**RULES**

**The Women in Science and Engineering Starter Deck**

Although patriarchy’s stranglehold on science and engineering is evolving, it still causes significant hurdles for scientists and engineers worldwide. You have the chance to support groundbreaking women in science and technology by securing resources for their careers. Advance science by completing as many careers as possible!

**Objective**

The objective of the game is to obtain as many points as possible. The player with the most points at the end of the game is the winner. Points are gained by completing Scientist/Engineer Cards. In order to complete a Scientist/Engineer Card, the combination of Resource Cards must be collected. Points from any incomplete Scientist/Engineer Card is subtracted from your total score at the end of the game.

*Note that this deck also has a few blank cards for you to create and add your own DIY Scientist Card and your own DIY Modifier Card. If you tweet or Instagram these DIY cards with the hashtag WISEDeck, we’ll take a look in case there are future expansion decks!*

**The Deck**

This deck contains a total of 74 cards which includes 21 Scientist/Engineer Cards, 77 Resource Cards, and 22 Modifier Cards. This game is best played with 3 to 5 players, but can be played with 2.

Length of playing time is approximately 30 to 45 minutes but this can be easily adjusted by lowering the number of Scientist/Engineer cards used (see below).

**Scientist/Engineer Cards:**

Players obtain points upon completion of Scientist/Engineer Cards. Each of these cards requires a specific combination of Resource Cards which must be assigned to the scientist/engineer in order to be completed. Usually, the number of Resource Cards required to complete a project is the number of points collected by the player upon completion. At the end of the game, incomplete Scientist/Engineer Cards result in negative points equal to the point value of the card.

*Note that some of the scientists/engineers are women of colour (WOC) and therefore may have additional obstacles in game. Because of this, their cards may be more difficult to complete and are consequently worth an extra point.*

**Modifier Cards:**

These cards generally reflect issues related to gender equity and have effects (explained in the card text) that can impede or help a player complete their Scientist/Engineer cards. Note that some Modifier Cards are specifically aimed at women of colour scientists/engineers (WOC).

**Set Up**

**The Playing Field**

There are 4 main card “piles” in the game.

1. Resource Card pile – contains the shuffled Resource Cards face down.
2. Scientist/Engineer Card pile – contains the Scientist/Engineer Cards face down.
3. Discard pile – contains discarded cards face up (at the beginning, this will be empty).
4. Burn pile – (also empty at the beginning) contains face down Discipline and Achievement Cards that were used to complete Scientist/Engineer Cards as well as used Modifier Cards.

Once the Resource Card pile is completely used up, the Burn pile and Discard pile (minus the top card) are combined, shuffled and used to replenish the new Resource Card pile.

**Playing**

Each player starts with a hand of two Resource Cards, and one Scientist/Engineer Card. If you pick up a Modifier Card at the beginning, return it to the middle of the Resource pile - unfortunately, this also means you will be starting with a smaller hand. Each turn consists of three basic phases: A draw phase, an action phase and a phase.

1. **Draw:** At the start of their turn (youngest player goes first), the player draws two cards, in any combination, from the Scientist/Engineer Card pile, the Resource Card pile or the Discard pile (ie. 2 cards from the Resource Card pile or 1 card each from the Scientist/Engineer Card pile and Resource Card pile).

2. **Action:** The player can now choose to do as many of the following actions during their turn.

   a. **Start and/or work on a scientist/engineer.** To start a scientist/engineer, place a Scientist/Engineer Card face up in front of you. By doing this, you commit to finishing the card. If you do not finish it, you will be deducted the point value of the project at the end of the game. There is no limit to the number of projects you can work on at the same time. Finishing a scientist/engineer card involves placing a required resource card from your hand beside the scientist/engineer card on the playing field.

   b. **Complete a scientist/engineer.** A scientist/engineer is completed when you have acquired all the Resource Cards needed for the project and placed them beside the Scientist/Engineer Card.

3. **Discard:** Each player discards one Resource Card and modifier card. If you have no active Scientist/Engineer Cards (completed Scientist/Engineer Cards do not count), you must discard your entire hand. Note that Scientist/Engineer Cards can only be discarded.

**Ending the Game**

When the last Scientist/Engineer Card* is drawn from the Scientist/Engineer pile, the next player to complete a Scientist/Engineer Card ends the game. After this player finishes a Scientist/Engineer Card, all players get one more turn before the game ends. Then, players tally up all their points: positive points for completed Scientist/Engineer Cards and negative points for unfinished Scientist/Engineer Cards left on the field. The player with the most points wins the game.

For example: Dave completed a 4-point card, a 2-point card, and has an unfinished 3-point card. He gets 4 + 2 + 3 = 9 points at the end of the game.

*Note that you can play with fewer Scientist/Engineer Cards to start. This can be done to adjust the total playing time.*

**Credits**

**Game Design Team:** Kathryn Turner, Kashifa Hafeez, Maami Ishida, and Lisa Ying. With thanks to Sidney Ang, Genevieve Ledoux-Robert, Lu Li, David Ng, and Sam McKinnon.


Special thanks to Kathryn Clancy, Carrie Jenkins, Marie-Claire Shanahan.

This project was funded as part of the WWEST Partners Program, running under the 2010-2015 NSERC Chair for Women in Science and Engineering, BC/Yukon Region, Dr. Elizabeth Croft at the University of British Columbia; and by the Michael Smith Laboratories, UBC.

**For more information about WWEST, please visit http://wwest.ca**

**For more information about the PHYLO card game, please visit http://phylogame.org**