

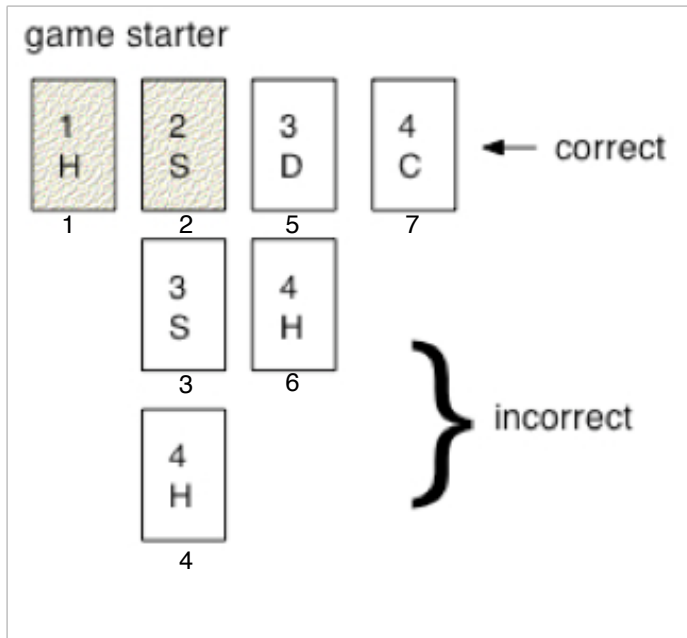
## Eleusis Session

### Explanatory Message to teams:

1. Eleusis is a game that simulates the steps scientists use to test scientific conjectures. (*Romesburg, H. C., 1979. Simulating Scientific Inquiry with the Card Game Eleusis. Science Education 63(5): 599-608*)
2. It is played in teams, usually of 4 or 5.
3. In Eleusis, conjectures should help discover an unknown 'rule' governing patterns {color, number, suit} in ordinary playing cards.
4. Each group selects a leader, who has been given (by the teacher) the hidden rule on small strip of paper, and is able to tell others whether a card they just played follows the rule.
5. In Eleusis the act of 'playing a card' is analogous to running a scientific experiment.
6. Reason for selecting a particular card to play should reflect a non-random thought process openly engaged in by all team members to test their conjecture about what the unknown rule is or might be.
7. Cards played can be rooted in traditional inference strategies, e.g., corroboration or falsification, or another 'strategy' of player's choice.
8. After each card is played ("experiment is run") the leader will tell the team "Your card follows the rule", or "Your card does NOT follow the rule", and the card will be positioned on the table to show the determination (Yes or No)
9. Normally several cards must be played before a team will claim to have successfully identified the unknown rule.
10. Once a team feels they have discovered the rule, they can stop the game and "declare successful discovery". If they have, indeed, discovered the rule, the team leader should record the cards played and their position on the table.
11. If their announced rule is incorrect, that team must stop trying to discover that rule and proceed to the next rule – with a different leader. The new leader gets a new slip of paper from the Professor stating the new rule and the starting 2 cards. The number of cards played will be added to the total cards played for 5 rules, but the number of rules discovered will not be incremented (so the "mean cards played per rule discovered" will be increased).
12. Time permitting, discovery of 4 or 5 rules (of increasing complexity) will be attempted.

### Eleusis mechanics:

1. The game is begun by the Professor giving each team leader a slip of paper containing the rule, and the first 2 cards. The leader of each team finds two cards that follow the rule from the 3 decks each team has been given, and places them side by side on the table
2. The team is invited to play another card that follows their conjectured rule. If a card played actually does follow the rule, it is placed beside the other two cards (see below).
3. If the resulting card played does NOT follow the rule, it is placed in a row below the line of correct cards.
4. A team with all successful confirmations would have but one line of cards.
5. Normally a team would need to play at least card, perhaps the last, to try to falsify the rule. This card would be placed below the line, similar to a failed confirmation.



*[unknown rule is: increase number by 1 and alternate suit colors.]*

Player materials:

1. Overall list of rules to hand out to players
2. 3 decks of playing cards to each team (52 cards per deck)

Getting started:

1. divide into about 7 teams of 4 players (3 players and 1 leader/administrator)
2. spread yourself at tables around the room
3. select one person from each team to be the Administrator – change Administrators as each rule is declared “found”.

Professor’s materials:

1. list of 5 different rules to be ‘discovered’ (time permitting) – increasing in complexity?
2. scoring sheet (each team leader is requested to prepare a ‘map’ of all cards played for later analysis).
3. The “map” should include:
  - a. card suit (Hearts, Diamonds, Clubs, Spades) and number/character (1,...10,Jack,Queen,King,Ace),
  - b. order in which card was played (1<sup>st</sup>, 2<sup>nd</sup>, .... 10<sup>th</sup>,...),

Analysis of records:

- a) After each rule is discovered, summarize your tally
- b) number of “correct” cards (that follow the unknown rule)
- c) number of “incorrect” cards (that do not follow the rule)
- d) team leader should record: b) + c) for each rule, and a total for team for all rules.
- e) team that is first to discover all 5 rules is ‘superior’ – in case more than one team identifies all 5 rules, the team that played the fewest cards is declared the “best”.