Curricular Integration

Before getting into the meat of this document, it behooves us to mention that Minds Across Time is not a closed community. By trusting us and our work with your students or children, you have made a significant gesture that we want to honor by helping to create the best possible product for our clients. To this end, we offer blank cards that you can use to incorporate your own curriculum or lessons into Minds Across Time. We offer a custom-card printing service so you can use your own cards in your own classroom. And if you are up for it, we will gladly work with you to design a completely new expansion set that will fit your specific curricular desires. If you have any questions, suggestions, or comments, feel free to contact the developers at irllc.co@gmail.com

Overview:

If you haven't noticed, Minds Across Time is fun. And kids need that. Our first priority is the welfare of our clients, and that includes granting them an experience which sparks their imagination, trains them in persistence, and helps them to build relationships with other people. But it just so happens that we can do this while enriching their classroom experience, deepening vital understandings, and reinforcing core content every time they sit down to play the game.

To that end, here are some general ways Minds Across Time can be used:

The first way to use Minds Across Time is as a game, played during students' free time. Collectible trading card games are something that students already enjoy and are engaged in. Why not capitalize on that to meet core standards? Just by playing Minds Across Time as a game, students are meeting:

KY.6-8.2.3 Students identify and analyze systems and the ways their components work together or affect each other.

KY.6-8.5.2 Students use creative thinking skills to develop or invent novel, constructive ideas or products.

KY.6-8.5.4 Students use a decision-making process to make informed decisions among options.

KY.6-8.5.5 Students use problem-solving processes to develop solutions to relatively complex problems.

KY.6-8.6.1 Students connect knowledge and experiences from different subject areas.

KY.6-8.6.3 Students expand their understanding of existing knowledge by making connections with new knowledge, skills and experiences.

And if students utilize the resources available at MindsAcrossTime.com, such as the card explanations, histories, and the forums, they are meeting:
KY.6-8.1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools such as interviews and surveys to find the information they need to meet specific demands, explore interests, or solve specific problems.
KY.6-8.1.16 Students use computers and other kinds of technology to collect, organize, and communicate information and ideas.

These standards are for middle school (grades 6-8) in the state of Kentucky, but similar standards exist in many states.

If you have the opportunity to play the game with your students, you can help them get insight into the strategic and tactical decisions in the game which build their critical thinking and decision making skills. These skills will be applicable in all subject areas.

The second way to use Minds Across Time is as an incentive system. Because individual cards (and even packs or sets) are fairly inexpensive, Minds Across Time cards are a viable reward for disciplined behavior, hard work, or even academic success. But Minds Across Time can also be used in much more targeted ways to reinforce the value of learning. For example, all Minds Across Time cards could be offered for free to students, on the condition that they must first read a book (or some selected text) on the subject of the card. To earn the Thomas Edison card, students might need to read a biography of Thomas Edison. To earn the Blockbuster card, students might need to create a plot of the amount of money earned by the best selling film of each year for 10 years versus the year it was released, and then decide if it is a linear function. Using the cards in this manner reinforces the value of knowledge and deepens the way the students experience both the card game and the real world around them.

The third way to use Minds Across Time is as an instructional mechanism. The card effects are designed to get at some of the key features and interactions of the things they represent, and many have educational content written onto the card itself. The cards can be used to introduce new content, explore the ramifications of an idea, or to reinforce or practice. For example, a discussion about synthetic materials could begin by asking students to search their Minds Across Time cards to identify where a common synthetic material (polypropylene) comes from, and to name some things it is used in. A lesson on environmental impacts could look at the pollution mechanic in Minds Across Time, investigate real life ways to measure and reduce environmental impact, and eventually propose new product cards that can be used in the game, based on their real-life research. A teacher trying to reinforce understanding of algebraic formulas could have students practice using all of the cards in Minds Across Time that require evaluating an algebraic expression. For each card, we have ensured that there are academic standards closely related to the content or function of the card, but these are merely a starting point for instructors looking to take advantage of this instructional resource; we encourage you to think of new and better ways to incorporate existing cards or new ones into your lessons.

Lookup Table of Standards Alignment:

What follows is a table of standards met by specific Minds Across Time cards, the full text of the referenced standard, and a list of cards which use that standard. These standards are given by a Common Core designation, or their state designation for the states of Kentucky and/or Ohio, but similar standards exist in many states. Please note that the second item in the KCAS codes is a range of grade levels. For the purposes of this table, codes may be written for grades 6-8 where the text of the standard does not change across grade level.

Kentucky Core Academic Standards (June 2013) Codes	Standard Full Text	Cards
KY.6-8.2.3	Students identify and analyze systems and the ways their components work together or affect each other.	Family, Programming Languages
KY.6-8.2.14 (Related: OH.8.SocialStudies.18)	Students understand the democratic principles of justice, equality, responsibility, and freedom and apply them to real-life situations.	Democratic Defense

KY.6-8.2.16 (Related: OH.7.SocialStudies.16)	Students observe, analyze, and interpret human behaviors, social groupings, and institutions to better understand people and the relationships among individuals and among groups.	Conference, Contest, Empire, Forum, Government Buildings, Office, Social Change, Teams, Time of Peace, Universities, The World Wide Web
KY.6-8.2.17 (Related: OH.7.SocialStudies.16)	Students interact effectively and work cooperatively with the many ethnic and cultural groups of our nation and world.	Multinational Conglomerate
KY.6-8.2.18 (Related: OH.6.SocialStudies.12-16)	Students understand economic principles and are able to make economic decisions that have consequences in daily living.	Antitrust Act, Barter, Buy Out, Economy of Scale, Guerrilla Marketing, Inflation, Monopoly, Scarcity, Ships
KY.6-8.2.20 (Related: OH.6.SocialStudies.1, OH.7.SocialStudies.2)	Students understand, analyze, and interpret historical events, conditions, trends, and issues to develop historical perspective.	Archimedes, The Colossus of Rhodes, Computers, Experience, Frederick Douglass, Grace Hopper, Leonardo DaVinci, Marie Curie, Movie Cameras, Osamu Tezuka, Qiu Jin, Sarah Breedlove (Madam C. J. Walker), The Statue of Liberty, Thomas Edison, World War, Youth Culture
KY.6-8.2.25 (Related: OH.6.SocialStudies.8, OH.8.VisualArt.3PE, OH.8.VisualArt.4PE, OH.8.VisualArt.5PE)	In the products they make and the performances they present, students show that they understand how time, place, and society influence the arts and humanities such as languages, literature, and history.	Qiu Jin, Trojan Horse
KY.6-8.2.26 (Related: OH.8.VisualArt.4PE)	Through the arts and humanities, students recognize that although people are different, they share some common experiences and attitudes.	Comic Books, Osamu Tezuka
KY.6-8.2.31	Students demonstrate the knowledge and skills they need to remain physically healthy and to accept responsibility for their own physical well-being.	Human Powered, Manual Labor

KY.6-8.2.33	Students demonstrate the skills to evaluate and use services and resources available in their community	Well Read
KY.6-8.4.1	Students effectively use interpersonal skills.	Democratic Defense
KY.6-8.4.5 (Related: OH.7.SocialStudies.16)	Students demonstrate an understanding of, appreciation for, and sensitivity to a multi-cultural and world view.	Archimedes, Frederick Douglass, Grace Hopper, Leonardo DaVinci, Marie Curie, Multinational Conglomerate, Osamu Tezuka, Qiu Jin, Sarah Breedlove (Madam C. J. Walker), Thomas Edison
KY.6-8.5.4 (Related: OH.7.SocialStudies.19)	Students use a decision-making process to make informed decisions among options.	Apocalypse, City Walls, Conflict of Interest, Erlenmeyer Flasks, Factory Recall, Fire, Forge, Indoor Plumbing, Laboratory, Museum, Nature, Non Compete Clause, Patent, The Photosphere (of the Sun), Plastic Furniture, Recycling Station, Renewability, Research, Resolution, Sculptures, Stone, Storm, Video Games, Workshop, Writer's Block
CC.8.R.F.SC.5 (Related: OH.6-8.Language.4c)	Students will use print and electronic resources (general and specialized dictionaries, thesauruses, glossaries) to determine the definition, pronunciation, etymology, spelling, usage of words, multiple meanings of words, content-specific meanings of words, or meanings of derivational roots	Dictionary
KY.6-8.W.WC.EU.4 (Related: OH.6-8.Language.1, OH.6-8.Language.2)	Students will understand that writers need to use correct spelling, punctuation and capitalization.	Unreaadaable
KY.6-8.W.WC.SC.2 (Related: OH.6-8.Writing.2d)	Students will use specialized content vocabulary and words	Textbooks

	used for specific contexts, as needed. *[Game Designer's Note: Although this is made clear in card-specific teacher's tips, this standard applies to the use of technical terms with specific meaning in the context of Minds Across Time. E.g. "abilities", "talents", "turn" ...]*	
CC.6.EE.2	Write, read, and evaluate expressions in which letters stand for numbers.	Abundance of Copper Ores, Archimedes, Blockbuster, Carcinogens, Economy of Scale, Espionage, Exile, Fluorescent Lightbulbs, Incandescent Lightbulbs, Manual Labor, Marie Curie, Osamu Tezuka, Qiu Jin, Sarah Breedlove (Madam C. J. Walker), Time, Temperature, and Pressure, Thomas Edison
CC.6.RP.1	Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."	Osamu Tezuka
CC.7.SP.7b	Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?	Blockbuster

CC.7.SP.8	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	Tough Luck
CC.8.F.1	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.	Blockbuster
CC.8.F.5	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	Blockbuster
KY.06-ESS1-1 (OH.7.ESS: The relative patterns of motion and positions of the Earth, moon and sun cause solar and lunar eclipses, tides and phases of the moon.)	Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.	Summer, Winter
KY.06-LS2-3 (OH.7.LS: Matter is transferred continuously between one organism to another and between organisms and their physical environments.)	Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	Transform Nutrients
KY.06-PS1-1 (OH.6.PS: All matter is made up of small particles called atoms.)	Develop models to describe the atomic composition of simple molecules and extended structures.	Quartz
KY.06-PS1-3	Gather and make sense of information to describe that synthetic materials come from natural resources and impact society	Aquariums, Celluloid Films,

KY.07-LS1-6 (OH.7.LS: Matter is transferred continuously between one organism to another and between organisms and their physical environments.)	Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.	Summer, Winter
KY.07-PS1-2 (OH.8.PS: There are different types of potential energy.)	Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	Cuprite, Sand
KY.07-PS3-5 (OH.6.PS: There are two categories of energy: kinetic and potential.)	Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	Kinetic Energy
KY.07-PS4-1 (OH.7.ESS: Energy can be transferred through a variety of ways.)	Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.	Energy Transfer
KY.07-PS4-2 (OH.7.ESS: Energy can be transferred through a variety of ways.)	Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.	Solar Panels
KY.08-ESS3-1 (OH.8.ESS: Earth's crust consists of major and minor tectonic plates that move relative to each other.)	Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.	Tectonic Shift
KY.08-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.	Forest, Habitats
KY.08-ESS3-4 (Related: OH.6.ESS: Rocks,	Construct an argument supported by evidence for how	Depletion

minerals and soils have common and practical uses.)	increases in human population and per-capita consumption of natural resources impact Earth's systems.	

Links to Standards Documents:
Common Core: http://www.corestandards.org/read-the-standards/
Kentucky: http://education.ky.gov/curriculum/standards/kyacadstand/Pages/default.aspx
Ohio: http://education.ohio.gov/Topics/Ohios-Learning-Standards