

Game Theory for Elementary School

BRAVE games, including JAMs, are a Game Theory application called “repeated games” that explore the role trust plays in conflict and cooperation.

JAMs use human connection to spark skilled reading so players can layer viewpoints, detect bias, diagnose and transform working dilemmas. Groups of 4 can use these 30-minute activities as prequels or sequels to BRAVE board game learning, or as stand-alone fun.

Each booklet in this series presents a unique schema designed to help students frame and organize content. Explore one schema, or try them all:

Game Theory

context

perspective

change

conflict

rights

cooperation

connection

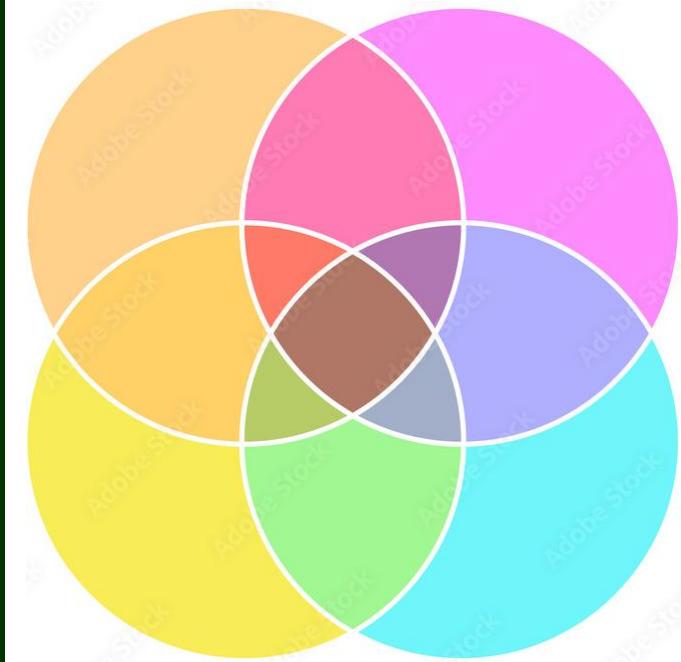
trust

creativity

Taken together, tools needed to navigate any social studies class with discerning minds.



Change



4

For parents & teachers: Welcome!

BRAVE games, including JAMs, are consistent with Science of Reading instructional guidelines. Tightly-scoped, this inquiry-led method puts knowledge in the foreground to cut across a range of K4-5 standards, meeting all learners where they are to get everyone in the game!

We take learning seriously. And for fun.

JAMs break from typical programming insofar as they're consistent with cognitive science. First, human connection sparks intrinsic motivation, incentivizing skilled reading. The beauty of this method is that players *want* to grapple with embedded vocabulary, engage in healthy discussion, and solve group problems. It's fun. This means students embrace the thrill of collaborating, reasoning with facts, sequencing, and testing truths.

Writing extensions provide explicit instructions to support students as they process, integrate, and store new knowledge. This last step is key because, according to Cognitive Load Theory, it effectively clears one's working memory, laying a foundation of knowledge to excel in equivalent classes at higher grades.

Messy? R&D revealed students thrive with this inquiry-led approach because it's intriguing. At that rate, they're positioned to soar beyond our wildest dreams.

VOCABULARY

accept to receive with approval or favor; to regard as true or sound; to believe; to undertake responsibility

adapt to adjust or modify fittingly

anticipate to realize beforehand; foretaste or foresee

change different from what it is or from what it would be if left alone; to become different; modification; revision;

except with the exclusion of; excluding; save; but

incorporate to unite or combine to form one body

innovate to introduce something new

iterate to develop a product, process, or idea by building upon previous versions by using each version as the point of departure for refinements and tweaks

manage to handle, direct, govern, or control in action

original belonging or pertaining to the origin; **OR** arising or proceeding independently of anything else

progress movement toward goal or higher stage

variable capable of being varied or changed; alterable

worldview comprehensive conception or apprehension of the world from a specific standpoint, or viewpoint

SUMMARY

Change is natural. It's also inevitable. Sometimes change seems awesome; other times it's hard to accept. You don't have to like change, however, if you learn how to manage change, you increase the odds that you'll like what unfolds.

From losing teeth, to losing a game or feeling like you might lose your identity, change is hard! However, throwing in the towel and refusing to believe you could manage change only makes a tough situation tougher!

One way to learn how to manage change is learning how to read your emotions, since emotions are clues that prompt us to ask thoughtful questions. For example, why. *Why do I feel this way?* Chances are it's because something isn't going well (negative emotion), or because something is going well. If too many negative emotions rise, you'd be wise to determine their source and then take an active role managing change to fit your needs.

Just beware you don't force your ideas or ways of being onto other people. Speak so others can hear you, but remember it's equally important to listen. Every piece of information you glean from a situation can and should inform how you manage your inputs and outputs, increasing the likelihood that you're able to manage change in a way that brings you comfort and safety.

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VOCABULARY

What are you waiting for?! Dig in!

Change: the only constant

1. LOOSE TEETH

Do you like losing your teeth? Imagine what it feels like before you lose a tooth. Do you wiggle it for days, or ignore the snaggletooth? Do you yank it out as soon as possible, or have your dentist pull it for you?

Consider: Why do humans lose teeth?

Change is a kind of revision. It might be natural, like the sun moving across the sky, or it could be manmade, such as changing your mind, your clothes, or the place you live.

Thinking about what change might look like or feel like before it happens. **Anticipating** change might stir emotions such as fear, which might in turn cause worry, draining a person's energy and preventing them from facing change.

On the other hand, if we learn how to read emotions and circumstances leading up to change as if they were a set of clues, we might form a thoughtful response. If so, we're more apt to have knowledge and skills in place to **manage** change, handle or direct it to our liking.

For example, imagine the first day of school. It's normal to feel scared, but it's crucial to ask why. Are you nervous because you want to belong, but you aren't sure if you'll be accepted? If so, treating others like they belong will naturally create a space where you belong.

ACCEPTING THE INVITATION TO MANAGE CHANGE GUIDING QUESTIONS CLASS DISCUSSION

1. RE-TELL Change can be good or bad, depending on your worldview. List a few reasons why people might not like change, generally speaking (don't get specific).
2. REVIEW If it's true that humans are variables that affect the rate of change, name some people in history who've affected change on a larger scale.
3. REASON Consider the people you named above. Infer why people gravitated to them or their message?

3. ACCEPTING THE INVITATION TO MANAGE CHANGE

Problems arise when someone else's worldview seems to threaten yours. In that case, change feels like it's happening at an increasingly faster rate. It's as if the more someone doesn't like what's happening, the more quickly change happens! Plus, if it feels like change is affecting everyone around you, the call to **adapt**, adjust or modify is overwhelming and you feel like you're going bananas!

Many humans believe in **progress**, the movement toward higher stage of evolution. But sometimes the people controlling change aren't as wise as they are clever. That, or it turns out change didn't lead us to a higher stage, but instead decreased our quality of life. Or, perhaps some changes permitted a few people to progress at the cost of vast numbers of people living a worse existence.

Either way, human participation—whether someone takes an active role in change or not—affects outcomes. This implies humans are the **variables** in any equation, the components capable of being varied. Thus, humans determine the rate of change. For example, workers strike, people protest, and groups lobby. In democracies, citizens vote, practice civil disobedience, or run for office.

If, however, you reject the notion that you're a variable, you're empowering those who accept they are.

LOOSE TEETH

GUIDING QUESTIONS CLASS DISCUSSION

1. **RE-TELL** Change can be natural or manmade, but it's almost always inevitable. *What does that mean?*
2. **REVIEW** Why is anticipating change—worrying, fearing or trying to stop it—a poor use of personal energy?
3. **REASON** Emotions provide clues that could help us consider a situation on a deeper level. In other words, if we could read emotions as if they were a book, we might infer why a certain emotion is surfacing and use that information to manage change to our favor. Generally speaking, do you think people like taking this approach? *Why or why not?*

2. OVERLAPPING WORLDVIEWS



Change is often the result of humans interfacing, or coming into contact, sharing or perhaps imposing themselves onto others. Given that everyone has a unique **worldview**, a comprehensive conception of the world based on their perspective, these interactions might inform change.

Worldviews are unique because they're based on where a person lives and how they see the world. Worldviews aren't unique in the sense that they provide everyone with a lens or framework through which they see and think about the world. *What things?* Everything. For example, the things we take for granted, such as our first language, our family's beliefs and cultural traditions. Plus, the things we think about more deeply, such as how we think about money, listen to politicians, or read history books.

These lenses, or frameworks, are useful because they allow us to see our worldview from a slightly different viewpoint, expanding our worldview as we work to pull everything into focus. For example, will you **accept**, receive with approval, your parents worldview and use it to plan a similar future? Or will you **iterate**, make tweaks? Will you **incorporate**, unite pieces from other worldviews; or **innovate**, introduce something completely new, rejecting the your family's worldview for the sake of making an **original** worldview, something brand new?

OVERLAPPING WORLDVIEWS

GUIDING QUESTIONS CLASS DISCUSSION

1. **RE-TELL** What is a worldview? Does everyone have a worldview? Is that good, bad or normal? What things shape someone's worldview?
2. **REVIEW** If a worldview is like a lens you use to see the world, and reading a book or listening to a friend's worldview offers additional context and perspective, how does your brain not forget its original worldview?
3. **REASON** Would you infer from this reading that considering someone else's worldview erases yours, or challenges you to hold and make sense of more information? Explain.