

TEF Grant Final Report

All Thompson Education Foundation (TEF) grant recipients must submit a final report to TEF by **May 31, 2025**. The final report is required. If you do not submit a final report for this grant by the due date, you will not be allowed to apply for future TEF grants.

Name: Joe Goldman

School: Centennial Elementary

Grant Type: Great Idea Grant

Project Name: Augmented Reality Sandbox

Objective of project as stated in the grant application:

We propose the development of an Augmented Reality (AR) sandbox designed to enhance geography education for students in grades 1-5. This interactive learning tool will allow students to visualize and manipulate topographical features, making geography both engaging and fun. By building the AR sandbox inhouse, we aim to create an innovative educational resource at a fraction of the cost of purchasing commercial alternatives.

1. Describe how you implemented your project.

Implementation of the AR Sandbox project faced several challenges due to delays in the purchasing and delivery of IT components, as well as unforeseen setbacks in installation and setup. As a result, the sandbox was not fully operational until May 2, which significantly impacted the timeline I had originally envisioned for its integration into classrooms this spring.

Because of the late completion date, classroom teachers have been hesitant to introduce the sandbox into their instructional time, concerned that it might cause disruption during the final weeks of the school year. However, the sandbox has found initial success in alternative settings. It has been effectively used as a reward in intervention groups, offering students a highly engaging and motivating experience. Additionally, even before it became fully functional, the sandbox served as a sensory tool for SEL instructors, supporting student regulation and engagement in a therapeutic context.

Looking ahead, I plan for the AR Sandbox to be fully integrated into classrooms at the beginning of the upcoming school year. This will allow for thoughtful planning and collaboration with staff to maximize its instructional and therapeutic benefits.

2.

Please provide the results of your project. This information needs to correlate to the “measurements” provided on your original grant application. If you changed your measurements of success, please detail the reason for the change with your results.

Due to delays in the delivery and installation of key IT components, the AR Sandbox was not fully operational until May 2. As a result, I was unable to collect data that directly aligns with the original success measurements outlined in the grant application, which were based on regular instructional use, student engagement, and teacher-reported integration into curriculum by spring 2025.

Given the adjusted timeline, the project’s intended instructional outcomes could not be fully assessed during this school year. However, alternate and informal measures were observed during limited use:

- **Student Engagement (Revised Measure):** Although not part of regular classroom instruction, the sandbox was used as a reward within intervention groups. Students responded with high interest and enthusiasm, often asking to use it again—indicating its strong potential as a motivational tool.
- **Sensory Support (Unplanned Outcome):** Prior to the sandbox becoming fully functional, it was used by SEL instructors as a sensory regulation tool. Staff reported that students engaged calmly and constructively with the sandbox, supporting self-regulation goals and demonstrating its value beyond academic instruction.

Because the original measurements could not be implemented within the expected timeframe, these revised observations highlight the sandbox’s promise in supporting engagement and sensory regulation. I plan to collect more formal data aligned with the original grant measurements—such as classroom integration, teacher feedback, and student engagement surveys—once the sandbox is fully implemented in fall 2025.

3. Did anything surprise you or your students during the implementation of your project?

One of the most surprising aspects of the project was how quickly students gravitated toward the AR Sandbox, even before it was fully operational. Despite the lack of interactive projection in the early

stages, students were naturally drawn to the tactile and visual experience of the sand itself. This reinforced how powerful hands-on, sensory-based tools can be for engagement and self-regulation.

Additionally, I was surprised by how effectively the SEL instructors were able to incorporate the sandbox into their work with students before the technology was even in place. Their creativity in using it as a sensory tool highlighted the sandbox's versatility and potential beyond its original academic purpose.

Students were also amazed by the interactive projection once it became fully functional. The real-time topographical changes and visual feedback sparked genuine excitement and curiosity—several students described it as “magic” and immediately began experimenting and asking questions about how it worked. This confirmed the sandbox's potential not just as a tool for learning, but as a powerful catalyst for inquiry and wonder.

4. Please provide a copy of the final budget for the grant (you may attach a separate sheet of paper). All copies of receipts must be submitted.

5.

Do you feel the project can be easily replicated in additional classrooms in Thompson School District, and, if so, is there any advice you can share?

Yes, I believe the AR Sandbox project can be successfully replicated in additional classrooms across Thompson School District, especially in schools where hands-on, sensory-based, or experiential learning is a priority. The concept offers cross-curricular applications in science (e.g., topography, erosion, landforms), social studies (e.g., geography, map skills), and SEL (e.g., sensory regulation and cooperative interaction), making it a flexible tool for various learning environments.

Advice for Replication:

1.

Plan Ahead for IT Support: One of the biggest challenges was the delay in receiving and installing components. Early and close coordination with the district's IT department is essential. I recommend ordering equipment well in advance and clearly communicating installation needs.

2.

Secure a Dedicated Space: The sandbox is a sizable and stationary setup. Having a designated, low-traffic area minimizes disruption and makes ongoing use more feasible.

3.

Start with Small Groups: Begin with intervention groups, enrichment sessions, or SEL activities to build staff comfort and student familiarity before attempting full-class integration.

4.

Train and Involve Staff Early: Teachers and specialists should be invited to explore the sandbox before implementation. Demonstrations and brainstorming sessions can inspire

amazon.com



SBh4bjQYF2

Your order of February 4, 2025 (Order ID 114-2239214-5041866)

Qty.	Item	Item Price	Total
1	The Hillman Group 190207 3/8-16X5 ZINC HEX Bolt Tools & Home Improvement B000BD6DHO B000BD6DHO 008236074994	\$32.54	\$32.54

This shipment completes your order.	Subtotal	\$32.54
	Promotional Certificate	-\$0.32
	Order Total	\$32.22
	Paid via credit/debit	\$32.22

Return or replace your item
Visit Amazon.com/returns



0/Bh4bjQYF2/-1 of 1-//BDU5-NIT/second-nominated-day/0/0205-12:30/0204-23:04

A7-20

amazon.com



SBvdZkMIG2

Your order of February 4, 2025 (Order ID 114-2239214-5041866)

Qty.	Item	Item Price	Total
1	4 inch Heavy Duty Casters Load 2400lbs, Lockable Bearing Plate Caster with Brakes, 360-degree Swivel for Furniture and W... Misc. X00231RRJR ABS401 (Sold by ABSLIMUS® Inc)	\$28.99	\$28.99
1	Coarse Thread Hex Nuts 3/8"-16 Misc. B0008PTJ4M B0008PTJ4M 008236069747	\$10.75	\$10.75
1	Prime-Line MPSC7849-100 Drywall Screws, #6 x 2 In., Coarse Thread, Phillips Head Drive, Flat (100 Pack) Tools & Home Improvement B07797NZX1 B07797NZX1 049793678492	\$5.91	\$5.91
1	Hillman 830506 Stainless Steel 3/8-Inch Flat Washers, 100-Pack Tools & Home Improvement B000BDSHEA B000BDSHEA 008236142655	\$12.59	\$12.59

We've sent this part of your order to ensure quicker service. The other items will ship separately.	Subtotal	\$58.24
	Promotional Certificate	-\$0.32
	Shipment Total	\$57.92
	Paid via credit/debit	\$57.92

amazon.com



SB7fjJ0hg2

Your order of February 4, 2025 (Order ID 114-9111754-2192219)

Qty.	Item	Item Price	Total
1	TNP Power Supply Adapter Cable for Kinect - Replacement USB AC Connector Cord Compatible with PC Microsoft Xbox 360 Kine... Video Game X0017LXN7J XB_KN_PWR_88_FBA 815656029363 (Sold by TNP Direct)	\$9.52	\$9.52

We've sent this part of your order to ensure quicker service. The other items will ship separately.	Subtotal	\$9.52
	Promotional Certificate	-\$0.11
	Shipment Total	\$9.41
	Paid via credit/debit	\$9.41

Return or replace your item
Visit Amazon.com/returns



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Final Details for Order #114-7206276-9510657

Order Placed: February 3, 2025
Amazon.com order number: 114-7206276-9510657
Seller's order number: 33376798
Order Total: \$629.00

Shipped on February 4, 2025	
Items Ordered	Price
1 of: BenQ MW632ST Business Projector, 3200 Lumens, WXGA, Short Throw, Wireless, Dual HDMI, Keystone, 1.2X Zoom, 3D, Golf Simu lation, Conference Room, Meeting, Classroom Sold by: Adorama (seller profile) Condition: New	\$629.00
Shipping Address: Andy Larkins, Technology 2890 MONROE AVE LOVELAND, CO 80538-3274 United States	Item(s) Subtotal: \$629.00 Shipping & Handling: \$0.00 ----- Total before tax: \$629.00 Sales Tax: \$0.00 -----
Shipping Speed: Standard Shipping	Total for This Shipment: \$629.00 -----

Payment information	
Payment Method: Visa Last digits: 2177	Item(s) Subtotal: \$629.00 Shipping & Handling: \$0.00 -----
Billing address Andy Larkins, Technology 2890 MONROE AVE LOVELAND, CO 80538-3274 United States	Total before tax: \$629.00 Estimated Tax: \$0.00 ----- Grand Total: \$629.00
Credit Card transactions	Visa ending in 2177: February 5, 2025: \$629.00

To view the status of your order, return to [Order Summary](#).



**How doers
get more done.**

1100 NICKEL DR LOVELAND CO 80537
970-461-9406 MANAGER CARL FREEMAN

1529 00002 01202 02/16/25 10:07 AM
SALE CASHIER PHILLIP

053608560308 5/8 RTD SHTG <A> 31.25N

19/32 OR 5/8 4X8 CDX PLYWOOD

750298152997 2X4-7 STUDS <A>

2X4-84" WHITEWOOD STUD

2@2.98

5.96N

764666680265 3IN CS 1LB <A>

10.48N

3" CONSTRUCTION SCREW 1 LB

044315610707 FRAME ANCHOR <A>

2INX3IN ANGLE FRAMING ANCHOR

8@0.98

7.84N

015812002968 SQUARE <A>

5.47N

EMPIRE 7-1/4" POLYCAST RAFTER SQUARE

037083050035 TB II 8 OZ <A>

5.48N

TITEBOND II WOOD GLUE 8 OZ

0000-441-856 4X4-8 GDF <A>

4X4-8FT PREMIUM FIR

2@10.42

20.84N

SUBTOTAL

87.32

SALES TAX

0.00

TAX EXEMPT

TOTAL

\$87.32

XXXXXXXXXXXX2706 VISA

USD\$ 87.32

AUTH CODE 045941/4026374

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Contactless

AID A0000000031010

VISA CREDIT

P.O.#/JOB NAME: 0

1529 02/16/25 10:07 AM



1529 02 01202 02/16/2025 5467

RETURN POLICY DEFINITIONS

POLICY ID

DAYS

POLICY EXPIRES ON

A

1

90

05/17/2025



Final Details for Order #114-7995805-6445030

Paid By: Thompson School District R2-J
Placed By: Misty Wilhite-Centennial Elementary
Order Placed: February 19, 2025
Amazon.com order number: 114-7995805-6445030
Order Total: \$248.88

Shipped on February 20, 2025

Items Ordered

Price

5 of: Sandtastik Sparkling White Play Sand, 25 lb (11.3 kg) - Fill Sandboxes, Sand Trays, Sensory Tables, Water Tables! Scoop,
Mold & Pour This Premium Non-Toxic Sand
Sold by: Amazon ([seller profile](#))
Business Price
Condition: New

\$31.11

Shipping Address:

Goldman-Sandbox
1555 W. 37TH ST
LOVELAND, CO 80538
United States

Item(s) Subtotal: \$155.55

Shipping & Handling: \$0.00

Total before tax: \$155.55

Sales Tax: \$0.00

Shipping Speed:

Consolidated Shipping in fewest deliveries

Total for This Shipment: \$155.55

Shipped on February 20, 2025

Items Ordered

Price

3 of: Sandtastik Sparkling White Play Sand, 25 lb (11.3 kg) - Fill Sandboxes, Sand Trays, Sensory Tables, Water Tables! Scoop,
Mold & Pour This Premium Non-Toxic Sand
Sold by: Amazon ([seller profile](#))
Business Price
Condition: New

\$31.11

Shipping Address:

Goldman-Sandbox
1555 W. 37TH ST
LOVELAND, CO 80538
United States

Item(s) Subtotal: \$93.33

Shipping & Handling: \$0.00

Total before tax: \$93.33

Sales Tax: \$0.00

Shipping Speed:

Consolidated Shipping in fewest deliveries

Total for This Shipment: \$93.33

Payment information

Payment Method:

Visa | Last digits: 2706

Item(s) Subtotal: \$248.88

Shipping & Handling: \$0.00

Total before tax: \$248.88

Estimated Tax: \$0.00

Grand Total: **\$248.88**

To view the status of your order, return to [Order Summary](#).

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Invoice#: AD2RT4R

Due
4/12/2025

Invoice Amount
\$754.68

Invoice Date	Payment Terms	Customer #
3/13/2025	Visa	1061355
Order #	Order Date	PO #
1CGQ7N2	2/28/2025	2502-01C9

Account Manager
Justin Green
312-705-3348
dreamteam@cdwg.com

Need help? Email Us
credit@cdw.com

How to Pay

Electronic (ACH)

The Northern Trust
50 S. LaSalle St.
Chicago, IL 60675

Routing No.: 071000152

Account Name: CDW
GOVERNMENT LLC

Account No. 91057

E-mail Remittance To:
gachremittance@cdw.com

By Mail (Check)

CDW Government
75 Remittance Dr., Suite 1515
Chicago, IL 60675-1515

Shipping Information

Shipping Address	Shipping Method
THOMPSON SCHOOL DISTRICT 2890 MONROE AVE LOVELAND, CO, 80538-3274	UPS Ground (2-3 days)

Attention to
MIKE HARTMAN

Billing Information

Billing Address

THOMPSON SCHOOL DIST. R2-J
THOMPSON SCHOOL

800 SOUNTH TAFT AVE

LOVELAND, CO, 80537-6347
970-613-5140

CDW PART #	DESCRIPTION	QUANTITY ORD / SHP / B.O	ITEM PRICE	ITEM TOTAL
8005980	HP Pro SFF 400 G9 Desktop Computer - Intel Core i5 12th Gen i5-12500 - vPro			
	MFG # AP0H1AT#ABA	1 1 0	\$754.68	\$754.68
	Contract # NATIONAL IPA TECHNOLOGY SOLUTI			
	Serial# (1)			
ISO 9001 and ISO 14001 Certified			Subtotal	\$754.68
CDW DIRECT			Shipping	\$0.00
FEIN 36-4230110			Tax	\$0.00
			Invoice Amount	\$754.68
			AMOUNT DUE	\$754.68