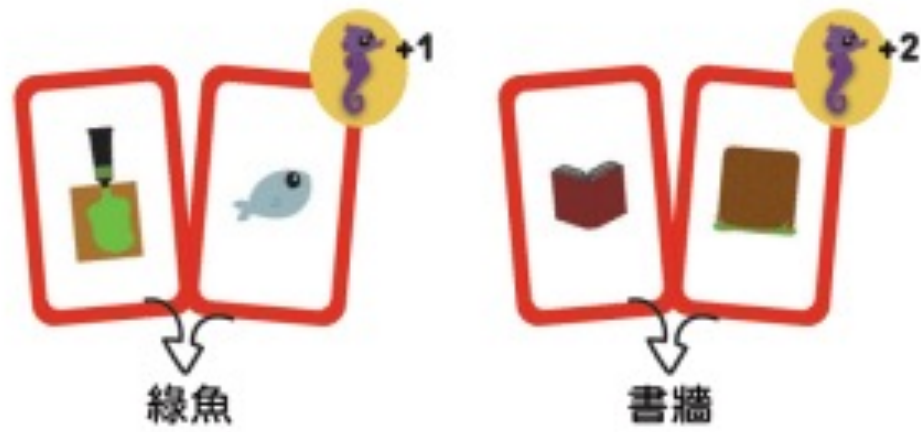
No. of players: 2-6

Difficulty: 3

Number of cards needed: 101



或
Or

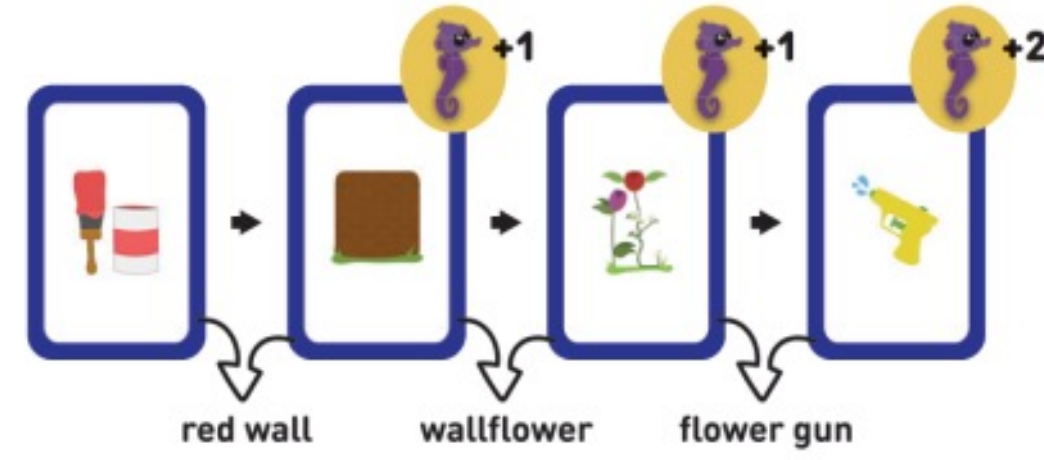
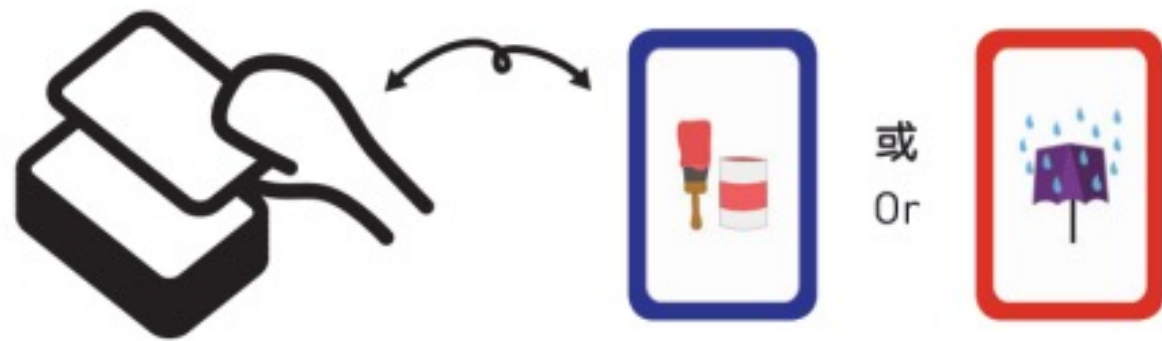
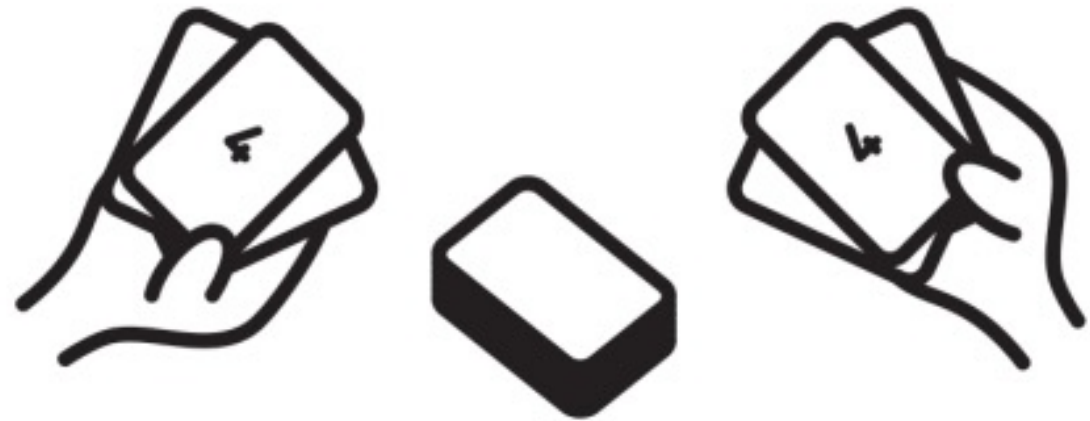


Game 3 - Bumper Card Chains

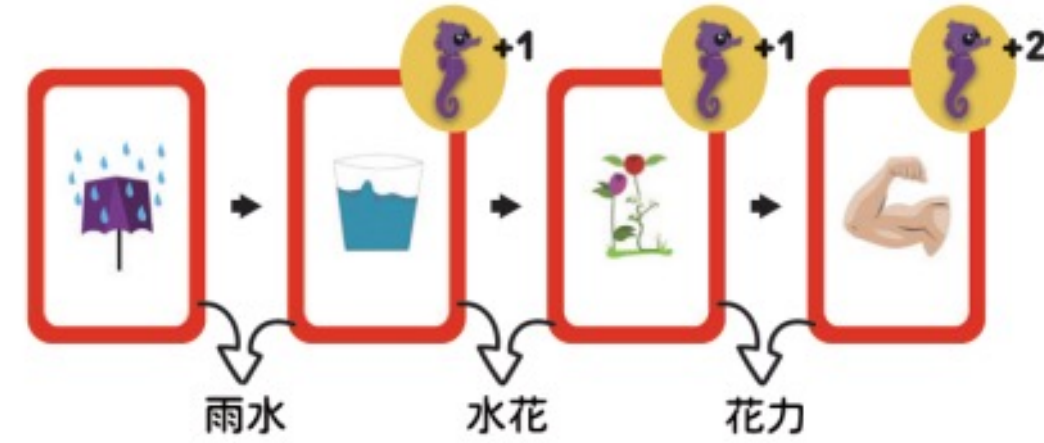
No. of players: 2-6

Difficulty: 3

Number of cards needed: 101



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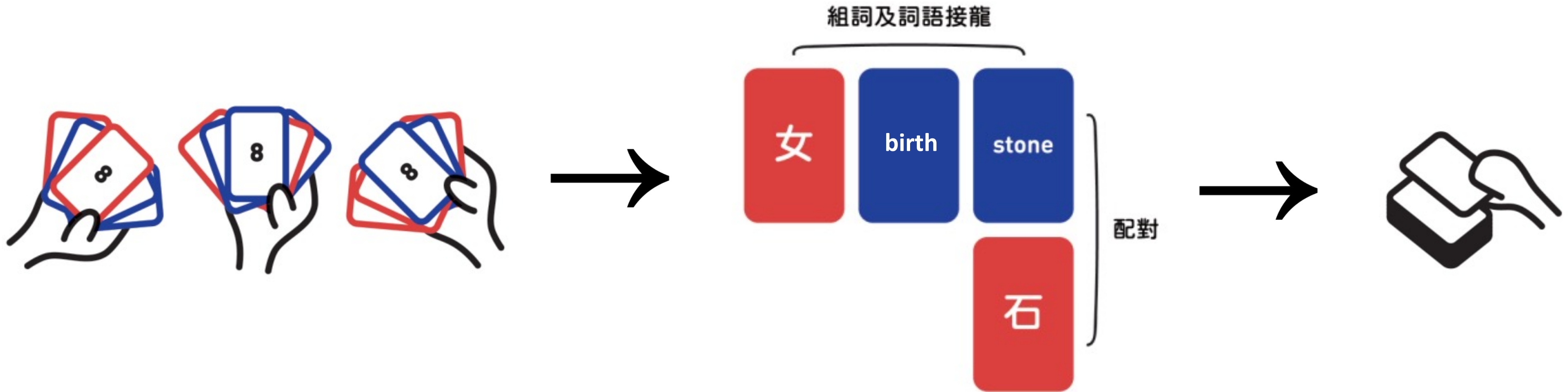


Game 4 – Bilingual mix and match

No. of players: 2-6

Difficulty: 4

Number of cards needed: 202



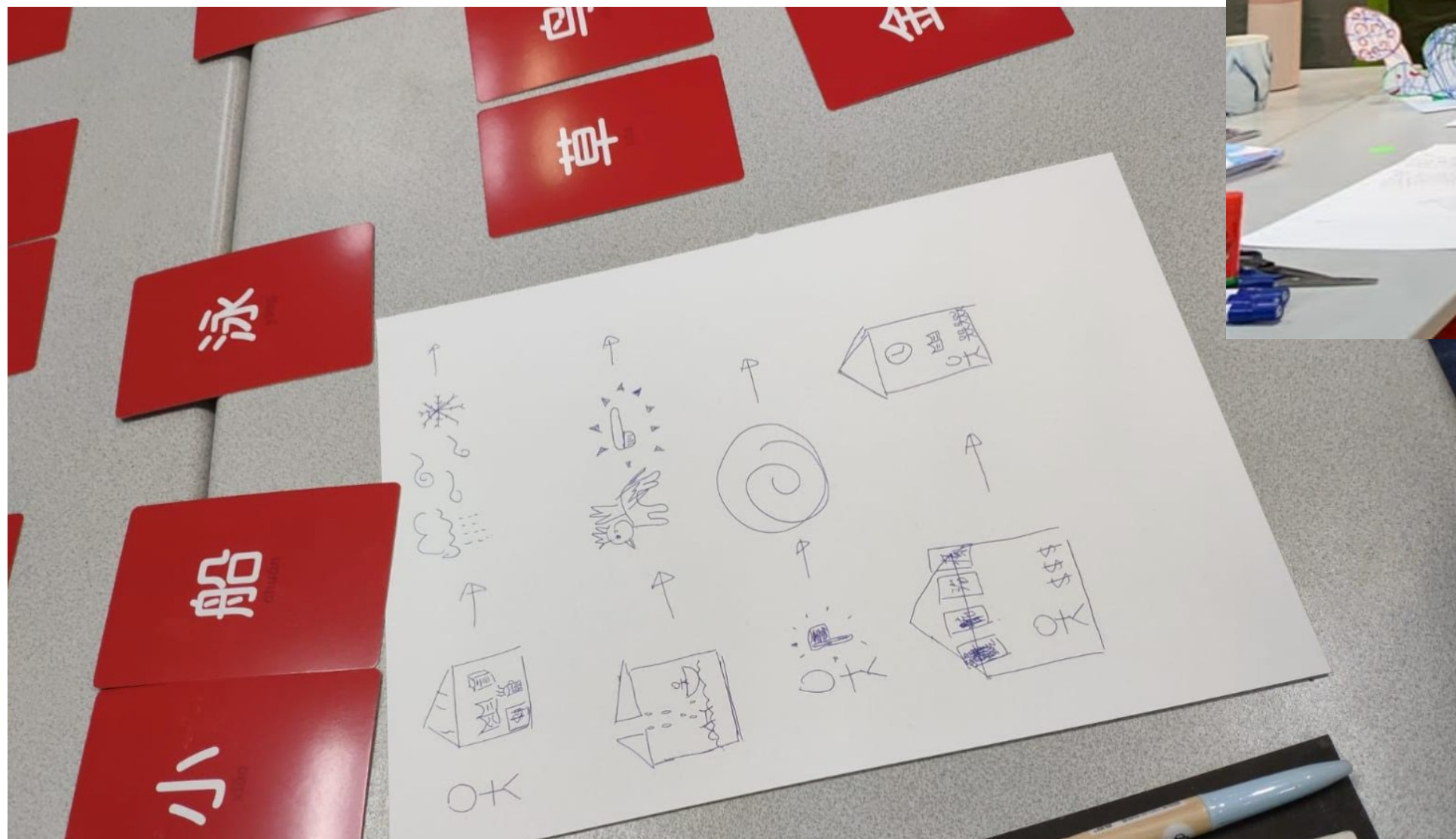
How Bumper Cards™ facilitates creativity and language learning

- Interactive Family Workshop
- Short course for Parents



How Bumper Cards™ facilitates creativity and language learning

- Training for social workers



Other Innovative Learning Tools and Tests created by CAYAN EDUCATIONAL DESIGN LIMITED.

1. **Bumper Cards™ Card Game** (bilingual Chinese-English with focus on creativity and play)
2. **Bumper Cards™ Word Play** (bilingual Chinese-English with focus on creativity and social interaction)
3. **Bumper Cards™ Morphogame** (game-based with focus on morphological awareness)
4. **Cayan Edu Morpho Assessment** (online assessment of morphological skills)
5. **Cayan Edu Training** (training and support for kids, parent and teachers)

Supported by a social impact grant from CUHK

We hope to maximize the social impact with these learning tools and tests.

www.cayanedu.com

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THANK YOU

Q & A