

Elements of Fun: A review of Chemistry Fluxx

Looking for a game to help with your science homework? Chemistry Fluxx can help... Or can it?




 2-6 players	 Ages 8+	 5-30 mins
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Table 1: Game Information taken from box.



Figure 1: The game box and components

Chemistry Fluxx is a chemistry-themed version of the fast-paced rule-changing game Fluxx, designed by Andrew Looney and published by Looney Labs in 2017. The “perfect” game for casual gamers and dedicated scientists alike, it aims to combine a fun, chaotic card game with the structured rules of Chemistry. While the game introduces chemistry concepts in an accessible way, it lacks depth when it comes to actual educational value. The scientific theme is present, but does it actually work as an educational tool? This question is what I will be exploring in my review, as I believe this game has potential as both a fun and serious game, if it were given a few tweaks.

The concept of Fluxx is simple: you begin by drawing and playing one card per turn, until someone plays a ‘New Rule’ card, which switches things up a bit. Not only do the

base draw and play rules change, but the win condition changes with each new ‘Goal’ card that is played, and your hand can change dramatically before you even play your first card.

The aim of the game is to play the correct ‘Keeper’ cards in front of you to match those shown on the ‘Goal’ card that is currently in play. However, with how rapidly the game changes, you can go from being one step away from the ‘Goal’ to back at the start. The addition of ‘Action’ cards introduces yet another layer of unpredictability, with some resetting all the rules back to basics, and others shuffling the ‘Keeper’ cards each player has in front of them. The high level of output randomness in this game means no two games are alike.

In general, one of the strengths of the Fluxx series is their accessibility. With rules that start as simply as ‘draw one, play one,’ there is little explanation needed for new players. Even as the game progresses and gets increasingly more chaotic, it happens gradually so players are not bombarded with new information. The frequent changes keep players on their toes, however, so the simplicity does not come across as boring. The accessibility also comes across in the Chemistry theming – the concepts introduced on the cards are not overly complex and can provide a fun introduction as to how everyday materials relate to the Periodic Table.

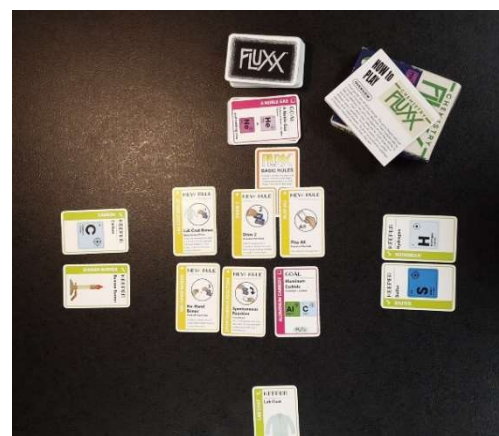
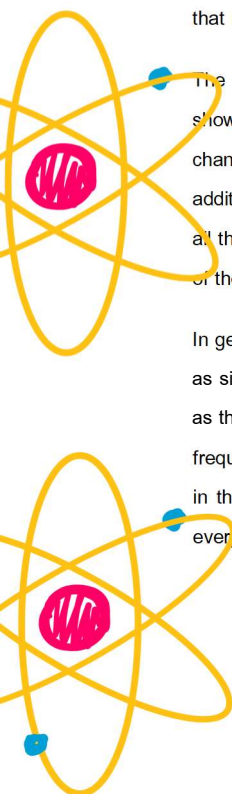


Figure 2: An example of the table mid-game



There are downsides to such a chaotic game, however – some people may prefer a game that allows for strategy and would find the constant and sudden evolution of the rules frustrating. Because of the high output randomness, victory often depends on luck - whoever draws the right card at the right moment wins. Unlike games where players can plan several turns ahead, strategy in Chemistry Fluxx is more about adapting to sudden changes rather than long-term planning - similar to other luck-based party games like Uno or Exploding Kittens.

Visually, the game is engaging, utilizing bright colours to not only distinguish between card types, but also to distinguish between elements on 'Keeper' and 'Goal' cards. This is useful, as at a glance it can be hard to tell what an element is based solely on the chemical symbol (e.g. H for Hydrogen), and it can be helpful to match a colour instead (e.g. Light blue for Hydrogen). This can make matching 'Keepers' to 'Goals' much easier and quicker.

Fun rating:



In order to understand how this game could be used as an educational tool, we should first see how it compares to the definition of a 'serious game', as coined by Clark Abt: "these games have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement."¹ Despite its scientific

theming, Chemistry Fluxx is fundamentally a party game—not an educational one. A true educational game is designed with learning objectives in mind, where the mechanics reinforce the subject matter². Chemistry Fluxx does the opposite—the game mechanics came first,

and the chemistry theming was layered on afterwards. In my experience, only one card in the entire deck actually requires chemistry knowledge. The rest simply display chemical symbols and formulae without asking players to engage with them. The card in question is "Compound It!" where a player can name a viable compound that can be made from the 'Keepers' on the table in order to draw two cards.

The lack of strategy necessary in this game can also be seen as a downside when aiming for an educational game. Strategy can be seen as a way to understand the educational content at a deeper level,³ as knowledge of the subject is required to choose the best course of action in context. For a game like Chemistry Fluxx, there is little to be done about the output randomness and inability to strategize, however the educational nature could be enhanced relatively easily, taking it from a game where you simply remember chemical facts, to one where you can understand and even apply this knowledge.

My suggestions to encourage higher-order thinking and improve the game:

- Include facts about the reactions that take place on 'Goal' cards. This would be an easy way to improve fact recall and create a deeper understanding of why reactions take place.

- Create a set of rules for use in classrooms. By getting students to answer questions to activate cards – e.g. explain the bonding between two molecules or balance an equation to pick up a card– you introduce a deeper understanding and an opportunity for students to apply their knowledge.
- Have more cards that rely on chemical knowledge. Similar to implementing a set of classroom-specific rules, making the 'New Rules' and 'Actions' more scientific would allow people to test their knowledge even further.

Educational rating:



Overall, I think that Chemistry Fluxx is a fun and engaging game, though it falls short when trying to be educational. The gameplay itself is exciting and fast-paced, even if the randomness means that certain 'New Rule' combinations make the game drag on a little. From an educational perspective, however, it is lacking and could easily be improved to make the perfect chemistry classroom game. In its current

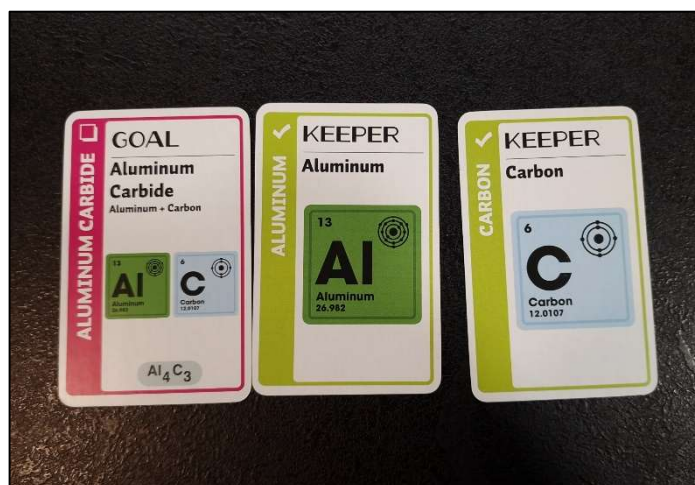
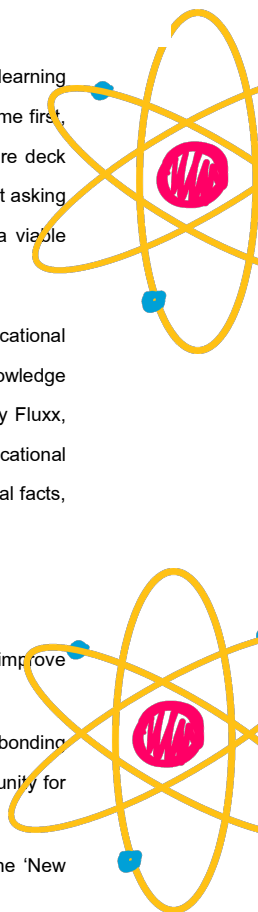
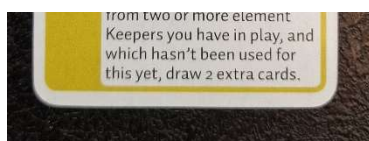


Figure 3: Examples of 'Goals' and 'Keepers'



Figure 4: The 'Compound It!' Card



form, Chemistry Fluxx serves as a light-hearted introduction to chemistry, but it lacks the depth for serious learning; with a few modifications, it could be a much stronger educational tool.

Overall rating:



References:

- 1 D. Djaouti, J. Alvarez, J.-P. Jessel and O. Rampoux, in *Serious Games and Edutainment Applications*, Springer London, London, 2011, pp. 25–43.
- 2 J. L. Plass, B. D. Homer and C. K. Kinzer, *Educ Psychol*, 2015, **50**, 258–283.
- 3 K. Burgun, Randomness and Game Design.

