Augmented Reality Writing Samples
from *Rescue* and *The Teleporter*

Introduction

As a student at Harvard University's Graduate School of Education, Kevin Preis worked with the team responsible for the Handheld Augmented Reality Project (HARP). This Department of Education-funded study explored the effects of augmented reality experiences on learning. HARP developed the experiences in-house and then introduced them into middle- and high-school classrooms as part of their curricula.

These augmented reality experiences consisted of a story filled with virtual characters and educational puzzles. Students began by watching a video that introduced the story and its main characters. Then, as students moved around in the real world, their mobile devices presented different characters and challenges that furthered the narrative.

Part of Preis' role was to produce original story ideas, scripts, game logic, and related assets that the HARP team could develop into new AR experiences. The samples that follow come from *Rescue* and *The Teleporter*, two of these original stories.

Preis created these materials in a format that would allow subject matter experts to insert educational content. For example, in *Rescue*, educational content was meant to target **mathematical skills** (like identifying the quadrant of the ocean in which a lost ship might be found) and **language skills** (through characters such as the Spanish-speaking Juan Lorenzo.)

Included in this document:
- *Rescue*: Synopsis and Main Character List for Video Production Team
- *Rescue*: Selections from Scripts for "Introduction to Augmented Reality" and "Opening Video"
- *The Teleporter*: Synopsis and Main Character List for Video Production Team
- *The Teleporter*: Sample documentation provided to HARP team
- *The Teleporter*: Selection from script for "Concluding Video"

Rescue

Synopsis

The crew of the *Screaming Lizard* is lost at sea, and their friends and families in the ocean town of Metry have no idea where the boat is. The authorities have turned to you, a group of experts, to help find the ship and its crew and to bring them back to safety.

Students will divide into groups. Each group will include an "Oceanographer", "Coast Guard", "Technical Expert", and "Medical Doctor". Students will receive different challenges and resources based on their roles in order to encourage collaborative problem solving.

Main Character List for Video Production Team

CAPTAIN HAMMERMAN — Late 40s; weathered features from years working at sea; the man in charge, whether on deck or on shore

MICHELLE HAMMERMAN — 18; Hammerman's daughter; usually self-confident, but shaken by the events of *Rescue*

SEAN ROBINSON — 18; wiry build; introspective; knows he's in over his head with both his work for Hammerman and with his romantic interest in Michelle, but has a sense of humor about his troubles

JUAN LORENZO — 24; care-free and adventurous to a fault; basically, the opposite of Hammerman, except for his love of being on the ocean

AUGMENTAL

1.   Video: Introduction to Augmented Reality Game, *Rescue*

FADE IN:

INT. CAPTAIN HAMMERMAN'S OFFICE

CAPTAIN HAMMERMAN is seated at his desk.

>   CAPTAIN HAMMERMAN
> I want to welcome you to the augmented reality game, *Rescue*. All of the people you will meet in this game will be playing characters, just like right now I'm pretending to be Captain Hammerman, a citizen in the ocean town of Metry. See? Actually, my office is just a film set.

Captain Hammerman directs the camera to pan around the room. Yep, this is a film set and not an office.

>   (To offstage.)
> Do I get to keep this outfit? No? Oh well.

>   (To viewer.)
> Look, you've all seen movies and played video games before, so I and the other actors are not going to tell you that the events of *Rescue* are real. What we are going to do is play our parts the best that we can. Unlike any movie you've ever seen or any game you've ever played, you get to take on a role, too. We want you to help us and our characters with the challenges they face, test yourselves with events that could really happen, and have fun with it. Good luck.

FADE OUT.

2.   Video: Opening to *Rescue*

FADE IN:

A PHOTOGRAPH OF A FLEET OF DEEP-SEA CHARTER BOATS

lined up along an oceanside dock. The expanse of the water beyond extends out to the horizon.

PULL BACK TO REVEAL:

INT. HAMMERMAN EXPEDITIONS - DAY

This photo of the boats is part of a sign hanging on the wall of an office. Above the boats is the title "HAMMERMAN EXPEDITIONS: OUR BOATS FOR YOUR ADVENTURE".

Another photo hangs next to the sign. It's a shot of CAPTAIN HAMMERMAN and his daughter, MICHELLE.

WE PULL FURTHER BACK AND SEE

Michelle is sitting at a desk in Captain Hammerman's office. She's watching a television screen, but we can't tell what's playing on it. Sun seeps through a nearby window and highlights her worried expression. We can hear the sound of lapping waves and seagulls coming from the docks just outside of the office.

Captain Hammerman enters. Michelle uses a remote control to pause whatever she was watching.

> CAPTAIN HAMMERMAN
> Don't bite your nails, Michelle.

> MICHELLE
> I wasn't, Dad.

> CAPTAIN HAMMERMAN
> I need you to watch the office for a little while longer.

> MICHELLE
> Are you going to see the mayor?

> CAPTAIN HAMMERMAN
> (Nodding.)
> We're expecting a team of rescue experts to show up any minute.

> MICHELLE
> Experts in what?

> CAPTAIN HAMMERMAN
> People who know the ocean. Technical experts. Communications people. Doctors.

> MICHELLE
> Doctors?

               CAPTAIN HAMMERMAN
Michelle, our boat's gone missing. When we find it, our guys onboard might need medical attention.

               MICHELLE
Did the rescue team from Metry radio in yet?

               CAPTAIN HAMMERMAN
That's what the mayor is going to tell me. It may take a while to find our boat's last point of contact. These waters…

               MICHELLE
I know, Dad. No one knows them well. On the news, they're calling the storm last night the worst they've ever seen out of season.

Michelle turns away to hide her face.

               CAPTAIN HAMMERMAN
I'm sorry, Michelle. I've got to go.

               MICHELLE
It's okay.

Captain Hammerman exits. Michelle picks up a remote control. We can see the television screen she was watching now, and on its screen is the frozen image of the interior of Captain Hammerman's office. Michelle unpauses the video.

ON THE VIDEO MICHELLE JUST UNPAUSED, SEAN ROBINSON moves into the frame. He is close enough to the camera for us to know that he is the one who pressed the button to start recording this video. He walks over and sits down in front of the camera.

               SEAN
So, okay, my name is Sean Robinson, and this video is for Freshman English. I'm supposed to talk about my life before college, what I'm doing this summer, and what I'm studying in the fall.

Sean holds up the same sign that we saw at the beginning: "HAMMERMAN EXPEDITIONS: OUR BOATS FOR YOUR ADVENTURE".

               I'm sitting in my boss' office here at Hammerman Expeditions, the place I'm working at this summer in Metry. I thought I could make some money and practice my Spanish with other guys on our boat. We take people like scientists and marine biologists out for deep sea trips.

Captain Hammerman comes into the frame with a cell phone pressed to his ear. He's oblivious to the fact that he's interrupting the video Sean is making by standing between Sean and the camera.

               HAMMERMAN
               (Shouting into the phone.)
Yeah? Well I better get that check. I'm not messing around, pal!

               (To Sean.)
You seen Juan today, Sean?

>   SEAN
> No, sir. He may be at the dock with the *Screaming Lizard*.

>   HAMMERMAN
> Better be.

Captain Hammerman walks off.

>   SEAN
> That was my boss, Captain Hammerman. Pretty serious guy. And the *Screaming Lizard* is one of his boats.
>
> (Holds up the sign again and points to one of the charter boats.)

A knock at the door to the office. Sean looks off-camera. An oil-stained JUAN LORENZO enters the frame and sits next to Sean, tipping his captain's hat back. He's eating a sandwich with the one part of his body that seems clean: his left hand.

>   SEAN
> Juan! What happened to you?

>   JUAN
> I've been working on the *Screaming Lizard* for three hours. Ugh. My lunch tastes like engine oil.

>   SEAN
>   (To the camera.)
> This is Juan Lorenzo.

>   JUAN
>   (To the camera.)
> *Hola, compañeros.*

>   SEAN
> Juan's been working here for three years. He's trying to put together the money to buy the *Lizard* from Captain Hammerman.

>   JUAN
> Almost got enough cash. Just a few more trips.

>   SEAN
> Then what?

>   JUAN
> What do you mean? Like, am I going to rename the boat the *Screaming Juan*?

>   SEAN
>   (Laughing.)
> No, man, what are you going to do with the boat?

>   JUAN
> I already made a deal with Captain Hammerman. I'll keep the *Lizard* around a few seasons and work with him. The rest of the time, it's me and the deep blue sea. Why, you looking for a job?

>   SEAN

No, I was just…

> JUAN
> If you want to work for me, you're going to have to stop falling down.

> SEAN
> That wasn't my fault!

> JUAN
> (To the camera.)
> I've been trying to get Sean to talk to this *chica* Michelle. He's got a big ol' crush on her. She's Hammerman's daughter. He was going to do it, but instead, he spilled blue paint all over her.

Outside of the video, Michelle reacts with surprise. She looks down at her sweatshirt. It's still got a little blue paint stain on it.

> SEAN
> (On video.)
> You tripped me!

> JUAN
> (On video.)
> I was trying to hurry you up, man. Just trying to help.

> SEAN
> (To the camera.)
> Well, anyway, it's been a good summer, and I'm looking forward to meeting the rest of you on campus when classes start next month. See you soon.

The video ends and goes to static. Captain Hammerman enters the room. Michelle turns off the TV.

> CAPTAIN HAMMERMAN
> Michelle, listen. Our rescue team from Metry called in.

> MICHELLE
> What did they say?

> CAPTAIN HAMMERMAN
> The *Screaming Lizard* isn't where we thought it would be. The guys are lost. Stay calm though, sweetheart. The team of experts just arrived.

> FADE OUT.

After the students have viewed the videos, the classroom teacher will
- **Instruct students on how to use the mobile devices to explore the town of Metry and to interact with characters they have met.**
- **Give students their first in-game challenge.**

The Teleporter

Synopsis

A mysterious thief has stolen the Teleporter, a suit which allows the user to move instantaneously from place to place. You and your team must join forces with the Government Research Defense Department to track the thief down before it's too late!

Students will divide into groups. Each group will include an "Inventors", "Security (GRD) Agents", "Trackers", and "Decoders". Students will receive different challenges and resources based on their roles in order to encourage collaborative problem solving.

Main Character List for Video Production Team

AGENT MICHAEL SHUO	Early 20s; a well-trained agent for GRD (Government Research Defense, pronounced "Guard"). His maverick behavior tends to lead him in the right direction but sometimes into water too deep for him to tread.
JUNE SHUO	18; an intern with GRD. She admires her cousin, Michael, but her calm intellectual personality means that they butt heads on occasion.
DEJUAN SEARS	Early 20s; Michael's roommate and tech entrepreneur; tags along for a demonstration of the Teleporter.
DR. SHAUNDA MARKS	Late 20s; inventor of the Teleporter and researcher at The Longhair Institute. Her romantic interest in Michael creates a rift between him and June when Shaunda becomes a suspect in the Teleporter's theft.
THE DIRECTOR OF GRD	40s; guides the agents under his command throughout their investigation and pushes them to discover what has happened.
THE THIEF	Appears as an anonymous figure masked by the Teleporter suit.

AUGMENTAL

Explanation of Augmented Reality Game Documentation

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<tr>
<td colspan="4" align="center">

PLOT POINT NAME

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<tr>
<td colspan="4">The **Plot Point Name** describes the character or scenario that the students will encounter. May also define multimedia elements required, such as "Image of a Key" or "Video of Teleporter Demonstration".</td>
</tr>
<tr>
<td align="center">**ROLE 1**</td>
<td align="center">**ROLE 2**</td>
<td align="center">**ROLE 3**</td>
<td align="center">**ROLE 4**</td>
</tr>
<tr>
<td colspan="4">Depending on his or her **Role**, each student on a team may receive slightly different challenges or resources in the Information Box (below). This encourages collaboration on challenges.</td>
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<td>INFORMATION BOX</td>
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The Information Box is the content that the student will see, hear, or view on the mobile device. Developers may choose the most appropriate method for delivery.

Some plot points will include challenges that depend on a student's knowledge of a curriculum. Two areas of focus are math and root word learning. Educational designers for HARP can use these challenges to tailor experiences to the student's needs.

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Game Logic

Game Logic summarizes the role of this plot point in advancing the students towards the conclusion of the game.

1.   **Augmented Reality Activity Day 2, Game Plot Point 5**

Agent inside the Room			
Inventors	**GRD Agents**	**Trackers**	**Decoders**
Whoa! I'm just waking up now. I got caught up in that sleeping gas. I'm not sure how you managed to get through that shield door, but you're too late. The thief used the Teleporter. Still, this might be worth having. It's a key that fell out of the suit as the thief was running away from the chemicals. After being knocked out, I'm not sure I trust anyone, though. GRD has standard operating procedures that I want to see you respond to before I give up this evidence. If each of you can give the correct response, I'll hand over the key. MATH-BASED CHALLENGE	Whoa! I'm just waking up now. I got caught up in that sleeping gas. I'm not sure how you managed to get through that shield door, but you're too late. The thief used the Teleporter. Still, this might be worth having. It's a key that fell out of the suit as the thief was running away from the chemicals. After being knocked out, I'm not sure I trust anyone, though. GRD has standard operating procedures that I want to see you respond to before I give up this evidence. If each of you can give the correct response, I'll hand over the key. ROOT-WORD-BASED CHALLENGE	Whoa! I'm just waking up now. I got caught up in that sleeping gas. I'm not sure how you managed to get through that shield door, but you're too late. The thief used the Teleporter. Still, this might be worth having. It's a key that fell out of the suit as the thief was running away from the chemicals. After being knocked out, I'm not sure I trust anyone, though. GRD has standard operating procedures that I want to see you respond to before I give up this evidence. If each of you can give the correct response, I'll hand over the key. ROOT-WORD-BASED CHALLENGE	Whoa! I'm just waking up now. I got caught up in that sleeping gas. I'm not sure how you managed to get through that shield door, but you're too late. The thief used the Teleporter. Still, this might be worth having. It's a key that fell out of the suit as the thief was running away from the chemicals. After being knocked out, I'm not sure I trust anyone, though. GRD has standard operating procedures that I want to see you respond to before I give up this evidence. If each of you can give the correct response, I'll hand over the key. MATH-BASED CHALLENGE (ON COMPLETION) OK, I guess it's fine to give you this as well. It's a decryption device that you'll want to share with your team. Good luck!

Game Logic: The agent provides the key, which is the clue to the next location. The decoder also gets a decryption device to help at the next plot point.

2. Augmented Reality Activity Day 2, Game Plot Point 6

Key			
Inventors	**GRD Agents**	**Trackers**	**Decoders**
Keys like these match up to specific rooms in the Longhair Institute. It's definitely one of these four rooms that are shown on your map. Make sure that you have the decryption device from the decoder on your team. Take a look at the coding on the key and see if you can't decide as a group which room to visit.	Keys like these match up to specific rooms in the Longhair Institute. It's definitely one of these four rooms that are shown on your map. Make sure that you have the decryption device from the decoder on your team. Take a look at the coding on the key and see if you can't decide as a group which room to visit.	Keys like these match up to specific rooms in the Longhair Institute. It's definitely one of these four rooms that are shown on your map. Make sure that you have the decryption device from the decoder on your team. Take a look at the coding on the key and see if you can't decide as a group which room to visit.	Keys like these match up to specific rooms in the Longhair Institute. It's definitely one of these four rooms that are shown on your map. Since you have the decoder, you should have shared it with the rest of your group by now. Take a look at the coding on the key and see if you can't decide as a group which room to visit.

Game Logic: They key leads the team to its next location.

AUGMENTAL

3.   Video: Conclusion to Augmented Reality Game, The Teleporter

FADE IN:

INT. LONGHAIR INSTITUTE - BEHIND THE SECURITY DOOR - DAY

The door swings open onto a bare room. Michael steps into the frame. The only thing in the room is the thief, still dressed in the Teleporter. On seeing Michael, the thief stands, slowly removes the hood, and then hands it to him. The thief is DeJuan.

> DEJUAN
> (Gesturing to the Teleporter.)
> It wouldn't work.

> MICHAEL
> I didn't want to believe that you were the thief. Even went by your room eight or nine times just to see if I could talk to you. To help you. But of course you weren't there.

> DEJUAN
> Everyone always has to help me.

> MICHAEL
> You're my friend.

> DEJUAN
> Everything I try and do goes badly.

> MICHAEL
> Calm down. Sit down.

> DEJUAN
> I apply for the fellowship and I miss out on that. I invest everything in my tech company and that goes under. And now…

> MICHAEL
> You know what? Save it. You didn't get that fellowship because another guy in your class spent more time in the library doing what he needed to do. Your tech company failed because your partners made wrong choices. I'm sick of excuses, DeJuan.

He sits in a chair next to the door, watching his friend.

> DEJUAN
> Does June know about me?

> MICHAEL
> (Nodding.)
> I think she knew as soon as the thief was still on the move.

> DEJUAN
> For what it's worth, I was never going to let Shaunda and that guy Agent Coles go to jail. I have the security tapes that prove they're innocent. Once I had figured out a way out of here, I was going to leave all that stuff behind. All the money that I took, too.

> MICHAEL

What about your big plan to save the business?

      DEJUAN
That was the idea at first. Now… now I just don't want anyone else getting hurt. Michael, I'm sorry. I'm really, really sorry.

      MICHAEL
Right now, we're the only ones who know.

      DEJUAN
Whatever you decide… you all decide… I'll do it.

                            FADE OUT.

Suggested Curriculum Homework: Students write an entry either in Michael's journal or June's journal: What should they do about DeJuan?