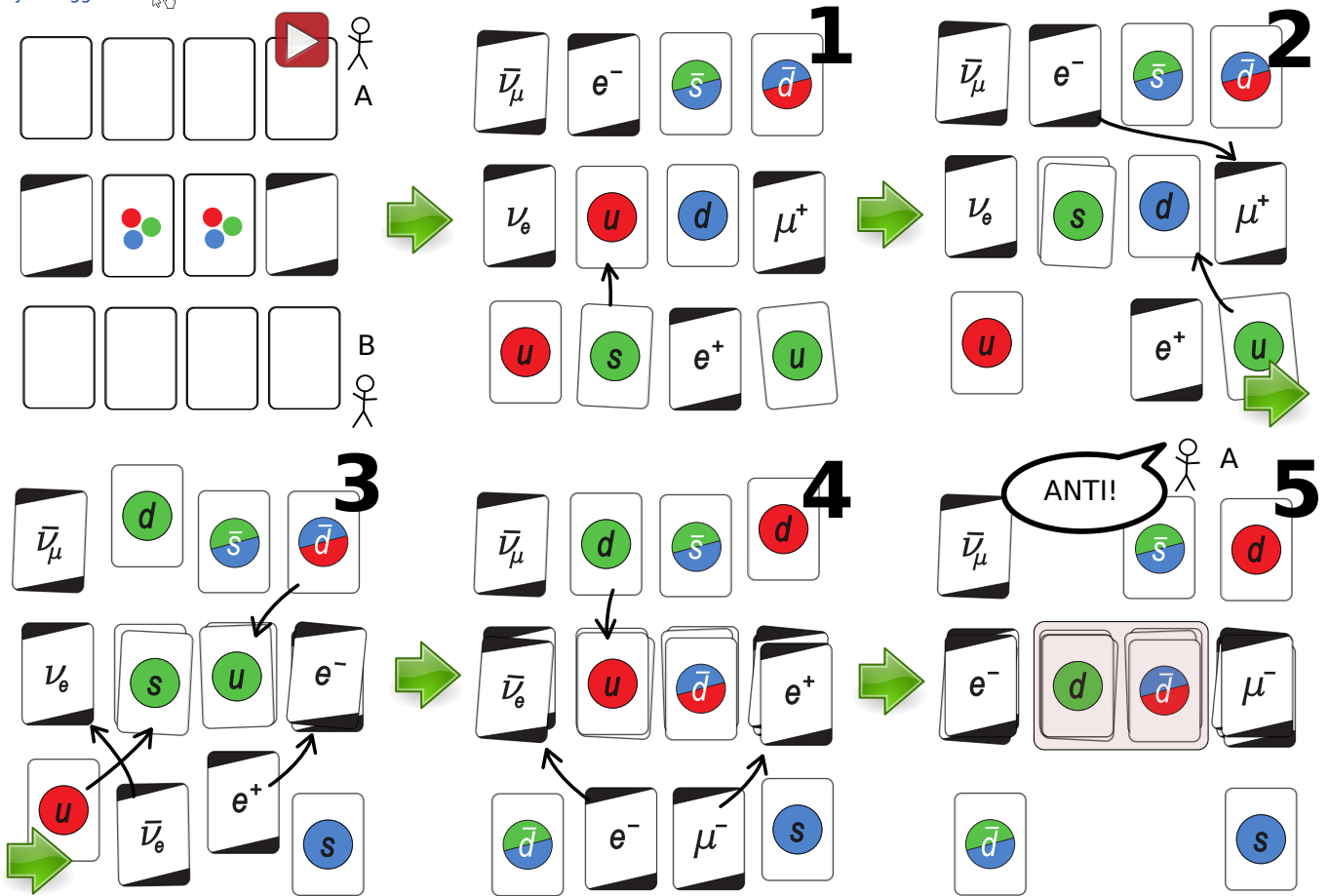
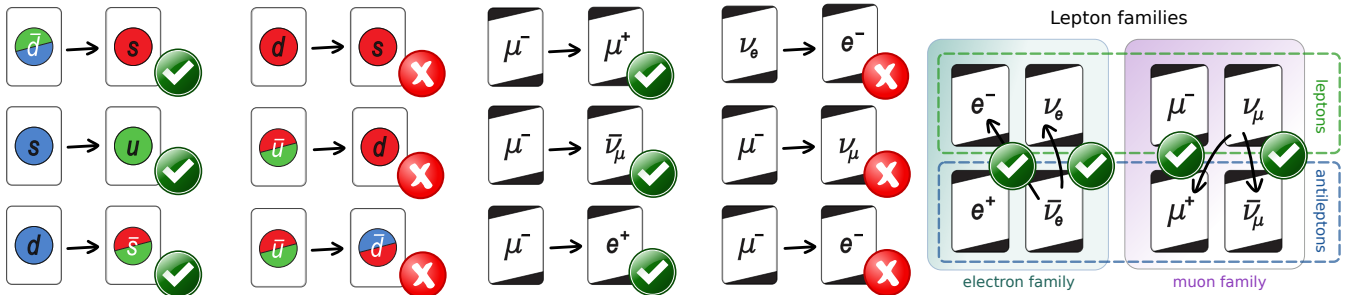


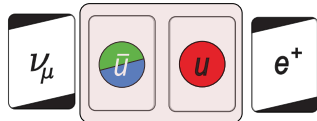
Game 4: ANTI



Rules of packing

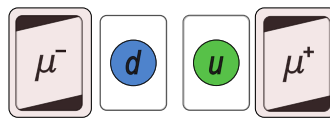


ANTI position #1



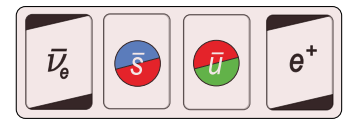
quark-antiquark pair in the middle of the common row

ANTI position #2



lepton-antilepton pair at the sides of the common row

ANTI position #3



all particles are antiparticles in the common row

ANTI

Number of players: 2.



Object of the game: to quickly get rid of the cards.

Course of the game: After shuffling the cards, both players get about half of the deck (so they get about 30-36 cards). The players are not allowed to see these cards, they keep them in a face down position in their hands. The game starts with preparing a common row in the middle of the table, which consists of 4 cards: 2 colored cards in the center (quarks/antiquarks) and 1-1 black and white cards to the sides (leptons/antileptons). Then both players place 4 cards face up in front of them, both creating their own row. The goal is to put these cards to the middle row, according to the rules of packing. There isn't any predetermined sequential order between the players, so one can put cards in rapid succession. That means that the quicker of the players

can use the opportunity better. During the game, players can quickly fill their own rows up to 4 from the cards they got at the beginning. The winner is, who can get rid of his/her cards first.

However, on certain constellation of cards in the middle row, a player can say ANTI, and then the opponent has to take up all the cards from the middle, common row. There are 3 kinds of ANTI positions:

- 1) There is a quark-antiquark pair in the middle ($u\bar{u}$, $d\bar{d}$, $s\bar{s}$ with appropriate colors and anti-colors - all the three colors are visible);
- 2) There is a lepton- antilepton pair at the sides of the common row;
- 3) All the four particles in the common row are antiparticles.

The rules of packing: quarks/antiquarks can be placed to another quark/antiquark if the two cards do not have any common color. On the sides: a lepton (antilepton) can be placed to an antilepton (lepton) if they are in the same family, or if they have opposite electric charge.