



**THE FUTURE IS A PLACE WE CREATE**

## **iINNOVATE Learning Experience Design**

### **iInnovate Learning Experiences Include**

- Content Standards
  - Priority Standards
  - Integrated - Cross-Curricular
- Success Skills
  - Curiosity, **Diversity**, Empathy, Critical Thinking, Persistence, Collaboration
- Personalization
  - Student voice and choice
- Relevancy
  - Real-world connections
- Assessment
  - Product, project, presentation
- Culturally Responsive Pedagogy
- English Language Development
- Career Technical Education

Note: The features above help us be mindful of the elements to include when planning to make a lesson/unit more robust and aligned to iInnovate learning.

Design thinking elements are embedded throughout the lesson as a way to familiarize facilitators with the process, but it is not true design thinking.

## Learning Experience Planning Template

<b>Lesson Title:</b>	The Game Board
<b>Grade Level:</b>	1
<b>Learning Experience Description</b>	In this lesson, student teams will create a game board that integrates learning American symbols, addition and subtraction, reading, and informational writing.
<b>Prior Learning Needed:</b>	Addition and subtraction concepts  Some knowledge of board games
<b>Standards</b>	
<p><b><u>Reading:</u></b>          CCSS.ELA-LITERACY.RI.1.6          Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.</p> <p><b><u>Writing:</u></b>          CCSS.ELA-LITERACY.W.1.2          Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.</p> <p><b><u>Integrated ELD</u></b></p> <p><b><u>Designated ELD</u></b></p> <p><b><u>Math:</u></b>          CCSS.MATH.CONTENT.1.OA.C.5          Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p> <p>CCSS.MATH.CONTENT.1.OA.C.6          Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., <math>8 + 6 = 8 + 2 + 4 = 10 + 4 = 14</math>); decomposing a number leading to a ten (e.g., <math>13 - 4 = 13 - 3 - 1 = 10 - 1 = 9</math>); using the relationship between addition and subtraction (e.g., knowing that <math>8 + 4 = 12</math>, one knows <math>12 - 8 = 4</math>); and creating equivalent but easier or known sums (e.g., adding <math>6 + 7</math> by creating the known equivalent <math>6 + 6 + 1 = 12 + 1 = 13</math>).</p> <p>CCSS.MATH.CONTENT.1.MD.C.4</p>	

Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

### **Science:**

K-2-ETS1-1

Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

K-2-ETS1-3

Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

### **Social Studies:**

1.1 Students describe the rights and individual responsibilities of citizenship.

1.1.2. Understand the elements of fair play and good sportsmanship, respect for the rights and opinions of others, and respect for rules by which we live, including the meaning of the “Golden Rule.”

1.3 Students know and understand the symbols, icons, and traditions of the United States that provide continuity and a sense of community across time.

### **CTE Connection**

#### **Career Technical Education (CTE) Pathway:**

#### **[Arts, Media, and Entertainment](#)**

#### **Potential Career Paths:**

**Animator-** An animator is an artist who creates multiple images, known as frames, which give an illusion of movement called animation when displayed in rapid sequence. Animators can work in a variety of fields including film, television, and video games.

**Web Designer-** Web designers plan, create and code internet sites and web pages, many of which combine text with sounds, pictures, graphics and video clips. A web designer is responsible for creating the design and layout of a website or web pages

**Composer-** Composers create and arrange musical scores for anything that requires a soundtrack. Composers work to arrange technical aspects of each recording like harmony, rhythm, melody and tone, and then perfect them with highly technical recording equipment and software packages.

**Computer Game Designer/Developer-** Video game design is the process of designing the content and rules of video games in the pre-production stage and designing the gameplay, environment,

	<p>storyline, and characters in the production stage.</p> <p><b>Electronic Simulation Consultant-</b> Consultants undertake short-term or long-term projects to address a variety of issues and needs. Consultants meet with management or appropriate staff to understand their requirements, using interviews, surveys etc. to collect necessary data.</p>		
<b>Success Skills</b>	<p>Check the success skills that are present in the lesson.</p> <div> <input type="checkbox"/> <b>Curiosity</b> <input type="checkbox"/> Persistence         </div> <div> <input type="checkbox"/> <b>Understanding Diversity</b> <input type="checkbox"/> Collaboration         </div> <div> <input type="checkbox"/> Empathy         </div> <div> <input type="checkbox"/> Critical Thinking         </div>		
<b>Essential Question</b>	How can diverse board games help people learn about American symbols?		
<b>Learning Progression</b>	<ol style="list-style-type: none"> <li>1. <a href="#">Research board games</a> and understand how they help us feel and learn.</li> <li>2. Think of ways we can use board games to teach others about American symbols.</li> <li>3. Learn about American Symbols</li> <li>4. <a href="#">Design a dice</a></li> <li>5. Design a board game</li> <li>6. Test and evaluate design</li> </ol>		
<b>Learning Intentions</b> “I am learning”			
<b>Success Criteria</b> <b>“I can”</b> <b>Surface, Deep, &amp; Transfer</b>	<b>Build Knowledge (Surface)</b> <b>What/ How</b>	<b>Make Meaning (Deep)</b> <b>Why</b>	<b>Apply Understanding (Transfer)</b> <b>When, Where, Should</b>
<b>ELD</b>  <b>English Language Objective “I can...in</b>			

<b>speaking, listening, reading, writing”</b>	
<b>Academic Vocabulary</b>	American symbols American Flag Bald eagle Board game Constitution Define Empathize Ideate Independence Day Liberty Bell Lincoln Memorial Model/ Prototype Mount Rushmore Publish Research Statue of Liberty Test/ Evaluate Uncle Sam United States Capitol Washington Monument White House
<b>Culturally Responsive Practices</b>	
<b>SEL Practices</b>	
<b>Classroom Management Needs</b>	Group students in heterogeneous groups of 2-4
<b>Business / Industry Involvement</b> (field trips guest speakers)	Local government official Game designer Engineer
<b>Materials/ Innovation Lab Use</b>	<b>Print Out</b> <a href="#">American symbols</a> <a href="#">Board Game Survey</a> <a href="#">Board Game posters</a> <a href="#">Camping Adventure board game</a> <a href="#">Feeling Bar Chart</a>

[Game Board Evaluation Rubric](#)  
[Paper dice](#)  
[Student Game Board Template](#)  
[Student game board blank template](#)

### Consumable Materials

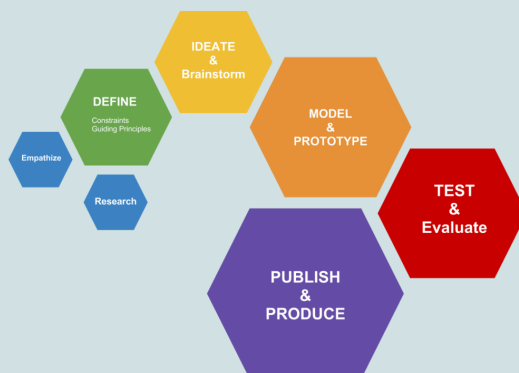
Construction paper- for board  
 Cardboard or foam board for game  
[Gift box](#) for game  
 Glue  
 Markers  
 Paper squares- for game pieces  
 Tape

### Resources

American Flag [video](#)  
[Blank Game Board Template with title](#)  
[Published Game Board](#)  
[The Golden Rule](#) book on video  
[Video of Ryan's board game review](#)

## Learning Experience Design Plan

Let's review the phases of the design process:



**Research/Empathy:** We learn about a topic.

**Defining our problem:** We define our problem.

**Ideate and brainstorm:** This is where you come up with ideas with your partner or team.

**Prototype:** This is where you sketch or draw what your ideas would look like.

**Model:** This is where you build the best idea!

**Test:** This is where we test to see if your idea works!

**Produce:** If it is good, we can make more.

Recommended: [Design Thinking Coloring Page](#)



**Empathy-** What is the issue?

Empathy is understanding what another person is experiencing OR feeling what someone else is feeling.

Opening Day-Co-construction activity

[Co-Construction slides](#)

Graphics

Share **slide 3** with the class- ask What do these images have in common?

- students think quietly for two minutes
- then come together in a think-pair-share and then in a small group to discuss ideas together
- groups share out their thinking

Next, show **slide 4** to the class- what could these images have in common with the images from slide 3?

Allow students time to brainstorm

Share **slide 5**- How can board games help people learn about American symbols?

Have students generate ideas for success criteria about symbols and board games. Record student ideas and compare them to the teacher-generated success criteria below:

## Teacher success criteria

<b>Build Knowledge (Surface) What/ How</b>	<b>Make Meaning (Deep) Why</b>	<b>Apply Understanding (Transfer) When, Where, Should</b>
<p>I can identify American symbols.</p> <p>I can describe the meaning of each symbol.</p> <p>I can identify how game boards make people feel.</p> <p>I can identify how board games help people learn.</p> <p>I can identify needed components of a game board.</p> <p>I can identify the phases of the design thinking process.</p>	<p>I can discuss and share ideas about each American symbol.</p> <p>I can discuss a plan to design a game board with a partner or team..</p> <p>I can discuss my plans during the ideate and brainstorm phase of the design thinking process.</p>	<p>I can design a game board that will help others learn about American symbols.</p> <p>I can use the design thinking process to successfully design and build a board game.</p>

Compare your success criteria to the list that the students brainstormed. Modify any success criteria to meet the needs of your group this year.

As we move through this unit, we will be sure to revisit these success criteria so we know that everyone in the room understands what we are doing.

Raise your hand if you enjoy board games.

Together, we are going to use the design process to answer the question, “How do board games help people learn?”.

The first phase of the design process is research and empathy. Let's begin with empathy or understanding how others view board games.

Before we can understand how board games make us feel, let's play a board game! This game is called Camping Adventure, similarly to Candyland. (**RECOMMENDED** optional)



To play the camping game, students need to draw a card and go to the space they draw. If they draw a double square card, they need to go to the closest of each color. As for the camping cards, they need to name the camping gear and then move their game piece to that space. The game pieces are the animals at the bottom of the page. The goal of the game is to reach the campsite, located near the finish line.

### Camping Adventure board game

After playing the game, have students use the [survey](#) to ask classmates how board games make them feel. This will enable students to begin thinking about how board games make them feel.

As students finish their graphs, have students mark on the white board which feeling they feel when playing board games (you will use this data to help guide students to make a bar graph)

Class comes together to review the data collected in the form of a bar graph.

Questions to consider:

Which feeling do people feel the **most** when playing board games?

Which feeling do people feel the **least** when playing board games?

Ask students to make addition and subtraction statements using this data.

Generate other questions using the number of votes for each feeling.

Class uses the newly collected data to make a [bar graph](#) with teacher support

Recommended: Color [bar graph](#) in as you collect data. Emphasize the importance of organizing data and why it is important to see how people feel when playing board games.

Use class data to have students brainstorm comparison data

From this data, we learned that many people think that board games make them feel \_\_\_\_\_ and \_\_\_\_\_. **How could we use board games and the feelings they give us to help us learn?**

Teacher collects thoughts from class.

Empathy is understanding what another person is experiencing OR feeling what someone else is feeling.

**How do board games help us learn?**

Let's watch this video of a game that Ryan made with his dad. He talks about his board game and how to play. When we watch the video, ask yourself how does Ryan's board game help people learn?

We are entering the next phase of the design process, research. Research is understanding information about a topic that is already known.



### Research-

[Video of Ryan's board game review](#). (Watch to about 2:30)

Let's do some research on board games!

Teacher posts [Game Research Posters](#) around the room.

Students move around the room to learn about each board game component. Marking off what each game's components are.

Gather students back together. What did they notice each game had? Which component was most common? (DICE and GAMEBOARD) Let's begin with dice.

**Dice (singular- die)** is a 3d Shape called a cube. Faces... edges... vertices..

How might dice help someone learn?

Students share ideas, teacher records on the whiteboard.

Students make their [own dice](#) (make two each)

[Practice addition and subtraction problems with dice](#).

How do dice help us learn?

Identifying the next essential component is the **game board**.

Tomorrow we will use the empathy and research we collected to design our own board game.

Give students time to play the [Camping Adventure Board Game](#).

How does this board game help us learn?

- Helps people learn about supplies needed to successfully camp

Today, our objective is to learn about American symbols, and use what we learn to create and build a board game that teaches others about important American symbols.

Let's start with the important details. What is a symbol?

A **symbol** is a picture, place or thing that stands for something else.

An American symbol is a picture, place or thing in our country that stands for things that are important to us as Americans.

An example of this is the American Flag.

Watch this [video](#) to learn about the American Flag

Let's read about other [American symbols](#)! Pages **258-263** in the social studies book is a great support!

(Coral read)

Define-Clearly define the need you are trying to solve, sharpen key questions.



**Define-** Clearly define the need you are trying to solve, sharpen key questions.

**Define:** How can we teach others about American symbols?

Could we build a game board that teaches others about the American symbols using the key elements of a game (Dice, Game Board)?

Materials available:

- Game board template
- Student made dice (from day 2)
- Pencil
- Crayons
- Markers
- Construction paper

**Constraints-** Just like we have rules for sharing that have consequences if we break them, design thinking projects have rules that must be followed. When we identify constraints, we are looking to see all the rules we need to follow for the project. Constraints are also known as limitations. We do not have endless supplies, so the supplies we have to work with are constraints. Constraints help us separate what is real from what is in our imagination.

For example, if I was needing a pencil to write with, I could get one from the pencil fairy (in my imagination) or I could get a pencil from the pencil bin in our classroom. Knowing that the pencil fairy is not real, and that in my classroom we have a specific spot for pencils, I know that that is a constraint. As much as getting a pencil from a pencil fairy sounds fun!

Constraints:

- Game must have a name
- Game should help others learn about American Symbols
- Game must use dice
- Game should have clear rules and directions.

Teacher collects student responses. Are there any other constraints?

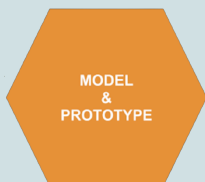


**Ideate and Brainstorm-** Brainstorm and create solutions, no idea is a bad idea! Narrow your ideas.

In this stage of the design process students brainstorm and create solutions, no idea is a bad idea! Narrow your ideas.

Put students into teams. They will brainstorm ideas for their board game using the materials defined above.

Students use this [template](#) to design their own game board about American symbols.



**Model and prototype-** Build representations of one or more ideas

In this part of the design process, students build representations of one or more of their ideas.

(Reference Camping game.)

Student teams must **write directions** for their game. They should use the dice they made and a game board as part of their game design. Model writing directions in clearly identified steps.

[Play camping adventure game, try to write the rules](#)

[Write the rules for their own game](#)

Teams should give their board game a name.

After the team has written their rules, they should play their game to test it out. This is the test and evaluate step in the design process. Student teams should make modifications to their game as needed.



**Test and Evaluate-** Test your prototype. Validate ideas and get feedback to improve. Make adjustments as necessary

Have a class discussion on the “Golden Rule”- treat others the way you want to be treated- when playing their game and in preparation of playing another team’s game.

Read this book about treating others the way you want to be treated.

[The Golden Rule](#) book read aloud on youtube.

Have the class test out other students' games. They will evaluate the game using [this rubric](#).

Collectively, the class will decide on the best game.



**Publish and Produce-** If it works, share it with the world!

Students will then play the [completed American symbol board game](#). This is the publish and produce step in the design process.

**Closure**

Exit tickets, feedback for next lesson

How do board games help people learn?

How did the board game help you learn about American Symbols?

**Assessment**

Student board game designs

[Project Rubric- Creativity and Innovation](#)

[Presentation Rubric](#)

**Extensions**

Spinner- Have students investigate the spinner as a tool to learn something new in a board game. Take what you are learning in the classroom (e.g. plant parts) and have them create their own spinner.

Guided practice: make one together

How can spinners have pictures? How can we use the pictures to talk about what we know about the topic? (SEE EXAMPLE OF PLANT PARTS BELOW)



