

THE GREENPOP FOUNDATION

# BIOPHILIA ASSESSMENT FOR SCHOOL LEARNERS



Shared as part of the Fynbos Corridor Collaboration - [fynboscorridors.org](http://fynboscorridors.org)  
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## INTRODUCTION

The following assessment has been designed by The Greenpop Foundation for the purpose of determining the psychosocial impacts of urban greening projects conducted at schools in Cape Town. The assessment consists of a 2-part questionnaire which aims to assess learners' contact with nature and their levels of biophilia (love of nature) and biophobia (fear of nature).

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## KEY CONSTRUCTS

1. Children's contact with nature
2. Children's biophilia
3. Children's biophobia
4. Environmental stewardship

## SECTION A: MEASURING CONTACT WITH NATURE

*Operationalisation:* Contact with nature is defined as time spent on interactions with the natural world.

This scale to measure contact with nature was developed in the following way:

1. Students from Mountain Road Primary were asked to describe all of the activities they have experienced with wild plants and animals.
2. From that, we develop a list of 15 most common activities.
3. That list was turned into a set of likert-scale questions which assess how frequently children come into contact with nature.

For example:

"I observe insects pollinating plants."	Often	Sometimes	Never
"I plant veggies, plants, or trees."	Often	Sometimes	Never

## SECTION B: MEASURING BIOPHILIA & BIOPHOBIA

### 1. BIOPHILIA:

*Operationalisation:* Biophilia is defined as a love of, connection to, and respect for nature.

Biophilia is assessed in terms of 3 types of manifestation: behavioural (actions), cognitive (thoughts or beliefs) and affective (feelings).

		Content Areas		
		A. Love	B. Connection	C. Respect
Manifestations	1. Behavioural	A1	B1	C1
	2. Cognitive	A2	B2	C2
	3. Affective	A3	B3	C3

#### QUESTIONS:

##### LOVE - I love nature

- A1: I would donate my money to protect animals. (1)
- A1: I like to watch TV shows about animals. (7)
- A2: I think trees are beautiful. (13)
- A2: I believe that fynbos is special. (19)
- A3: I love plants. (25)
- A3: I love animals. (31)

##### CONNECTION - I am part of nature

- B1: I treat animals as I want to be treated (21)
- B1: I would rather play in nature than play inside (27)
- B2: I think that people are part of nature (15)
- B2: I believe that humans are animals too (33)
- B3: I feel happy when I am with animals (3)
- B3: I feel at home when I am in nature (9)

##### RESPECT - I respect nature

- C1: If I saw someone hurting an animal, I would tell them to stop. (23)
- C1: I would like to work with animals or plants when I grow up. (17)

- C2: I think that people should protect the environment. (5)
- C2: I believe that littering is wrong. (29)
- C3: I feel happy to have a garden at my school. (11)
- C3: I feel grateful for the jobs animals do (35)

**2. BIOPHOBIA:**

*Operationalisation:* Biophobia is defined as a fear of, hatred of, and disconnection with nature.

Biophobia is assessed in terms of 3 types of manifestation: behavioural (actions), cognitive (thoughts or beliefs) and affective (feelings).

		Content Areas		
		D. Fear	E. Hatred	F. Disconnection
Manifestations	1. Behavioural	D1	E1	F1
	2. Cognitive	D2	E2	F2
	3. Affective	D3	E3	F3

**QUESTIONS:**

**FEAR - I fear nature**

- D1: I avoid playing outside. (18)
- D1: When I see a bird, I run away. (24)
- D2: I think all animals are dangerous. (30)
- D2: I believe that spiders want to bite me. (36)
- D3: I am scared of being in a forest. (6)
- D3: I feel afraid when I see a bee. (12)

**HATRED - I hate nature**

- E1: When I find insects in my house, I kill them. (14)
- E1: Sometimes, I hurt animals. (26)
- E2: I think that snakes are evil. (2)
- E2: I don't think people should protect the environment. (8)
- E3: I hate wild animals. (34)
- E3: When I have to be in the garden, I feel angry. (20)

DISCONNECTION - I am separate from nature

F1: I don't really play at the park. (4)

F1: I often throw rubbish on the ground. (10)

F2: I think that people are more important than animals. (22)

F2: I believe that people don't need nature. (28)

F3: I don't really care what happens to wild animals like rhinos. (16)

F3: I don't think plants are useful. (32)

**\*Note: Environmental stewardship is measured through behavioural manifestations of biophilia.**

## SCORING

After administering the questionnaire (following pages), the data should be scored in the following way to transform each answer into a number for each learner:

1. Section A:
  - a. Often = 3
  - b. Sometimes = 2
  - c. Never = 1
2. Section B:
  - a. Odd numbered questions:
    - i. Yes, I agree = 3
    - ii. I'm not sure = 2
    - iii. No, I disagree = 1
  - b. Even numbered questions:
    - i. Yes, I agree = 1
    - ii. I'm not sure = 2
    - iii. No, I disagree = 3

Once you have scored all of your data, add all of the scores for each individual learner together to get a biophilia score for that learner.

Learner scores can then be averaged to get an overall score for your group of learners.

## FREQUENCY OF ADMINISTRATION

This questionnaire should be administered before your project intervention and again afterwards to determine impact. If the project is ongoing, we recommend administering the questionnaire annually.

NAME: \_\_\_\_\_  
GRADE: \_\_\_\_\_

## SECTION A

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How often do you do the following activities? Tick your answers.

	<b>Often</b>	<b>Sometimes</b>	<b>Never</b>
1. Pick flowers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Climb trees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Catch insects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Visit nature reserves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Smell plants & flowers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Grow seeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Plant trees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Watch insects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Play in the garden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Pick wild fruit to eat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Walk in the park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Watch birds & animals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Draw plants & animals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Feed wild animals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Have a picnic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What else do you do outside? \_\_\_\_\_

## SECTION B

For the following statements, please **circle** whether **you agree**, **you're not sure**, or **you disagree**. There are no right or wrong answers, so try to answer honestly.

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1. I would donate my money to protect animals.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

2. I think that snakes are evil.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

3. I feel happy when I am with animals.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

4. I don't really play at the park.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

5. I think that people should protect the environment.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

6. I am scared of being in a forest.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

7. I like to watch TV shows about animals.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

8. I don't think people should protect the environment.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

9. I feel at home when I am in nature.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

10. I often throw rubbish on the ground.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

11. I feel happy to have a garden at my school.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

12. I feel afraid when I see a bee.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

13. I think trees are beautiful.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

14. When I find insects in my house, I kill them.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

15. I think that people are part of nature.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

16. I don't really care what happens to wild animals like rhinos.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

17. I would like to work with animals or plants when I grow up.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

18. I avoid playing outside.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

19. I believe that fynbos is special.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

20. When I have to be in the garden, I feel angry.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

21. I treat animals as I want to be treated.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

22. I think that people are more important than animals.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

23. If I saw someone hurting an animal, I would tell them to stop.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

24. When I see a bird, I run away.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

25. I love plants.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

26. Sometimes, I hurt animals.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

27. I would rather play in nature than play inside.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

28. I believe that people don't need nature.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

29. I believe that littering is wrong.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

30. I think all animals are dangerous.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

31. I love animals.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

32. I don't think plants are useful.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

33. I believe that humans are animals too.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

34. I hate wild animals.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

35. I feel grateful for the jobs animals do.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**

36. I believe that spiders want to bite me.

**Yes, I agree.**

**I'm not sure.**

**No, I disagree.**