

Draw-and-write mapping: Effective way to capture children's natural representations

December 27 2023, by ZHANG Nannan

(a1) Nature in my eyes
我眼中的大自然

Nanping street
avenue
university

This is the scenery of Kunming.

No.0870

(a2) Nature in my eyes
我眼中的大自然

grass
boy & girl
tree
swing
grape trellis

Nature is the home of all things, including human beings. Let's live in harmony.

No.0470

(a3) Nature in my eyes
我眼中的大自然

sky
sun
sunshine
forest
mountains
boat river

Green hills and clear waters, mountains, boat, green grass and trees on both sides.

No.1211

(a4) Nature in my eyes
我眼中的大自然

mountains
water
trees
grass

In my eyes, nature has mountains, water, trees and grass.

No.1325

(b1) 我眼中的大自然

rockery
tree
leaf

Beautiful, vibrant nature.

No.0013

(b2) 我眼中的大自然

apple
tree
cat
grass
flower

There are many animals, plants and insects.

No.0004

(b3) 我眼中的大自然

sun
cloud
tree
flower

Nature is amazing, We should explore it.

No.0327

(b4) 我眼中的大自然

bird
snake
moon
Tin House
dog
crocodile
boar
dragonfly
tree

Nature in my eyes is full of animals and plants.

No.0116

(c1) 我眼中的大自然

我眼中的大自然是一个美丽的环境，空气清新，环境优美，这就是美丽的自然。

Nature in my eyes is a beautiful home, it gives me a beautiful environment and fresh air, this is nature in my eyes.

No.0699

(c2) 我眼中的大自然

No.0903

(c3) 我眼中的大自然

sun
mountains
fish
tree
Canna grass
vines

Green hills and clear waters, the grass is green and the trees are tall.

No.0514

(c4) 我眼中的大自然

Coccinella septempunctata
Lucanidae

No.0042

(d1) 我眼中的大自然

Pollution is serious, and the exhaust gas produced by the factory affects the environment.

No.0190

(d2) 我眼中的大自然

sun
cloud
tree
My house, flowers and trees.

No.0609

(d3) 我眼中的大自然

tree
leaf
tear
good people
sapling
Loggers

Nature is alive, sometimes laughing, sometimes crying.

No.1157

(d4) 我眼中的大自然

The trees are tall and straight, the river is clear, the birds are singing and the flowers are fragrant.

No.1348

(e1) 我眼中的大自然

kite
bear
pig

No.0325

(e2) 我眼中的大自然

Gorilla
bear
giraffe
monkey
rabbit

The animals are having a meeting in the green forest.

No.1859

(e3) 我眼中的大自然

sun
cloud
blue sky
bird
butterfly
tree
house
soil
grass
rabbit

Very beautiful.

No.1917

(e4) 我眼中的大自然

Parashorea cathayensis
Grewia biloba
Site: tropical rainforest

I love this place, I love nature more.

No.0914

Sample of drawings. Credit: YUE Zhihui

Mental representations play a crucial role in shaping attitudes and behavior. Children's representations of 'nature' can be assessed along several dimensions, including aspects such as level of wildness, cognitive complexity, degree of elaboration, emotional expression, and representational style. However, understanding children's representations of nature, especially among preadolescents with limited verbal narrative skills, remains a challenge.

In a study published in [*People and Nature*](#), Prof. Chen Jin and his team from the Xishuangbanna Tropical Botanical Garden (XTBG) of the Chinese Academy of Sciences investigated the multidimensional psychological representations of Chinese adolescents of the natural [environment](#) and explored how they understand and express information about the natural environment through drawing and writing.

Using a draw-and-write task and a questionnaire survey, the researchers had preadolescent children (aged 9-12) draw their perceptions of the natural environment on paper and write down the ideas and feelings associated with them. Specifically, they examined the effects of direct, indirect, and vicarious nature experiences on preadolescent children's representations of nature in China.

First, they firstly found that children's nature drawings not only share similarities, but also show significant variations: their drawings depict a wide range of living and non-living elements, sometimes including humans. The children's natural representation of children also exhibited significant variation in the degree of wildness, cognitive complexity,

level of elaboration, expression of emotion, and style of representation.

They then found that vicarious nature experiences have a significant positive effect on the cognitive complexity, extent of elaboration, and positive [emotional expression](#) in children's drawings, while direct nature experiences also have a weaker but still significant positive effect on the elaboration.

The findings highlight the importance of the surrounding environment and nature experiences, especially vicarious nature experiences, in shaping the preadolescents' representations of nature.

"Our study suggests that the draw-and-write mapping method is a reliable and effective way to capture children's natural representations. Chinese adolescents could clearly express their cognitions and emotions about the natural environment through drawing and writing," said Chen Jin of XTBG.

More information: Zihui Yue et al, Multidimensional mental representations of natural environment among Chinese preadolescents via draw-and-write mapping, *People and Nature* (2023). [DOI: 10.1002/pan3.10577](#)

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