

Appendix 1:

Nature Words, Knowledge, and Attitudes

Start of Block: Pre-survey

Q1.1

You are invited to participate in a study on changes in nature vocabulary and attitudes. This survey will take approximately 15 minutes to complete. You will be asked to provide some basic demographic information, answer some identification questions, and reflect on your experiences of and attitudes toward nature.

Your participation is voluntary and your responses will be kept anonymous. You may refuse to take part in the research or exit the survey at any time without penalty, and you are free to decline to answer any particular question you do not wish to answer for any reason.

Submission of the survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

The possible risks or discomforts of this study are negligible. Your participation in this study may help us understand the role of language in our experience of nature. If you have any questions about the research, please contact the Principal Investigator, Margaret Luthin, at margaret.luthin@umontana.edu, or the faculty advisor, Dr. Leora Bar-el, at leora.bar-el@mso.umt.edu. If you have any questions regarding your rights as a research subject, contact the UM Institutional Review Board (IRB) at (406) 243-6672.

By clicking this box, I confirm that I have read the above information and agree to participate in this research project.

End of Block: Pre-survey

Start of Block: Demographics

Q2.1 What year were you born?

Q2.2 What race/ethnicity do you identify as? (Select all that apply.)

Q2.3 Is English your first language?

Q2.4 What gender do you identify as?

Q2.5 Highest level of schooling completed:

Display This Question:

If Highest level of schooling completed: = Some college

Or Highest level of schooling completed: = 2 year degree

Or Highest level of schooling completed: = 4 year degree

Or Highest level of schooling completed: = Professional degree

Or Highest level of schooling completed: = Doctorate

Q2.6 Did you study or attain a degree in an environmentally related field (for example: forestry, agriculture, environmental studies, wildlife biology, botany, climate science)?

Yes (please specify which field:)

No

Q2.7 Are you or have you ever been employed in an environmentally related sector (for example: farming, ranching, forestry, landscaping, gardening, wildlife management)?

Yes

No

Display This Question:

If Are you or have you ever been employed in an environmentally related sector (for example: farming... = Yes

Q2.8 Please provide your occupation and how many years you were/have been employed.

Q2.9 Do you live in Montana?

Yes

No

Display This Question:

If Do you live in Montana? = No

Q2.10 Have you ever lived in Montana?

Yes

No

Display This Question:

If Have you ever lived in Montana? = Yes

Q2.11 During which years did you live in Montana? (Ex: 2000-2008)

Display This Question:

If Do you live in Montana? = Yes

Q2.12 For how many years have you lived in Montana? (Ex: 2005-present)

Q2.13 Are there natural areas or green spaces accessible to you near your home?

Yes

No

Q2.14 How far from your home is the nearest natural area or green space? (Parks, wilderness areas, recreation areas, etc.)

Within a couple blocks

Within a couple miles

More than a couple miles away

Q2.15 What is your 5-digit zip code?

End of Block: Demographics

Start of Block: Naming and Identification

Q3.1

This section contains questions concerning species in your local area. For each question, please list as many as you can think of, separated by commas. If you cannot think of any, write "Don't know".

Q3.2 What kinds of backyard birds do you have around your home?

Q3.3 What different kinds of hawks are found in your area?

Q3.4 What different kinds of evergreen trees grow in your area?

Q3.5 What different kinds of maple trees grow in your area?

Q3.6 What other kinds of trees do you have in your neighborhood?

Q3.7 What kinds of snakes are found in your area?

Q3.8 What kinds of wild berries grow in your area?

Q3.9 What kinds of wild cats are found in your area?

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Q3.10 For the following questions, list as many names as you know. If you do not know the name, write "Don't know."

Q3.11 What do you call the shrubby tree that bears small, sour apples?

Q3.12 What kind of tree produces acorns?

Q3.13 Which conifer turns yellow and sheds its needles in the fall?

Q3.14

Have you ever seen this plant?

Yes

No

Don't know

Display This Question:

If Have you ever seen this plant? = Yes

Q3.15

What name(s) do you use for this plant? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.16

Have you ever seen this plant?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this plant? = Yes

Q3.17 What name(s) do you use for this plant? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.18 Have you ever seen this plant?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this plant? = Yes

Q3.19 What name(s) do you use for this plant? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.20 Have you ever seen this plant?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this plant? = Yes

Q3.21 What name(s) do you use for this plant? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.22 Have you ever seen this bird?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this bird? = Yes

Q3.23 What name(s) do you use for this bird? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.24 Have you ever seen this bird?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this bird? = Yes

Q3.25

What name(s) do you use for this bird? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.26 Have you ever seen this bird?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this bird? = Yes

Q3.27 What name(s) do you use for this bird? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.28 Have you ever seen this tree?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this tree? = Yes

Q3.29 What name(s) do you use for this tree? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.30

Have you ever seen this tree?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this tree? = Yes

Q3.31 What name(s) do you use for this tree? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.32 Have you ever seen this tree?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this tree? = Yes

Q3.33 What name(s) do you use for this tree? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.34 Have you ever seen this mushroom? (It can be large and releases a cloud of spores when mature.)

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this mushroom? (It can be large and releases a cloud of spores when mature.) = Yes

Q3.35 What name(s) do you use for this mushroom? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.36 Have you ever seen this mushroom?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this mushroom? = Yes

Q3.37 What name(s) do you use for this mushroom? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.38 Have you ever seen this?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this? = Yes

Q3.39 What name(s) do you use for this? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.40 Have you ever seen this insect?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this insect? = Yes

Q3.41 What name(s) do you use for this insect? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.42 Have you ever seen this insect?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this insect? = Yes

Q3.43 What name(s) do you use for this insect? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.44 Have you ever seen this animal?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this animal? = Yes

Q3.45 What name(s) do you use for this animal? (List as many as you know. If you do not know the name, write "Don't know.")

Q3.46 Have you ever seen this animal?

- Yes
- No
- Don't know

Display This Question:

If Have you ever seen this animal? = Yes

Q3.47 What name(s) do you use for this animal? (List as many as you know. If you do not know the name, write "Don't know.")

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Q3.48 The following questions will involve audio samples from Montana environments. For this section, please ensure that the volume on your device is on.

Q3.49 Have you ever heard this sound?

- Yes
 - No
 - Don't know
-

Display This Question:

If Have you ever heard this sound? = Yes

Q3.50

What name(s) do you use for the creature that makes this sound? (List as many as you know. If you do not know the name, write "Don't know".)

The recording is repeated below if you need to listen again.

Q3.51 Have you ever heard this sound?

- Yes
 - No
 - Don't know
-

Display This Question:

If Have you ever heard this sound? = Yes

Q3.52

What name(s) do you use for the creature that makes this sound? (List as many as you know. If you do not know the name, write "Don't know".)

The recording is repeated below if you need to listen again.

Q3.53 Have you ever heard this sound?

- Yes
- No
- Don't know

Display This Question:

If Have you ever heard this sound? = Yes

Q3.54 What name(s) do you use for the creature that makes this sound? (List as many as you know. If you do not know the name, write "Don't know".)

The recording is repeated below if you need to listen again.

Q3.55

Have you ever heard this sound?

- Yes
- No
- Don't know

Display This Question:

If Have you ever heard this sound? = Yes

Q3.56

What name(s) do you use for the creature that makes this sound? (List as many as you know. If you do not know the name, write "Don't know".)

The recording is repeated below if you need to listen again.

End of Block: Naming and Identification

Start of Block: Experience

Q4.1 Experiences: The following questions concern your personal interactions with nature throughout your life.

Q4.2 In what setting did you spend the majority of your childhood?

- Urban/suburban
- Small town
- Semi-rural
- Rural

Q4.3 Which type of setting best describes the area around your home now?

- Urban/suburban
- Small town
- Semi-rural
- Rural

Q4.4 As a child, how often did you play outdoors in nature?

- Often
 - Sometimes
 - Rarely
-

Q4.5 How often do you spend time outside in nature nowadays?

- Daily
 - 4-6 times a week
 - 2-3 times a week
 - Once a week
 - Never
-

Q4.6 I am satisfied with the amount of time I spend in nature.

- Strongly agree
 - Somewhat agree
 - Neither agree nor disagree
 - Somewhat disagree
 - Strongly disagree
-

Q4.7 I feel that competing activities, responsibilities, distractions, or other factors affect my time in nature.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Display This Question:

If I feel that competing activities, responsibilities, distractions, or other factors affect my time... = Strongly agree

Or I feel that competing activities, responsibilities, distractions, or other factors affect my time... = Somewhat agree

Q4.8 Which activities, responsibilities, distractions, or other factors detract from your time in nature? Select all that apply.

- Not enough time
- Financial difficulties
- The outdoors is dangerous/scary
- No one to spend time outdoors with
- Computers, phones, and electronic media
- Television and film
- Natural areas are difficult to access
- Health issues
- Other (please specify): _____

Q4.9 When did you gain most of your knowledge about nature?

- During a particular period in my life
- Gradually over time

Display This Question:

If When did you gain most of your knowledge about nature? = During a particular period in my life

Q4.10 During what period of your life did you learn most of your nature knowledge?

- Childhood
- Teenage years
- 20-29
- 30-39
- 40-49
- 50-59
- 60 years or older
- Other (please specify): _____

Q4.11 From which sources or experiences did you gain most of your knowledge about nature?
Select all that apply.

- Parents
- Grandparents
- Siblings
- Other family members
- Friends
- Partner or spouse
- School teachers
- College/higher education
- Summer camp
- Educational nature programs
- Textbooks
- Other books
- Social media
- Film/television
- Other (please specify): _____

End of Block: Experience

Start of Block: Attitudes

Q5.1 Attitudes: The following questions concern your attitudes and beliefs about the environment.

Q5.2 I am interested in the natural environment.

- Strongly agree
 - Somewhat agree
 - Neither agree nor disagree
 - Somewhat disagree
 - Strongly disagree
-

Q5.3

I feel connected to nature.

- Strongly agree
 - Somewhat agree
 - Neither agree nor disagree
 - Somewhat disagree
 - Strongly disagree
-

Q5.4 I consider my relationship with nature a significant part of my identity.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Q5.5 I am concerned about issues such as pollution, environmental degradation, species extinction, and resource depletion.

- Strongly agree
 - Somewhat agree
 - Neither agree nor disagree
 - Somewhat disagree
 - Strongly disagree
-

Q5.6 I am concerned about climate change.

- Strongly agree
 - Somewhat agree
 - Neither agree nor disagree
 - Somewhat disagree
 - Strongly disagree
-

Q5.7 I am likely to endorse pro-environment policies.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Q5.8 I am likely to support funding for nature-based programs.

- Strongly agree
 - Somewhat agree
 - Neither agree nor disagree
 - Somewhat disagree
 - Strongly disagree
-

Q5.9 The ability to identify and name things in nature is important to me.

- Strongly agree
 - Somewhat agree
 - Neither agree nor disagree
 - Somewhat disagree
 - Strongly disagree
-

Q5.10 People older than me are better at identifying and naming things in nature.

- Strongly agree
 - Somewhat agree
 - Neither agree nor disagree
 - Somewhat disagree
 - Strongly disagree
-

Q5.11 People younger than me are better at identifying and naming things in nature.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Page Break

Q5.12 Thank you for your time! If you wish, use this space for any additional comments or feedback you may have.

End of Block: Attitudes
