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SCIBORG:

**The science literacy board
game: a new tool for improving
science literacy with informal
youth education**

Rulebook

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The SCIBORG board game Rulebook, 2024

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Introduction

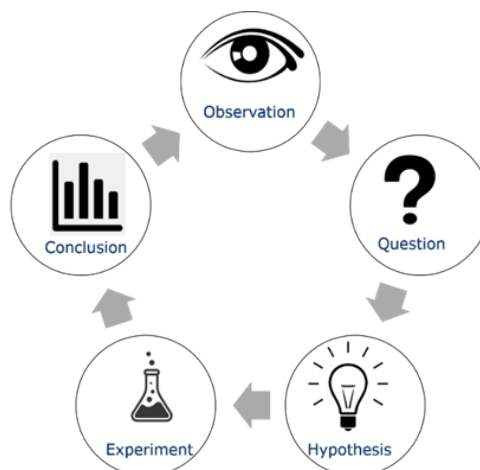


The **SCIBORG project**, co-funded by the **Erasmus+ Programme**, has as a primary objective to enhance the **civic science literacy of young people and youth workers** through the development and implementation of an innovative **board game**.

SCIBORG is a game designed for up to 3-5 players, who take up the roles of researchers and who go through the research method to produce scientific breakthroughs and gain renown.

The game is split into a series of phases. During each phase, the players prepare for the game's challenges or conduct activities and try to base their research on the best available data

The 5 phases of the research process





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The Game in a Nutshell

The game is **played within five Phases**, with the **first two being preparatory Phases** while the **later three being Research** card-drafting Phases.

Phase 1:

Observation - prepare the game

Phase 2:

Question - select bonus cards to determine your research question

Phase 3:

Hypothesis - collect the components of a good hypothesis

Phase 4:

Experiment - collect the components of a good experiment

Phase 5:

Conclusion - collect the components of a good conclusion

During each Research Phase, the players will be given a set of cards. They will continue to Draft them, selecting a card and passing the set to the next player and so on, until all cards have been Drafted.



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Once the Drafting is over, **the players will reveal their selection** of cards and reveal a number of Chance cards where they will gain or lose points. Subsequently, they **proceed to the next round**, where they will again be given a set of cards and Draft.

Once all rounds are over, the players will **calculate the points they have gained** based on their card collection. Each Research Phase has its **own set of symbols** that express the essential components of research at that phase.





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Contents of the game

90 Research cards including:

30 Hypothesis Cards		30 Experiment Cards		30 Conclusion Cards	
Front	Back	Front	Back	Front	Back

21 Chance cards including:

7 Hypothesis Cards		7 Experiment Cards		7 Conclusion Cards	
Front	Back	Front	Back	Front	Back

21 Bonus cards:

Front	Back

6 Character cards:

Front	Back

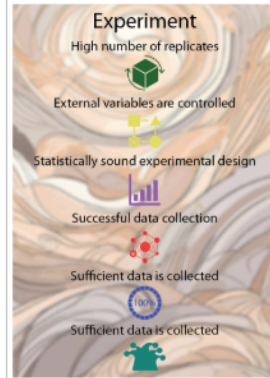
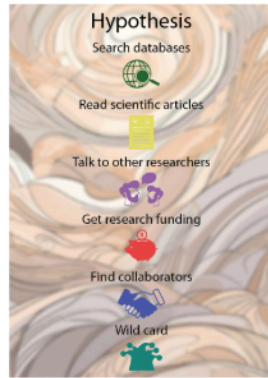
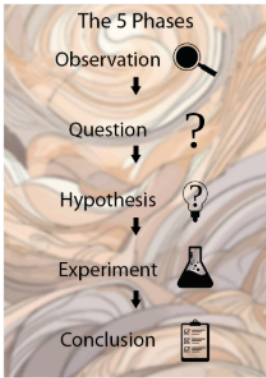


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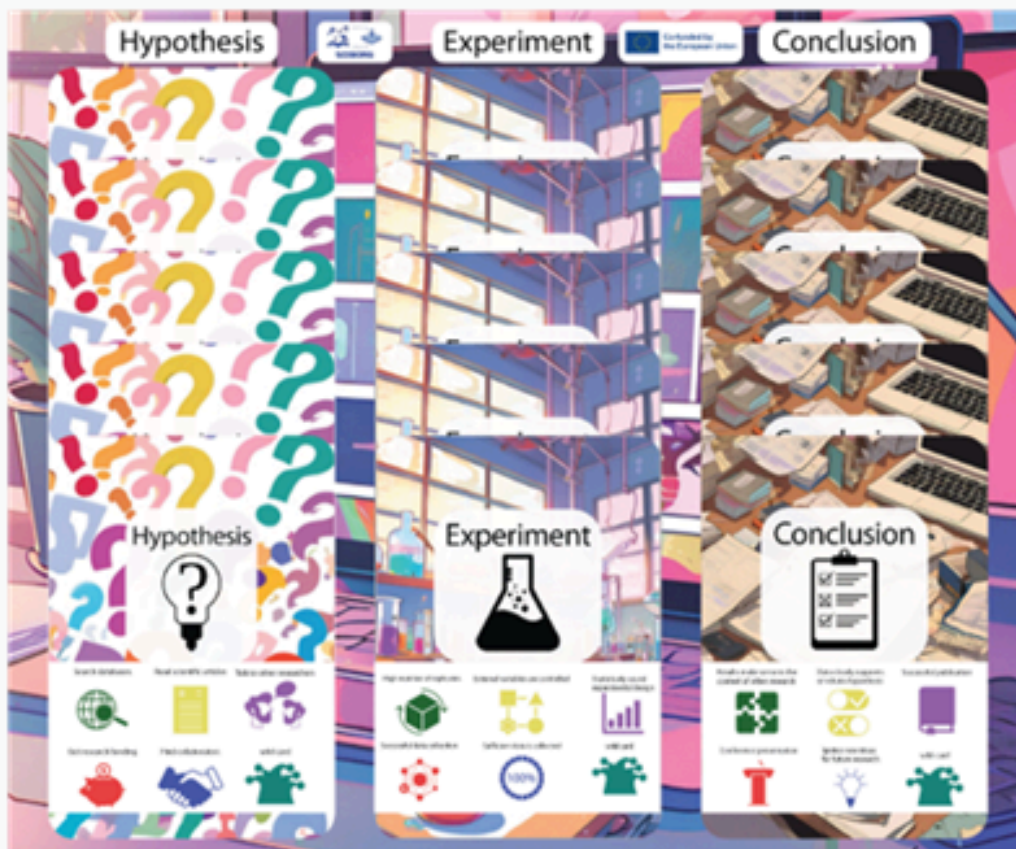


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2 double-sided Player Aid cards per player:



1 Player Board per player:





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Score card:

Player Name	Phase	Link-up	Maxi-Link	Doing the Hard Work	Chance	Story	Field Focus	Step Focus	Bonus	Total
	Hypothesis									
	Experiment									
	Conclusion									
	Hypothesis									
	Experiment									
	Conclusion									
	Hypothesis									
	Experiment									
	Conclusion									
	Hypothesis									
	Experiment									
	Conclusion									

Additional materials: 6-sided die (you can borrow this from another game)

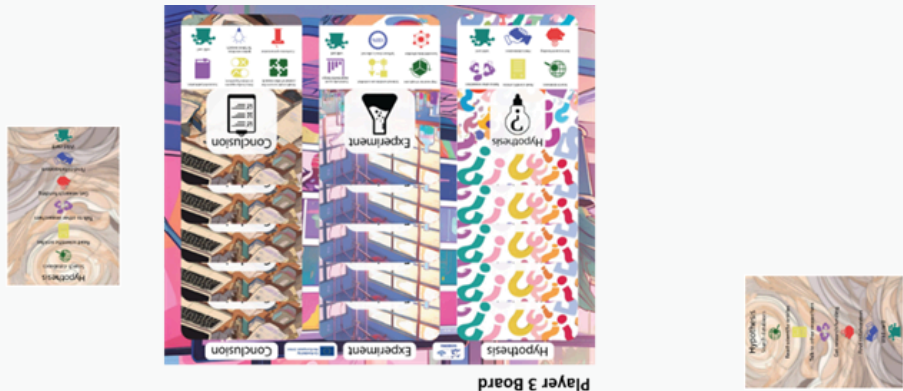


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Phase 1: Observation (Set-up)

During this Phase, deal each Research set of cards into five decks each containing 6 cards, and place them face down in the middle of the table. At this point, you should have 15 decks of 6 cards. Randomly choose a player to be the starting player.



Player 3 Board

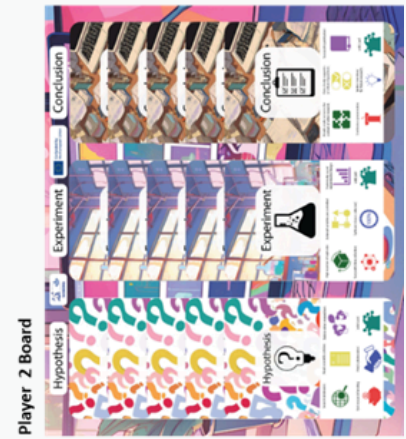


Player 4 Board

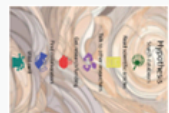


Hypothesis Research cards (separated into 5 piles)

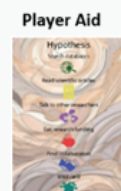
Hypothesis Chance Cards



Player 2 Board



Player 1 Board



Player Aid



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Phase 2: Question (Bonus Card Selection)

Starting with the first and continuing clockwise, each player draws two Bonus cards and chooses one to keep, placing it face-down near their player board; return the other to the bottom of the Bonus deck. Players are allowed to look at their own Bonus cards at any time.

Note on rules: *If playing with the option character cards, players can draw more Bonus cards in order to match the field outlined on their character card.*

Phase 3: Hypothesis

Starting with the first and continuing clockwise, each player selects one **Hypothesis Research deck**. Turn the remaining deck face-down as a discard pile.

Each player looks at their deck and simultaneously selects one card from their deck. They place it face up on their player board at the appropriate Phase slot, and gives the rest to the next player clockwise.

The players then continue picking one card at a time and similarly passing the remaining to the next player until all cards are selected.



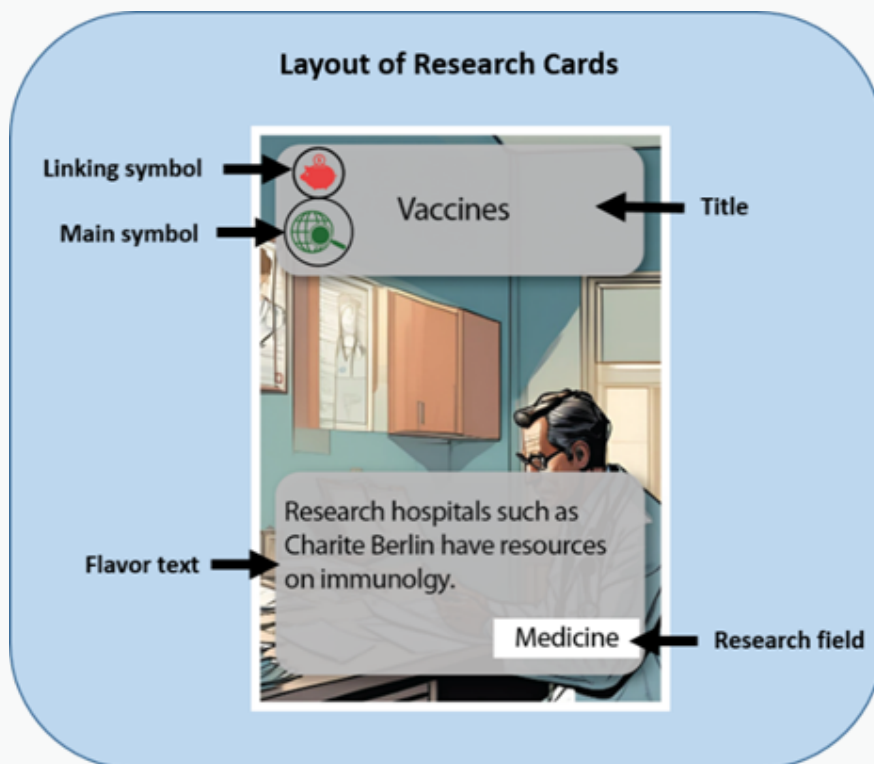
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Finally, each player looks at their 6 cards, chooses one to discard, and rearranges the rest in the order they wish, creating the longest Research Chain (see image on next page) they can, scoring points. Players can have more than one chain.

Once this is concluded, each player reveals a **hypothesis chance card** for themselves and gains or loses points accordingly. Afterwards, the next player clockwise becomes the first player, and the next Phase begins.





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How to make a chain

Linking symbol

Main symbol

Mental Health

Researchers can find plenty of online databases with mental health articles.

Psychology

Use your linking symbol to link to another card's main symbol

Sustainable architecture

Mental Health

Researchers can find plenty of online databases with mental health articles.

Psychology

OR

Use your main symbol to link to another card's linking symbol

Sustainable architecture

Mental Health

Reindeer herding

The EU funds research on minority communities like the Sami.

History

**Note that wildcard symbols can be linked to any other symbol*





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Research Story

After each of the Hypothesis, Experiment, and Conclusion phases, each player presents their Research Process using the cards they played; the story they create can use elements of the **card's symbols, flavor text, title or image.**

They should start with the Starting Research Card and explain how they got to the next card and so on. They can do so for each chain they have. Players can start their story with: **“In order to build my Hypothesis/Experiment/Conclusion, I...”**

A non-playing person should be judging the relevance of the story, and award additional points for: Accuracy, Terminology, Reason, Speed, and Entertainment.

If no non-playing person is present, instead each player who successfully concludes this step gains 3 extra points; the other players vote to determine if the effort was sufficient or the players can vote to pick the best story.



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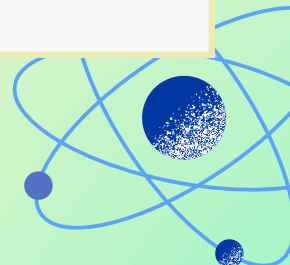
Phase 4: Experiment

Repeat the same procedure as the Hypothesis phase but instead using **the Experiment research cards** and **the Experiment chance cards**.

Phase 5: Conclusion

Repeat the same procedure as the Hypothesis phase but instead using **the Conclusion research cards** and **the Conclusion chance cards**.

Note on rules: *The players will now check and resolve any card Link abilities (if any) and calculate victory points. - this is an alternate rule that can be included if we wish to include universal abilities based on SCIENTIFIC FIELD.*





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Scoring

At the end of each phase, players gain or lose points. Follow the process below:

1. Resolve chance cards

2. Link Up: One point per card in any chain

3. Maxi-Link: Each chain provides the following additional points depending on its length:

- a. 2 cards: 0 points
- b. 3 cards: 2 points
- c. 4 cards: 4 points
- d. 5 cards: 7 points

(**Note:** Each Research Phase provides a maximum of 12 points)

4. Doing the Hard Work: Each player without a Wild Card in their current phase gains 1 extra point

5. Field Focus: Gain 1 point for each card that directly links to another card of the same field

6. Step Focus: Gain 1 point for each different Main symbol on your cards (excluding <wildcard symbol>)

7. Research Story: Choose the one that applies:

a. **With a non-playing judge:**

i. Story: Gain extra points as described in the Research Story section

b. **Without a non-playing judge:**

i. Story: Gain extra points as described in the Research Story section

8. Bonus (calculate for all phases once after the end of Conclusion Phase): The players gain additional points based on their Bonus Cards requirements



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Thank you for exploring the SCIBORG board game! We hope you enjoy diving into the world of science, critical thinking, and discovery through play.

For any further information, feedback, or support, please don't hesitate to reach out to us.

Contact us:



@sciborgproject



SCIBORG is made possible through the collaboration of our dedicated partners:



WasserCluster Lunz (Austria) – Scientific Partner



Dracon Rules Design Studio (Greece) – Game Design Partner



Asociatia Share Education (Romania) – Educational Partner

Project coordinator



Project partners:



Project conducted in cooperation with the
“Interdisciplinary network for Science Education Lower Austria (INSE)”

