



How to Create a Health Game

(Adapted from Bernie Dodge, [Board Game Design](#), Nancy Smith [Creating Board Games](#) and Tim Novak ([Game Creation](#)))

Creating a Game to Promote Health

Designing a game is a great way to help others learn about health issues. Designing a game takes a great deal of creativity, organization, research and hard work. While everyone cannot be expected to design a best-seller game, all of us can show that we have learned about a health issue and also have some fun preparing the game. Don't hesitate to ask your teacher to help you with developing your game.

Different Types of Games

There are different types of games, where the goal of the game is to simulate a life experience, test knowledge or skills, acquire assets or points or to use words in a variety of ways. For example:

- CandyLand is a game of following paths.
- Trivial Pursuit is a game of answering questions.
- Monopoly a game of acquisition.
- Scrabble is a word game played on a board.

You can model your game after a popular game or decide to develop your game using one of those basic strategies of pathways, questions, acquisition or word play.

Basic Idea for the Game (Concept)

Don't worry about a name for your game just yet... but if a great name comes to you... write it down quickly. Your game might be based on a story or Fairy Tale... You might decide to base your game on something you are studying in school: history, art, math, music, and reading-- maybe on an adventure. A vacation or a visit to a Museum or a class visit to a firehouse might be the basis for your game. Going to a Shopping Mall with a list of things to be purchased could become a great game. Your game might be based on something in the curriculum. Your game may require you to answer a math problem or answer a question about literature as a way to move about the board. In this instance, we are trying to design games that help us learn about our health. So you can think about games that:

- Maintain or threaten your health
- Encounter health-related choices
- Simulate interactions with others that affect our health
- Encourage us to take action to improve or protect our health or the health of others

Key Questions about Your Game

- Who will play your game?
- What will the game be about?
- How will you start and finish?
- How will you "win" or be successful?

A Template for Game Design

Bernie Dodge, a professor who is often credited with pioneering webquests, has published a university course on game design for learning. We have adapted his template here, but you should also read his full text on [First Steps in Game Design](#). Another great article on the various elements of [Game Creation](#) has been written by Tim Novak of HAE Games.

A Game Design Template

Step 1: Content Analysis

Investigate, study and discuss the content with your fellow game inventors. For these webquests, we will provide specific web sites and tasks that will help you learn the content.

Prepare a list (as lengthy as is possible) of the different elements of the topic. Use brainstorming techniques in this stage to identify as many ideas as you can. Don't discard or reject any ideas at this stage.

With large sheets of paper or a whiteboard in front of you, write down words that are associated with the topic of your game. Build on words already posted. Reinforce with positive comments anything that anyone suggests. There are no wrong answers at this point.

Use this neat [visual thesaurus](#) to generate ideas and words that are related to the subject of the game. Use this device as part of your brainstorming process.

Step 2: Incubation

One of the magic things about creativity is that your mind works on problems without your knowing it. After you've generated a list of possible aspects of your topic, take a break. Walk away from the place where you generated your list and do something entirely different. Some time later, come back and look at your list. New ideas will suddenly occur to you. Connections and alternatives that you didn't notice will become apparent. Add them to your list and then you're ready for the next step.

Step 3: Chunking (Creating Combinations of Ideas/Information/Scenarios that Could Fit in Your Game)

Now it's time to take the list of content elements and put them into categories related to board games. Take a large sheet of paper and divide it into six sections labeled **Pieces**, **Patterns**, **Paths**, **Probabilities**, **Prizes** and **Principles**. Recopy the items that you've listed by putting them into the proper category. If something seems to fit in more than one place, don't hesitate to put it in multiple spots.

| | |
|-----------------|---|
| Pieces | Elements that seem as though they might make sense as markers to be moved around on the board or as score keeping devices. |
| Patterns | Are there combinations of things in the content that seem to go together? Are there combinations of things that when put together become something else or take on some additional meaning? |
| Paths | Are there progressions of events in the content that could be thought of as paths? Is there a physical place in the content that one can move around in? |

| | |
|----------------------|--|
| Probabilities | Do some things in the content happen by chance or happen outside the control of someone dealing with that content? |
| Prizes | What's valuable in this content area? What do people strive for or try to acquire? |
| Principles | What general statements can you make about how the world of this content works? What IF-THEN statements can you make that relate one content element to another? |

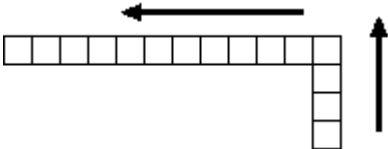
Step 4: Aligning

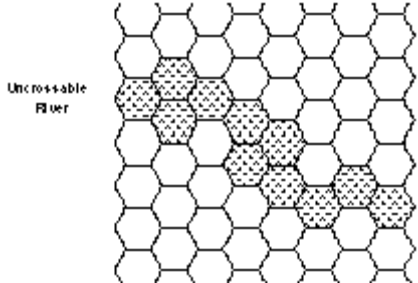
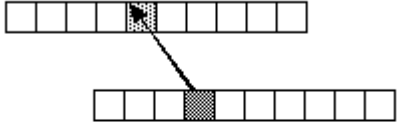
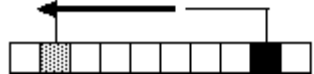
The next step is to look for specific patterns, elements and structures within the content that you wish to teach, and match them with possible analogs in the structure of a game. Look over the list of content elements that you just chunked out and see how you might align them with typical structures found in a board game.

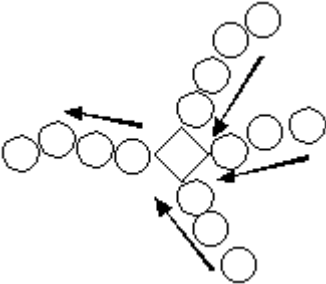
In doing this, remember the two rules of congruence:

1. Whenever possible, the structures of the game should *mirror* the structures of the content.
2. The structures of the game should never *contradict* the structures of the content.

As you examine the content elements that you've listed and chunked and match them with game structures, jot down ideas that seem as though they should be a part of your game.

| The Structure of the Content or Knowledge/Skill Underlying the Game | Reflect this in the Game Structure |
|--|---|
| 1. How do people move through or around the content of the issue in real life? | Show Movement Along a Path |
| <p>Examples</p> <p>They embark on a Journey or Quest: They find something lost, make a discovery, get to a place, accomplish a goal, etc</p> <p>They perform a specific procedures directly related to the content They get a degree, perform an operation, get a job, buy a home, etc</p> <p>There are natural and human processes related to the content digestion, making laws, growing up, photosynthesis, etc</p> |  |

| | |
|---|--|
| <p>2. What are the obstacles that people will encounter in real life related to the content/issue?</p> | <p>Create Blocks/Detours on the Path</p> |
| <p>Examples</p> <p>Physical/Transportation/Money/ mountains, rivers, equipment failure, no cash to purchase supplies etc</p> <p>Bureaucratic getting a visa, filling out applications, no services available etc</p> <p>Lack of friends/allies/or there are specific enemies or competitors No Cooperation from others/Misunderstandings</p> <p>Psychological/Emotional/Knowledge/Skills/Individual Resources Lack of experience, confidence, personal interests counter obstacle etc</p> <p>(You can make getting past the obstacle contingent on a specific dice throw or possession of a particular card)</p> |  |
| <p>3. Are there Shortcuts & Setbacks that people encounter about this issue in real life?</p> | <p>Have Players Jump Several Squares</p> |
| <p>Examples:</p> <p>Jumping ahead Marrying into money. hiring someone instead of doing it yourself. getting an early promotion. having a skill, a friend can help, supportive parents are there, being very healthy or good looking</p> <p>Moving backward Stock market crash, getting fired, getting divorced, being, having a illness, etc</p> | <p>Jumping from one path to another path</p>  <p>or jumping ahead on the same path</p>  |

| | |
|--|--|
| <p>4. Are there decisions or choices that people need to make about the issue in real life?</p> | <p>Have Branching Paths in the Game</p> |
| <p>Examples:</p> <p>Career/Work Choices: Go to college or start to work?, Launch a new product line, buy a company that already makes the product, or focus on your other products? Look for another job</p> <p>Relationship/Family Choices Get married or stay single?</p> <p>Lifestyle Choices Clothes, friends, activities, interests</p> <p>Ethical/Moral/Spiritual Choices and Dilemmas honesty or dishonesty, telling on a friend for his/her good,</p> <p>Competition/Cooperation Choices Go to the peace conference or continue to wage war?</p> <p>Situational Choices Drinking, smoking, being frank or discreet, taking/avoiding risks, accepting challenges</p> |  |
| <p>5. Are there general situations or conditions that increase risk/reward in real life about this issue?</p> | <p>Risky Paths</p> |
| <p>Examples:</p> <p>Risk/reward from Choices Made Some choices lead to a chain of events that are more risky than others. deciding to invest in stocks versus putting your money in CD's.</p> <p>Risk/reward from certain related situations or conditions Tough neighbourhood, friends or close friends doing something, parents doing something</p> | <p>If one path is meant to be riskier than another, put more squares on it that require turning over a card that describes an undesirable event. Or more squares that might send the player back to square 1.</p> <p>To compensate for this enhanced risk, make the path shorter, or let it also contain more squares that lead to the opportunity for desirable things to happen.</p> |

| | |
|--|--|
| <p>6. Are there elements of the issue that can be based on differing power/influence among the people in real life?</p> | <p>Pieces with Differing Power</p> |
| <p>Examples:</p> <p>Age-related Parents and their Children</p> <p>Gender related Males and females</p> <p>Status related People with differing political clout, bosses, organizations or countries with differing military or economic power</p> | <p>Chess: some pieces can move in more directions or over a greater distance.</p> <p>Backgammon: two pieces together cannot be captured, but one piece alone can be hit by an opposing piece.</p> |
| <p>7. Are there Goals, Outcomes or Rewards that people seek in relation to the issue in real life?</p> | <p>Provide Valuable Pieces, End Squares, Points, Chips etc as part of the game</p> |
| <p>Examples:</p> <p>Interim goals and rewards: Money, quality of life improvements, votes, popularity.</p> <p>End goals/Outcomes: Treasures, a corner office, a peaceful prosperous life.</p> | <p>Interim or gradually acquired prizes can be represented as play money or tokens that look like valuable things.</p> <p>End goals translate to the final stop in a race game.</p> |
| <p>8. Are there uncontrollable conditions that can change suddenly about this issue in real life?</p> | <p>Change the Board</p> |
| <p>Examples:</p> <p>Economic Conditions: Pre- and post-revolution. Suddenly the rules change. Stock market shifts from bull market to bear.</p> <p>Social Conditions Your ally becomes your adversary, you meet someone, you lose someone, etc</p> <p>Physical Conditions The climate shifts and suddenly it's difficult to be a carnivorous, 50 ton lizard.</p> | <p>Build a two-layer board with a number of holes in both layers. To simulate changing conditions, rotate the upper layer so that some former holes are now covered up and new holes are uncovered.</p> <p>Othello: pieces are white on one side and black on the other. When a row of white pieces has a black piece on each end of the row, they are flipped over and become black, which affects other pieces nearby.</p> |

| | |
|---|---|
| <p>9. Are there mathematical relationships/calculations related to the issue in real life?</p> | <p>Provide Lookup Tables</p> |
| <p>Examples:</p> <p>Economic: If you raise the price of your product from \$40 to \$50, your sales will decline by 10% to 25%.</p> <p>Statistical/Epidemiological The rate of infection within the population, probability etc</p> | <p>Rule book, telling what to do based on a given roll of the dice or other conditions.</p> |
| <p>10. Are there Random or Uncontrolled Events that are out of the player's control or which are practically unpredictable?</p> | <p>Provide Randomizers such as dice, spinners etc</p> |
| <p>Examples:</p> <p>Physical/Environmental weather, accidents, equipment failure</p> <p>People-Related the behavior of other people</p> | <p>Use a spinner as part of the board or as a separate piece.</p> <p>Chance cards that are read when you land on a chance square.</p> <p>Dice (can be 6, 10, 12, or 20 sided)</p> |

Step 5: Drafting

Now you have a list of possible game elements in hand. It's time to take a large sheet of paper and begin to sketch out a game board. Grab some small tokens, coins, or whatever's handy and put them to work as game pieces. Play with possibilities until the design of your game begins to gel.

At this point in the process, keep asking yourself what kinds of thinking the players will be doing as they play. Are they focused on gamestuff or will your game engage them in learning about the health issue? Does winning the game require learning the content better than the other players? If not... you've got more work to do.

Step 6: Incubating

It's time to let your subconscious work on this some more. Put your rough draft aside for awhile and resume normal life. When you come back to your work, you'll have new ideas and insights to apply to it. That brings the early design steps to a close. The rest of the process is a cycle of testing and refinement with as many people as you can draw into the process.