

CLASSROOM MATERIALS & MEDIA REVIEWS

REMY DOU, DEPARTMENT EDITOR

DNA Ahead Game & More: 3-in-1 Adventures in DNA (K–16 Educational Resources; Dr. Dorothy Semenow; <http://www.dnaahead.com>)

From the mind of Dorothy Semenow – Caltech’s very first female graduate student and all-around mind sleuth – comes *DNA Ahead & More*, a game that takes players on a journey through the world of genetics and biotechnology. The art and the quality of materials alone speak to the labor of love that went into its development. Yet, more than art, this game represents a wealth of knowledge that any K–16 life science, science club, or continuing education instructor would want to tap into.

If you can play *Monopoly* then you can play *DNA Ahead*. In short, players (or teams of players) move along the large board with the short-term goal of claiming spaces. Spaces claimed contribute votes to the player (or team). In the end, the player with the most votes wins the game. Of course, game play goes a little further than that, with opportunities to multiply votes or block opponents from obtaining votes. In fact, the rules of the game, while not complicated, can take some time to explain and feel a little overwhelming at first. Nevertheless, a “Quick Start” guide will get most groups going right away.

Incredibly, while the game is fun to play, its real strength comes from the DNA and biotechnology content found on the game board and game pieces. Players will not only have

access to in-depth-yet-accessible science, but they will also learn about the “who” behind the science, with a special (and authentic) focus on traditionally underrepresented groups in these fields. Children and adults will discover more than just facts; they will discover potential careers and professions.

Here is where the fun in *DNA Ahead* truly lies: in what teachers can do with the game pieces outside of game play. The game cards offer a world of possibilities for development of student activities and/or assignments. “Show-and-Tell cards” direct students in the representation of content through artistic and creative avenues. Other game cards, including “WOW” and “iii” cards, can be used as fountains of topics that students can dive into by creating presentations around them. Even the artwork itself is a learning tool; students can engage with the content right from the outset as they try to figure out the pictures’ meanings before reading the text. As Dorothy puts it, “The game aims to encourage, urge, spur, guide, and support users to *do something*, hopefully a creative thing, with what they learn from the materials.” Indeed, with some teacher prompting, this is absolutely achievable.

It is worth noting that the level of disassociation between subject-area content and game play may surprise some users. Essentially, one could play the game without having to understand or even read the DNA and biotechnology content. The game was purposefully designed that way to give users

of all academic backgrounds exposure to materials that may otherwise intimidate them. Students’ level of engagement with the content will require active teacher involvement. The game box includes a guide to help educators take full advantage of the resources inside.

As a teacher, I could envision myself using *DNA Ahead Game & More* as part of a unit lesson on DNA or biotechnology. Rather than sitting my students down for an hour of game play, I would set the game board and pieces on a table and give students opportunities to roll the die and interact with the game several times a week. I would then use the content they gain access to as springboards to activities that enrich the classroom curriculum. At the end of the unit, the class would tally votes and shower the winners with bragging rights. There is definitely more than one way to use this resource, and that, too, is part of the fun.

Remy Dou
ABT Department Editor
Florida International University
redou@fiu.edu

REMY DOU taught high school life science for eight years before becoming an Albert Einstein Distinguished Educator Fellow. He now works as a Graduate Assistant at Florida International University contributing to STEM education research. For column queries: rdou002@fiu.edu