

# **Video Game Design Hansel and Gretel: Through the portal**

Conference City and State:

Louisville KY

**2024-2025**

Team ID: 22259-1

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Video Game link: <https://clem1212.github.io/TSA-Video-Game-Through-the-Portal/>

## Through the portal

*Hansel and Gretel: Through the Portal* is a Two player fantasy game where players learn teamwork and problem-solving. Players control Hansel and Gretel as they navigate different fairy tale worlds with different unique challenges. The game blends storytelling and different game mechanics to create a cool experience.

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## The Purpose of Our Game

The purpose of our game is for players to learn the value of teamwork and friendship by working together as Hansel and Gretel through their journey. Players must use their abilities to overcome challenges and escape the dangers that happen through different game dimensions. The game has strategy, exploration, and problem-solving, emphasizing the themes of trust and teamwork. The game is designed for young players, with the fairy tales being a main focus, making it good for families, young gamers, and gamers in general being E for everyone. It also introduces story elements of Grimm brothers with different elements of fairy tale stories in the game. The two players control Hansel and Gretel using the keyboard and Players must communicate to face challenges. It has Problem-Solving with the game encouraging critical thinking through decision-making and even social Connection by allowing players to bond between players, making it a great experience for families and friends.

## The Rules of Our Game With game Mechanics

Each fairy tale has its own mini game and level. The mini games feature simple controls (using arrow keys for Hansel and WASD keys for Gretel even sometimes using the mouse and space bar for different games. Players need to perform tasks like dodging, collecting items, or activating special powers to move on to the next level or story.

### **The Pied Piper Rules:**

- Use arrow keys and WASD to move
- Avoid rats and collect eggs
- Press the down arrow key or S key to activate powers (shield and arrow)
- Collect book pages to proceed to the next level
- Press SPACE to start the game

### **Golden Goose Rules:**

- Use WASD and arrow keys to move
- Dodge enemies and collect all the eggs
- Use power-ups to gain an advantage (press SPACE to activate shield and arrow)
- Press SPACE to start and reload the game & activate power-up

### **Aladdin Rules:**

- Use W key and up arrow key to fly
- Avoid clouds and try to get 20 points to win
- Press SPACE to start and restart the game

### **Jack and the Beanstalk Rules:**

- Press W and up key to jump
- Jump on blocks to climb the beanstalk
- Reach the top to win
- Press SPACE to start and reload the game

### **Hansel - Robin Hood Training Rules:**

- Use arrow keys to move around
- Click and move the mouse to shoot the targets for your training
- Train with Robin Hood for the witch fight
- Press SPACE to start the game and reload the game

### **Gretel - Rapunzel Training Rules:**

- Use left & right keys to dodge falling items
- Press down key to activate the shield
- Train with Rapunzel for the witch fight
- Press SPACE to start the game and reload the game

### **Witch Boss Fight Rules:**

- Use arrow keys and WASD to move
- Run from the witch and collect book pieces
- Find the full book to return home and fight the witch
- Press Space to continue
- Avoid falling witch spells and collect eggs
- Climb the platforms to defeat the witch and find the portal to go home

### **Game Collisions and interactions:**

*\*\*\*When Hansel and Gretel collide with the rats in the first level, they lose. When they fall off the platform, they lose. When Hansel and Gretel collide with eggs in the second level, they collect points. When they collide with the geese, they lose. When Hansel and Gretel collide with the clouds in the 3rd level, they lose. When Hansel and Gretel jump on the blocks in the 4th level, they progress further up the beanstalk, and when they fall off the platform, they lose. When Hansel collides with the targets, he gets trapped. When Gretel collides with the flying objects, she loses. When Hansel and Gretel collide with the witch, they lose, and when they collide with the eggs, they collect points. When Hansel and*

*Gretel collide with the spells in the boss level, they lose, and when they collide with the portal, they go back home. Whenever Hansel and Gretel collide with any of the book pages, they go to the next level or collect points in the boss level. \*\*\**

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## The Story/ Lore

The plot revolves around Hansel and Gretel, who escape into a magical portal and get pulled into different fairy tale worlds, battling the witch along the way. They meet famous characters like Rapunzel and Robin Hood, who help them develop new skills to fight the witch. The game is designed around the shown narrative, with different mini-games inspired by various fairy tales and various retro games. Here's a breakdown of how it plays out: Main Story: Hansel and Gretel stumble upon a magical book in the witch's candy house and are transported to other fairy tales. They must defeat the witch and beat the different games to return home. Each fairy tale has its own game, such as: Pied Piper, Golden Goose, Aladdin, Jack and the Beanstalk, Robin Hood Training, Rapunzel training and the Witch Boss Fight. The players will need to perform tasks like dodging, collecting items, or activating special powers to move on to the next level or story.

Eventually, the witch discovers Hansel and Gretel during their training, forcing them to get transported into another portal to the witch's furnace. They must navigate the fiery maze, evade the witch, and find the portal that originally transported them through the different fairy tale worlds—ultimately returning home! The overall theme emphasizes teamwork, friendship, and growing stronger by working together—something Hansel and Gretel learn through their journey. The combination of narrative and interactive gameplay makes this an exciting adventure!

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## Technology used

We used the following technologies to create this video game: Programming/Coding Languages: HTML, CSS, and JavaScript, using Kaboom.js and Kaplay.js as JavaScript libraries. Art and Design Software: Photoshop, Photopea, Piskel, DinoPixel, and pixel art. Music Software: FL Studio(for laptop), GarageBand and BandLab (for phone). Collaboration Tools: GitHub (for web hosting and code management), Google Drive (for artwork storage and project planning game in Google Docs), and Imgur (for image and art hosting using their API).

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## Copyright

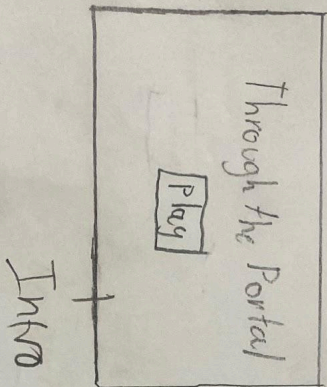
We are not using anybody else's trademark (all art is made by Dillon Smith and Dakota Manley and all code and music is made by Clement Amoah).

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# The Storyboard

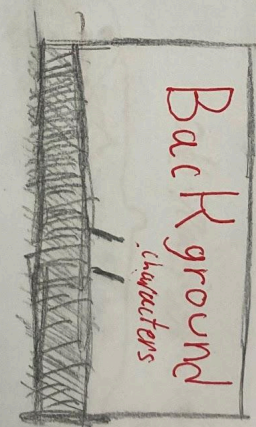
# Scene 1

Opening segment.



# Scene 2 / Intro.

ISA 24-25



the Pictorial Rule section, first actual part.

Rules:

element makes these.

Dana



Pied Piper Scene

TA 24.25

might add these things, mostly  
design purposes??

add stairs & where  
maybe

short

characters (H & G)

elements (rocks)

End!

Add notes maybe?

~~David~~



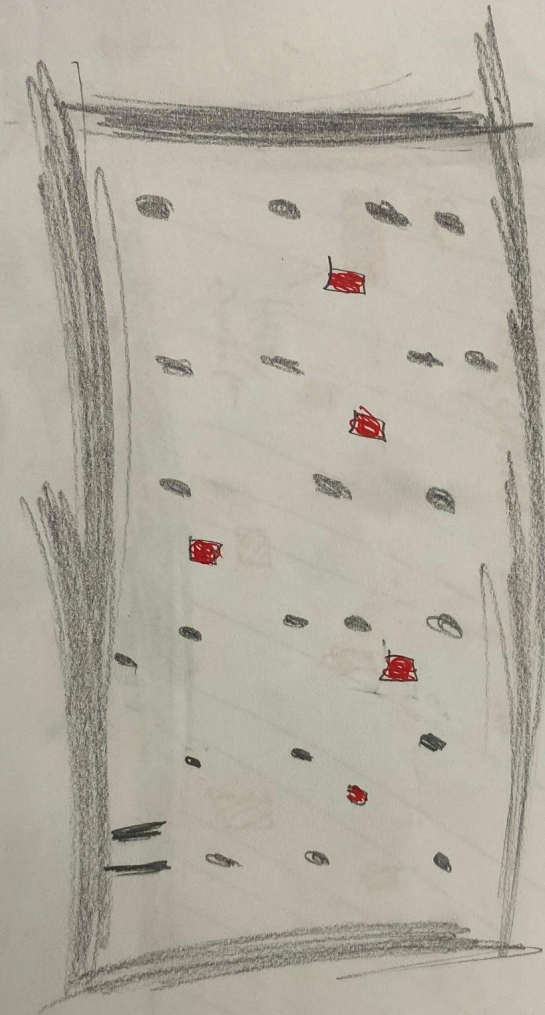
Rules for Golden Goose

Rules:  
~~~~~

Golden Goose

Enemy # : Random

# <sup>20</sup> Required!



Key:

• = 134

• = Enemies

• = Eggs

Scout

TS/24-25






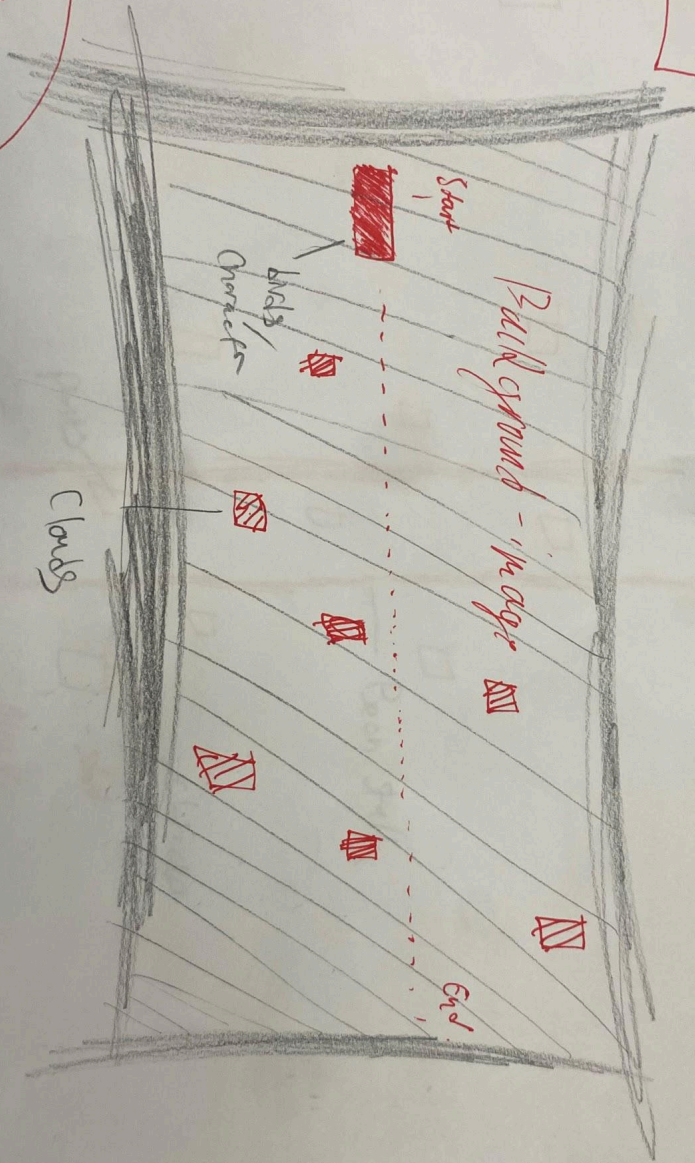
# Aladdin Rules

Rules:

## Aladdin

TS024-25

Key:  
 = High  
 = Obstacle  
 = Background image



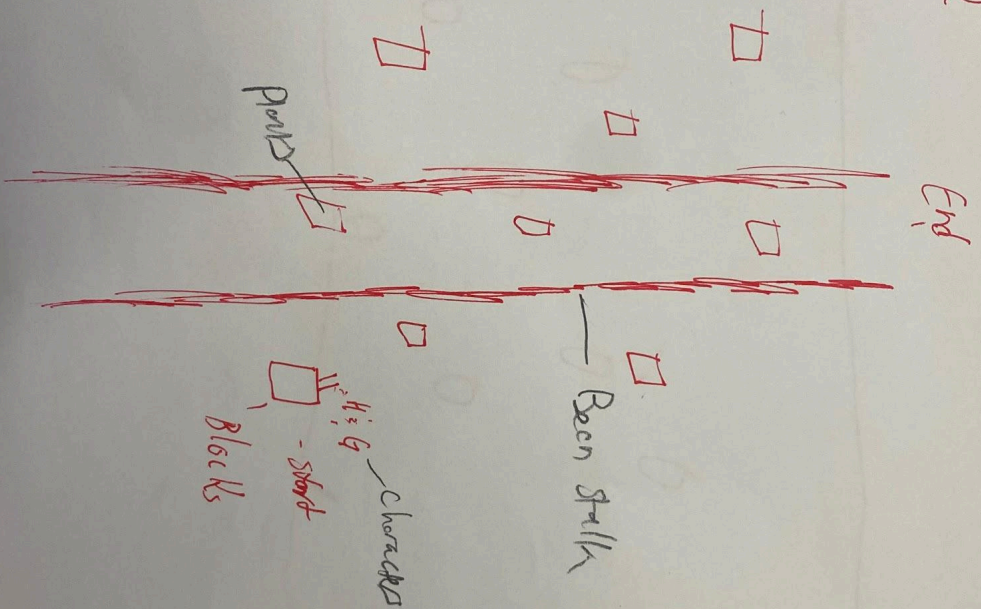
TS024-25



~~Jack and the Beanstalk~~

Jack and the Beanstalk

Rules



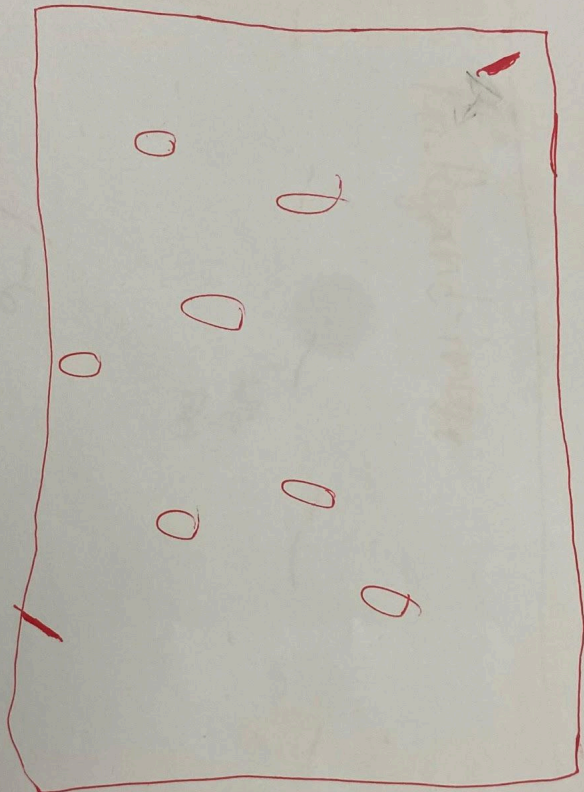
TS#24-25

TS#24-25



Hausel Target Practice. w/ Robinson

JSF 24-25



● = Hausel  
○ = Target  
/ = Robinson

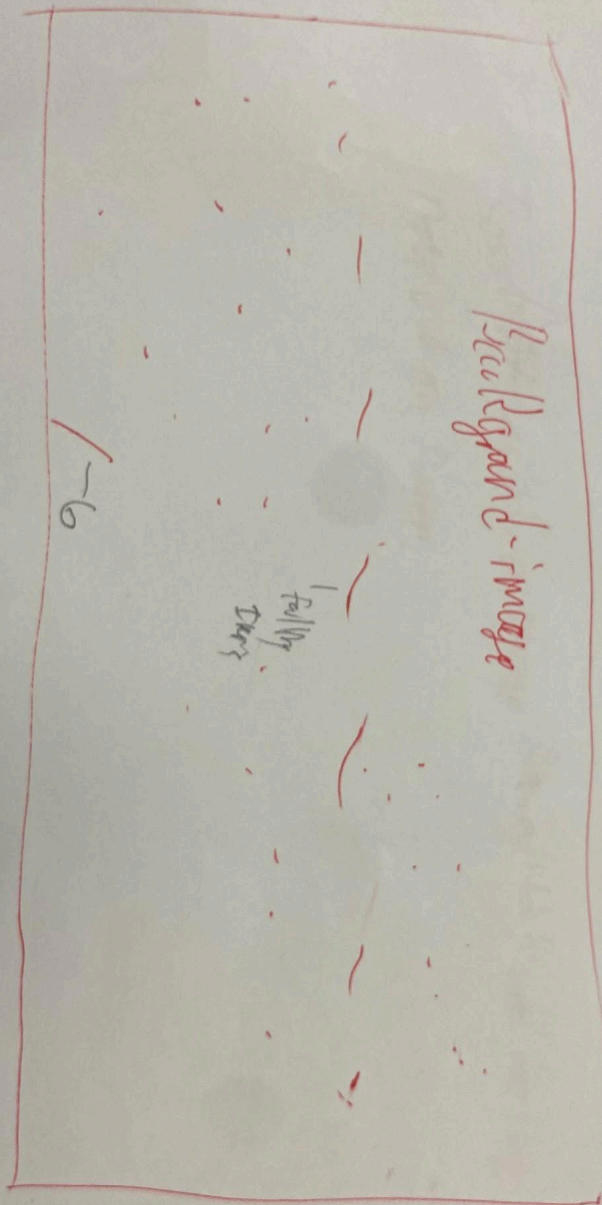
*Dr. [Signature]*



Control training w/ Rasmus

TSR 24-25

Background - image



1 - good  
- falling stars.

David



Ross light

TS129-25

Ross light would be a chase from a mile and too long to  
report on paper.

Smith

## Work Log




| Date  | Task              | Time              | Comments                                                                                                                   |
|-------|-------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------|
| 09/10 | Video Game Design | 1 hour            | Finding fairy tales to use for the design and planning out video game -D.S                                                 |
| 09/17 | Video Game Design | 1 hour 30 min     | Made music (Dillon & Clement,), drawn out levels and planned levels (Dillion, Cody Adam and Clement) made art (Cody,) -D.S |
| 9/24  | Video Game Design | 1 hour 40 minutes | Made music (Dillon) made code (Clement) Made background (Adam) Made art (Cody) -D.S                                        |
| 9/26  | Video Game Design | 1 hour            | Made background art (Adam) made character art (Cody) helped with art and made code (Clement) -D.S                          |
| 10/1  | Video Game Design | 1 hour 30 min     | Cody made art, Clement and Adam made names, and Dillon organized a portfolio. -D.S                                         |
| 10/15 | Video Game Design | 4 hour 20 min     | Cody made art for hansel, Clement made music and finished all levels to the game but boss level, Dillon made music, -D.S   |
| 10/22 | Video Game Design | 1 hour 40 min     | Cody made art for Gretel and Clement Fixed Bugged Code and made music -C.A                                                 |

|       |                   |               |                                                                                            |
|-------|-------------------|---------------|--------------------------------------------------------------------------------------------|
| 10/29 | Video Game Design | 1 hour 30 min | Cody made carpet, and blocks. Clement, Adam, and Dillon made 3 sections of the story. -D.S |
|-------|-------------------|---------------|--------------------------------------------------------------------------------------------|

|       |                   |               |                                                                                                                                                     |
|-------|-------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 11/7  | Video Game Design | 1 hour 30 min | Cody made art, Clement helped Cody, Adam tried making background, Dillon Worked on portfolio. -D.S                                                  |
| 11/12 | Video Game Design | 1 hour 15 min | Dillon made art and worked on portfolio, Clement coded. -D.S                                                                                        |
| 11/19 | Video Game Design | 1 hour 15 min | Adam made up a story. Clement coded, Cody made art. Dillon worked on portfolio -D.S                                                                 |
| 11/21 | Video Game Design | 1 hour 40 min | Adam made a story, Dillon made art/worked on a portfolio. -D.S                                                                                      |
| 11/25 | Video Game Design | 1 hour 30 min | Clement code video game and Dillain and Clement made background art for first 3 levels-C.A                                                          |
| 11/26 | Video Game Design | 1 hour 40 min | Clement code video game/ ,made music and Dillanl made background art for the 4th and 5th level-C.A                                                  |
| 11/27 | Video Game Design | 2 hour 40 min | Dillan and Adam made background art for 6th level and helped Clement on background level for the last level. Clement code video game and made music |

|       |                   |                |                                                                                                                                                                           |
|-------|-------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                   |                | for the game -C.A                                                                                                                                                         |
| 12/12 | Video Game Design | 2 hour 45 min  | Clement photoshop title screen and coded intro with cut scene and made music -C.A                                                                                         |
| 12/17 | Video Game Design | 1 hour         | Testing Video Game -Dillon, Clement. - C.M                                                                                                                                |
| 2/19  | Video Game Design | 3 hour 50 min  | Clement edited the portfolio, recorded game play, added video game play in a website for a how to play instructional video and concluded/ edited script for the game -C.A |
| 2/22  | Video Game Design | 30 min         | Clement edited and worked on the portfolio -C.A                                                                                                                           |
| 2/25  | Video Game Design | 30 min         | Adam Worked on script for the video game informational video-C.A                                                                                                          |
| 2/26  | Video Game Design | 30 min         | Dillon worked on art for a rock replacing the arrow for a rock -C.A                                                                                                       |
| 2/27  | Video Game Design | 48 minutes     | Dillon and Clement tested the video game -D.S                                                                                                                             |
| 3/4   | Video Game Design | 2 hours 50 min | Adam made and edited the informational video while Cody, Dillain and Clement tested and spot checked the video game-C.A                                                   |
|       |                   |                |                                                                                                                                                                           |
|       |                   |                |                                                                                                                                                                           |
|       |                   |                |                                                                                                                                                                           |
|       |                   |                |                                                                                                                                                                           |

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|--|--|--|--|
|  |  |  |  |
|--|--|--|--|

## STUDENT COPYRIGHT CHECKLIST

*(for students to complete and advisors to verify)*

1) Does your solution to the competitive event integrate any music? YES ☒ NO ☐

If NO, go to question 2.

If YES, is the music copyrighted? YES ☐ NO ☒

If YES, move to question 1A. If NO, move to question 1B.

1A) Have you asked for author permission to use the music in your solution and included that permission (letter/form) in your documentation? If YES, move to question 2. If NO, ask for permission (OR use royalty free/your own original music) and if permission is granted, include the permission in your documentation.

1B) Is the music royalty free, or did you create the music yourself? If YES, cite the royalty free music OR your original music properly in your documentation.

**CHAPTER ADVISOR:** Sign below if your student has integrated any music into his/her competitive event solution.

I, \_\_\_\_\_ (chapter advisor), have checked my student's solution and confirm that the use of music is done so with proper permission and is cited correctly in the student's documentation.

2) Does your solution to the competitive event integrate any graphics? YES ☒ NO ☐

If NO, go to question 3.

If YES, is the graphic copyrighted, registered and/or trademarked? YES ☐ NO ☒

If YES, move to question 2A. If NO, move to question 2B.

2A) Have you asked for author permission to use the graphic in your solution and included that permission (letter/form) in your documentation? If YES, move to question 3. If NO, ask for permission (OR use royalty free/your own original graphic) and if permission is granted, include the permission in your documentation.

2B) Is the graphic royalty free, or did you create your own graphic? If YES, cite the royalty free graphic OR your own original graphic properly in your documentation.

**CHAPTER ADVISOR:** Sign below if your student has integrated any graphics into his/her competitive event solution.

I, \_\_\_\_\_ (chapter advisor), have checked my student's solution and confirm that the use of graphics is done so with proper permission and is cited correctly in the student's documentation.

3) Does your solution to the competitive event use another's thoughts or research? YES ☐ NO ☒

If NO, this is the end of the checklist.

If YES, have you properly cited other's thoughts or research in your documentation? If YES, this is the checklist.

If NO, properly cite the thoughts/research of others in your documentation.

**CHAPTER ADVISOR:** Sign below if your student has integrated any thoughts/research of others into his/her competitive event solution.

I, \_\_\_\_\_ (chapter advisor), have checked my student's solution and confirm that the use of the thoughts/research of others is done so with proper permission and is cited correctly in the student's documentation.