**Supplemental material**

**Appendix S1. Example Items CT-skills Tests***Below, we translated an example item of each task category administered in the critical thinking tests (\* = correct answer) and the explanation. File type: DOC.*

**Learning tasks**

**Conditional syllogism**

Below, you will find two premises that you must assume are true.  
Indicate whether the conclusion follows logically from the given premises.

Premise 1. If citizens are involved in improving the safety of a neighborhood, the number of home burglaries decreases.

Premise 2. The number of home burglaries in the Princenhage district has decreased.

Conclusion: In the Princenhage district, citizens are involved in improving the safety of their neighborhood.

* The conclusion follows logically from the premises
* The conclusion does not follow logically from the premises\*

Explain briefly why you chose this answer:

*Explanation: This assignment requires that participants not confuse logical validity of the conclusion with the believability of the conclusion. The conclusion is (presumably) believable for participants due to their prior knowledge or real-world knowledge. Premise 2 confirms the consequent of the conditional in premise 1. However, this does not necessarily mean that it is caused by the involvement of citizens in improving the safety of the neighborhood. There might be another cause. For more information, see Evans (2003).*

**Categorical syllogism**

Below, you will find two premises that you must assume are true.  
Indicate whether the conclusion follows logically from the given premises.

Premise 1. No safety instrument leads to decrease in incidents.

Premise 2. Some risk inventories and evaluations (RIE’s) lead to a decrease in  
incidents.

Conclusion: Some RIE’s are no safety instruments.

* The conclusion follows logically from the premises\*
* The conclusion does not follow logically from the premises

Explain briefly why you chose this answer:

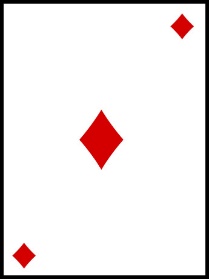
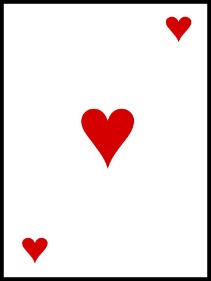
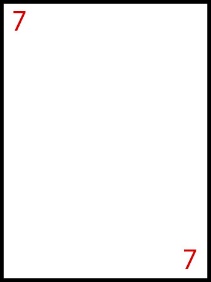
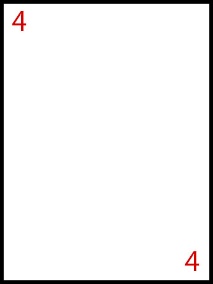
*Explanation: This assignment requires participants not to confuse logical validity of the conclusion with the believability of the conclusion, which probably seems unbelievable due to prior beliefs or real-world knowledge (RIE’s are well-known safety instruments in the domain of Safety and Security). There is no overlap between some RIE’s and a decrease in incidents. For more information, see Evans (2003).*

**Transfer tasks**

**Wason selection task (abstract)**

Each of the four cards below has an image on one side and a number on the other side. The following rule applies to the cards:  
  
*If there is a heart on one side, then there is a 7 on the other side.*

Which card(s) should you turn over to check if the rule is violated? Choose one or more of the options below, but only choose the card(s) that is/are necessary to check if the rule is violated.

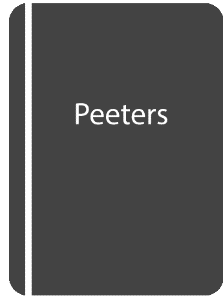
**   **

O O\* O O\*

*Explanation: This assignment requires people to not only seek to confirm the rule but also look for falsification of the rule. By turning over the card with a heart, you can test whether the rule is violated: if there is no 7 on the other side, the rule is violated. The same for turning over the card with a 4: if that card has a heart on the other side, the rule is violated. Because if there is a heart on the one side, there should be a 7 on the other side. People who choose other options than the combination of the card with a heart and the card with a 4, verify rules rather than to falsify them, or demonstrate matching bias by selecting options explicitly mentioned in the conditional statement.* *For more information, see Stanovich (2011).*

**Wason selection task (study-related context)**

Each of the four passports below has a nationality on one side and a surname on the other side. The following rule applies to the passports:   
  
*If the Dutch nationality is on one side of the passport, the surname Janssen is on the other side of the passport.*Which passport(s) should you turn over to check if the rule is true? Choose one or more of the options below, but only choose the passport(s) that is/are necessary to decide whether the rule is true or false.

*   *

O\* O O O\*

*Explanation: This assignment requires that participants not only seek to confirm the rule but also look for falsification of the rule. By turning over the passport with the Dutch nationality on the one side, you can test whether the rule is violated: if the surname Janssen is not on the other side, the rule is violated. The same for turning over the passport with the surname Peeters on the one side: if that passport also has the Dutch nationality, the rule is violated. Because if the Dutch nationality is on the one side, the surname Janssen should be on the other side. People who choose other options than the combination of ‘Dutch’ + ‘Peeters’ probably fail to apply logical principles, verify rules rather than to falsify them, or demonstrate matching bias by selecting options explicitly mentioned in the conditional statement.* *For more information, see Stanovich (2011).*