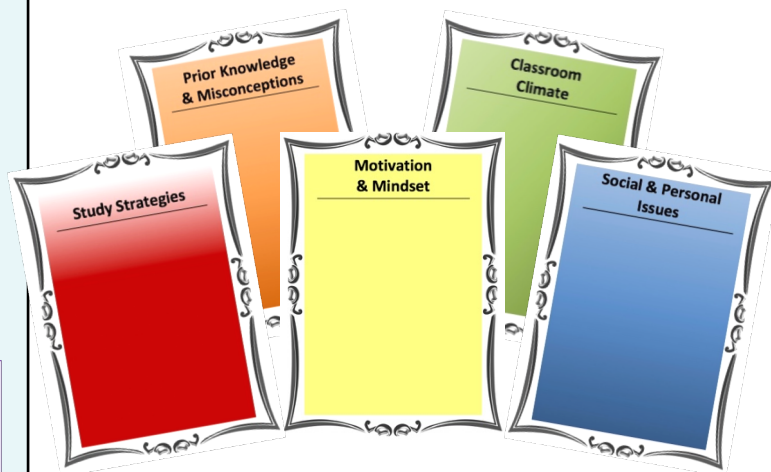
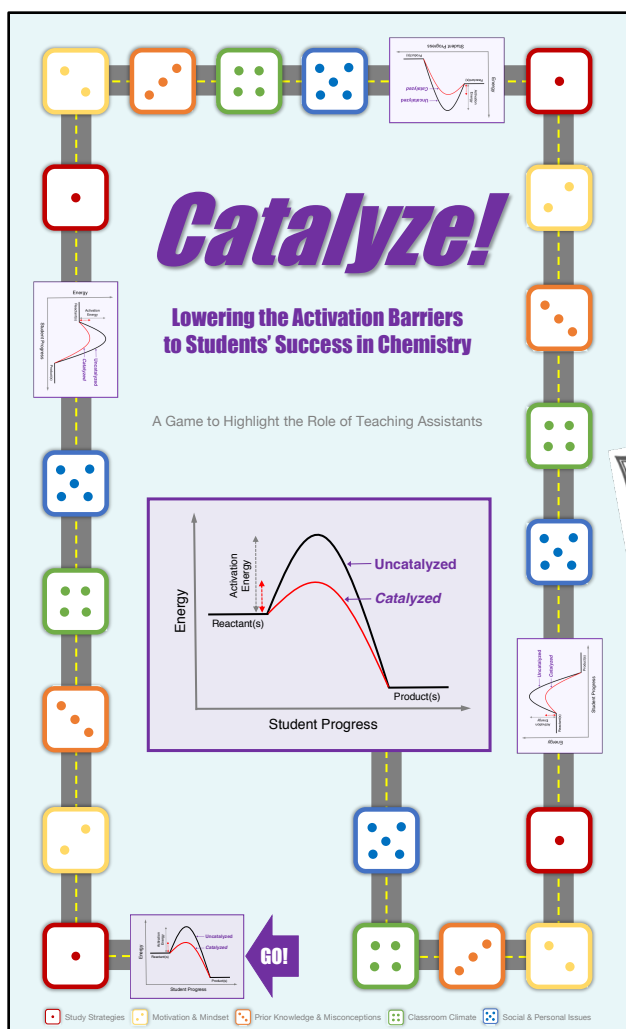


Catalyze!

A Game for Teaching Assistants: Agents of Change in Undergraduate Education

Catalyze! is a fun and engaging board game for teaching assistants (TAs) in the chemical sciences that aims to highlight the ways in which you can help your undergraduate students realize their academic potential. Students face a myriad of potential barriers to learning and development – from ineffective study strategies, to incomplete prior knowledge and misconceptions, low motivation and fixed mindsets, negative classroom climates, and difficult personal and social situations. In your dual role of educator and learner, you can draw on your experiences and skills to consider the ways in which you might *catalyze* your student's success in chemistry.



Materials required: 1 game board, 1 colored die, 2 game pieces, >50 game cards, notepads/pencils, timing device

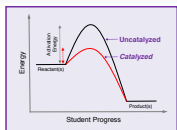
Players: 4(+)

Setup Time: < 2 minutes

Playing Time: 30 minutes - 1 hour

Catalyze! Game Instructions

Game Objective



Two teams of TAs (2-3 players each is optimal) engage in a contest of professional teaching competencies as they collaborate on how best to shape effective learning environments for their students in various undergraduate chemistry courses. The object is to move around the game board's circuit, which is comprised of regularly repeating squares of different colors that correspond to *five categories* of teaching and learning scenarios: 1. study strategies; 2. motivation and mindset; 3. prior knowledge and misconceptions; 4. classroom climate; and 5. social and personal issues. The purple 'Catalyze' spaces, which appear at every sixth position, offer a choice of question category. **The first team to successfully complete a final scenario in 'Catalyze! Central' wins the game!**

Setup

Arrange the game board with the colored die, timer, and five different scenario card stacks, questions side up, beside it. Provide each team with a game token, pencils/pens, and notepad. Players on the same team should sit near one another to facilitate discussion.

Rules of Play

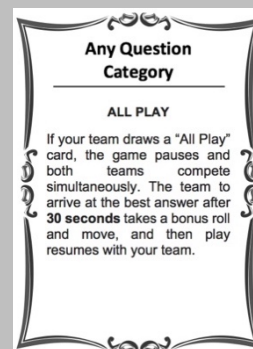
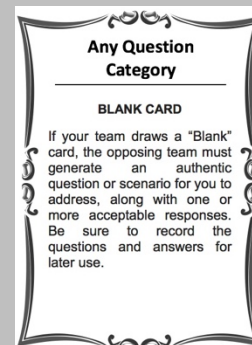
- 1 To begin, each team places their game token on the **Catalyze!** space adjacent to *Go!*
- 2 The team whose member has the most students in their lab or discussion section takes the first turn.

On Your Turn:

- 3 Your team has one chance to respond to a scenario card and advance along the circuit.
 - If your token is on a purple **Catalyze!** space located on the periphery (including at the beginning of the game), you can choose from any one of the five question categories.
 - If your token is on one of the colored spaces, you must address a scenario from that card category.

In either case, the opposing team draws the top card from the deck of the specified category and reads aloud the scenario that appears on the front of the card. [Interspersed in the five card decks are two other types of cards, as described in the adjacent box insert.] Your team has **1 minute** to discuss the scenario and present a response to the opposing team, who will judge its merits and offer effective feedback. Featured on each card's reverse side are recommended answers and supporting explanations; however, valid responses may be less detailed and/or include other solutions not listed. *All players are encouraged to exercise creativity and care when formulating an answer, and fairness and reason when assessing other's answers.*

- 4 Was your team successful?
 - **YES!** If the opposing team finds your answer to be satisfactory: Roll the colored die, move your token to the next space indicated by the die – OR to the next purple **Catalyze!** square, whichever appears first along the circuit* – and wait for your next turn. ***If playing the abridged version of the game, disregard this rule and only stop at the Catalyze! spaces when you roll a six.**
 - **NO!** If the opposing team finds your answer to be unsatisfactory OR your team provided an answer without discussion amongst all team members OR your team did not provide an answer within the allotted time limit: Do not roll the die or move your token. Instead, you must attempt another question card in the same category when it is your next turn.
 - **NOT SURE?** Any questions or points of clarification should be directed to a moderator (a course instructor or senior TA, for example); if such an individual is unavailable, and teams cannot reach a resolution, another scenario card is drawn.
- 5 Repeat steps 3-4 until you arrive at **Catalyze! Central**.



How to Win:

- 6 When your team reaches **Catalyze! Central** and it is your turn, *the opposing team chooses a card category for your final scenario*. If your team is unsuccessful, you can try again on your next turn(s). If your team is successful – and the first to complete this last exercise (All Play cards count too!) – you win **Catalyze!** CONGRATULATIONS!

Finale

Take a moment to reflect individually and then discuss with other players: Which ideas, strategies, or resources from **Catalyze!** will be of help to you in your teaching this academic term or in the near future? Which colleagues can you reach out to for further assistance with teaching and learning issues? If you were to employ a game (board, card, or other) in your teaching, what factors would you take into consideration?