**Version 1.3 last updated by S Zhang Dec. 31, 2022**

**Rules to play:**

1. Starter deck contains 6 cards. If players have more than 6 cards, they can freely assemble a deck of up to 12 cards. However, **they cannot add or remove cards to the deck during a game.**
2. **Each ROUND of the game has 3 TURNS**.
3. **Each game has 3 ROUNDS**.
4. Each TURN gets 10 energy points that you can spend. To play a card, you must spend the number of energy points written on the card.
5. Players can play up to 2 cards per TURN, so long as the total energy points the cards cost is less or equal than the energy points you have available. You cannot reuse these cards during this ROUND. After each ROUND, all cards get returned to the deck for reshuffling.
6. To play the card(s), each player places the chosen card(s) in front of them face down. For each TURN, both players turn over the cards at the same time.
7. Place the card to the side when done with the TURN.
8. You can only use a card once per ROUND.
9. Left over points from each TURN can be used for the next TURN of the same ROUND. E.g. if during this turn you only played 1 card that costs 5 energy points, you can save these 5 points for the next turn, when you’ll have 15 (5 points from the last turn + 10 new points from this turn) points to spend.
10. Each ROUND the player with the most attack points win. See example of game play.
11. **Win 2 of 3 ROUNDS to win the game.**
12. *Special attacks:* certain attacks are only usable if the card is played with another card in a specific category. In order for the special attack to take effect, the player playing the cards must provide a reasonable explanation of why the card belongs to that category.

**Example of game play:**

1. Round 1, turn #1, each of the two players receives 10 energy points.
2. Player A uses 8 of their 10 energy points to play 2 cards. Based on the damage points written on the cards, player A has 7 attack points (i.e. cause 7 points of damage to player B).
3. Player B uses all 10 of their energy points to play 2 cards and has 10 attack points.
4. At the end of turn #1, player A has 2 energy points left, player B has 0. Player B is at an advantage by 3 attack points. Player B wins round 1.
5. Round 1, turn #2, each player receives 10 energy points. Player A now has 10 + 2 = 12 points. Player B has 10.
6. Player A uses all 12 points and played 15 attack points this turn.
7. Player B uses 9 points and played 9 attack points this turn.
8. At the end of turn #2, player A has 0 energy points left, player B has 1 point left. Player A has played a total of 7 + 15 = 21 attack points. Player B has played 10 + 9 = 19 attack points.
9. At the end of player #2 player A is now at an advantage by 2 attack points.
10. Round 1, turn #3 (last turn), each player receives 10 energy points. Player A now has 10 energy points. Player B has 1 + 10 = 11 points.
11. Player A uses 9 energy points and plays 10 attack points. Player B uses 9 energy points and plays 9 attack points.
12. This is the end of round 1. Player A has played a total of 7 + 15 + 10 = 31 attack points. Player B has played a total of 10 + 9 + 9 = 28 attack points.
13. Player A wins by an advantage of 3 attack points.

**Notes for instructors:**

*There are 2 opportunities for learning / extra credit using this game*

1. Card design: Have the students create their own cards using the template to reinforce the knowledge about the definition of the vocabulary of interest and encourage engagement. Extra credit can be given for card design submitted. Further extra credit can be rewarded for “most educational”, “best design” etc. depending on the average class grade, class size, and instructor preference. (Recommendation: create a list of key terms for students to sign up for to avoid excessive duplication of vocabulary during card creation.)

This game can be easily adapted to other disciplines as well. The only adjustment needed is for the category colors.

1. Gaming tournament: instructors can set up gaming tournaments within the class that can take place either during class time, office hours, review sessions, or entirely outside of class time. Games can help repeatedly expose students to the definition of a collection of terms and encourage students to engage with class material for fun on their own time. Instructors can choose to reward tournament champions with either points, revealing 1 question from the up coming exam, etc.

For review time, if the cards are relevant to the material of the exam, the instructor can grant extra bonus moves, e.g. playing this card at this time will cost 1 less energy point, or the attack power will increase by 2 points. However, the two players must both agree that this card is relevant for this bonus to take effect.

*Assessment of effectiveness*

If the instructor has created a list of vocabulary terms for student sign up, an assessment exam (emphasize to students that the score for this exam will NOT count toward their overall grade) can be given at the start of the term to determine basal level of knowledge for the class. The exact same exam (again, emphasize to students that the score for this exam will NOT count toward their overall grade) can then be given immediately prior to the final exam, followed by a short survey on whether or not the student created a card, participated in a tournament (if yes, how many games have they played), if they found the exercise educational / engaging).