Supplementary Material

# Model for the item development

The attitude scale covers the *cognitive* (8 items), *affective* (7 items), and *behavioral* (9 items) components of the multi-component model of attitudes (Haddock & Maio, 2014; Konnemann et al., 2012) as well as three species-related dimensions: *naturalistic* (6 items), *negativistic* (6 items), and *ecoscientistic* (12 items; see Supplementary Table 1). The categories of the species-related dimensions were derived from the former model of Kellert (1985) and focus on the same dimensions as Prokop and Tunnicliffe (2010).

**Supplementary Table 1**

*Item examples of the model for item development of students’ attitudes toward insects.*

|  |  |
| --- | --- |
|  | Species-related attitudinal dimensions |
| Naturalistic | Ecoscientistic | Negativistic |
| Multi-component model of attitudes | Cognitive | I can identify many common insects in my environment. | Insects play an important role in mainland ecosystems. | Mosquitoes are completely useless animals. |
| Affective | I enjoy watching bees pollinate. | Learning about insects is exciting. | Insects are disgusting. |
| Behavioral | When I find a ladybird at home, I try to put it outside. | I would also consciously grow plants in my garden that are useful for insects. | If I see insects at home, I kill them. |

# Translation of the German prompt used in ChatGPT for analyzing the frequency of the insect groups in German-language media for children

I created a list of different groups of insects. Please analyze how often these insects appear in German-language media for children (e.g., fairy tales, TV series, films) and rank them accordingly. First name the insect that appears most frequently in children’s media and sort them in descending order. Do not group the insects together.

List of insect groups (for detailed information see Figure 2).

# Results of the frequencies of insect groups determined exploratively by ChatGPT (GPT-4; retrieved: April 17, 2024, 11:41)

List of frequencies identified by ChatGPT in decreasing order:

Ladybug, bee, ant, grasshopper, dragonfly, bug, housefly, moth, cockchafer, hercules beetle, wasp, louse, cockroach, longhorned beetle, praying mantis, flea, stick insect

# References

Haddock, G., & Maio, G. R. (2014). Einstellungen [Attitudes]. In K. Jonas, W. Stroebe, & M. Hewstone (Eds.), *Sozialpsychologie* (pp. 197-229). Springer Berlin Heidelberg. <https://doi.org/10.1007/978-3-642-41091-8_6>

Kellert, S. R. (1985). Attitudes toward animals: Age-related development among children. In M. W. Fox & L. D. Mickley (Eds.), *Advances in Animal Welfare Science 1984* (pp. 43-60). Springer Netherlands. <https://doi.org/10.1007/978-94-009-4998-0_3>

Konnemann, C., Asshoff, R., & Hammann, M. (2012). Einstellungen zur Evolutionstheorie: Theoretische und messtheoretische Klärungen [Attitudes towards evolutionary theory: theoretical and psychometric issues]. *Zeitschrift für Didaktik der Naturwissenschaften*, *18*, 55-79.

Prokop, P., & Tunnicliffe, S. (2010). Effects of having pets at home on children’s attitudes toward popular and unpopular animals. *Anthrozoös*, *23*(1), 21-35. <https://doi.org/10.2752/175303710X12627079939107>