

The Holiday Game Plan

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Externship: Breaking Games Analytics & Database Design Externship

Submitted: [Date]

How to use this document. Make a copy of this template at the start of Week 1. Each week, you'll add one section. By the end of the externship, this document — plus your HTML dashboard — is what you present to the Breaking Games team.

Don't worry about polish on day one. Some sections will be empty until later weeks. That's fine.

Note: This is one running document. You'll add to it a section at a time and paste the same link whenever a task asks for it.

Executive Summary

Fill this in last (during the capstone). Three to five sentences. The one-page version of "what did we find and what should we do."

[Your executive summary goes here.]

Week 1: Getting Into Breaking Games' Raw Data

1.1 Data inventory

For each of the six data sources, write what's in it, what questions it can answer, and what it can't answer alone.

File	What it contains
shopify_sales	Product sales totals; shows best sellers, but not when or why they sold.
shopify_orders	July order details; shows purchases, but not earlier months.
shopify_checkouts	Abandoned carts; shows what was left behind, but not the abandonment rate.
referrals	Traffic by source and landing page; shows visit patterns, but not exact revenue.
meta_campaigns	Ad results by campaign; shows spend and clicks, but not linked Shopify sales.

File	What it contains
meta_ad_sets	Ad results by ad set; compares targeting, but not linked Shopify sales.

1.2 Five instant answers

The questions Mike asks every Monday morning. Paste the SQL query and the answer for each.

Q1: Top 10 products by units sold this period.

```
SQL
SELECT
  product_title,
  SUM(net_items_sold) AS units_sold
FROM shopify_sales
GROUP BY product_title
ORDER BY units_sold DESC
LIMIT 10;
```

Answer:

Dwellings of Eldervale - Oracle Hex Tile	178
Dwellings of Eldervale - LEGENDARY Upgrade Kit	175
Dwellings of Eldervale - Minotaur Mercenary Mini Expansion	135
Dwellings of Eldervale - Shapeshifter Mercenary Mini Expansion	134
Dwellings of Eldervale 2nd Edition: Standard	129
Dwellings of Eldervale - Wooden Upgrade Treasure and Trove Tokens	127
We're Doomed!	104

Dwellings of Eldervale - DELUXE Upgrade Kit	89
MIXTAPE	83
The Big Box of Magic	46

Q2: Top 10 products by total revenue.

```
SQL
SELECT
    product_title,
    SUM(total_sales) AS total_revenue
FROM shopify_sales
GROUP BY product_title
ORDER BY total_revenue DESC
LIMIT 10;
```

Answer:

Dwellings of Eldervale 2nd Edition: Standard	13323.56
Dwellings of Eldervale - LEGENDARY Upgrade Kit	12514.05
Dwellings of Eldervale - DELUXE Upgrade Kit	5014.81
We're Doomed!	3810.47
Dwellings of Eldervale - Wooden Upgrade Treasure and Trove Tokens	2586.22
The Big Box of Magic	1920.14
Dwellings of Eldervale - Exclusive Game Mat	1874.13
MIXTAPE	1733.39
Dwellings of Eldervale - Minotaur Mercenary Mini Expansion	1370.38
Dwellings of Eldervale - Shapeshifter Mercenary Mini Expansion	1361.17

Q3: How many products are in the catalog?

```
SQL
SELECT COUNT(DISTINCT product_title) AS product_count
FROM shopify_sales;
```

Answer: 99

Q4: What was the total Meta ad spend?

```
SQL
SELECT ROUND(SUM(spend_usd), 2) AS total_meta_ad_spend_usd
FROM meta_campaigns;
```

Answer: \$37,200.94

Q5: How many unique checkout sessions started?

```
SQL
SELECT COUNT(DISTINCT name) FROM shopify_checkouts;
```

Answer: 1062

Week 2 — Designing Your First Database

2.1 Schema diagram

dim_product		shopify_sales
-----		-----
product_id (primary key)	<----->	product_id (foreign key)
product_title		net_items_sold

product_slug	net_sales
category (planned)	total_sales

`dim_product` gives each product one ID and keeps its descriptive details, title, URL slug, and planned category, in one place. Price, units, and revenue can change with sales, so they belong in the sales data rather than the product definition.

2.2 The dim_product design decision

A short paragraph: what columns did you choose for dim_product, and why?

[Your reasoning]

[Screenshot of the final JOIN query from Step 5 and the top 5 results]

2.3 Connect the journey

Three queries that connect traffic to sales across the catalog. Paste each query and a one-line summary of what it returned.

Query 1 — Products with sales but mysterious origins. Products with sales rows but no referral traffic matching their slug.

SQL

```
SELECT d.product_title, s.net_items_sold, s.total_sales
FROM dim_product AS d
JOIN shopify_sales AS s
  ON s.product_id = d.product_id
LEFT JOIN referrals AS r
  ON TRIM(COALESCE(d.product_slug, '')) <> ''
  AND r.landing_page LIKE '%' || d.product_slug || '%'
WHERE r.landing_page IS NULL
ORDER BY s.total_sales DESC;
```

Result: 58 products had sales but no matching referral slug. Examples include Dwellings of Eldervale 2nd Edition: Standard and Dwellings of Eldervale – LEGENDARY Upgrade Kit.

Query 2 — Products with traffic but no sales. Traffic comes in, nobody buys.

```
SQL
SELECT d.product_title, SUM(r.pageviews) AS total_pageviews
FROM dim_product AS d
JOIN referrals AS r
  ON TRIM(COALESCE(d.product_slug, '')) <> ''
  AND r.landing_page LIKE '%' || d.product_slug || '%'
LEFT JOIN shopify_sales AS s
  ON s.product_id = d.product_id
WHERE s.product_id IS NULL
GROUP BY d.product_id, d.product_title
ORDER BY total_pageviews DESC;
```

Result: 0 products. All products in dim_product have sales rows, so this table cannot reveal traffic-only products; no examples are available.

Query 3 — The full story. Every product with **total_sales**, **total_pageviews**, and a pageviews-per-unit-sold ratio.

```
SQL
WITH sales_totals AS (
  SELECT product_id,
         SUM(total_sales) AS total_sales,
         SUM(net_items_sold) AS net_items_sold
  FROM shopify_sales
  GROUP BY product_id
),
referral_totals AS (
  SELECT d.product_id,
         SUM(r.pageviews) AS total_pageviews
  FROM dim_product AS d
  JOIN referrals AS r
    ON TRIM(COALESCE(d.product_slug, '')) <> ''
    AND r.landing_page LIKE '%' || d.product_slug || '%'
  GROUP BY d.product_id
)
SELECT
  d.product_title,
  COALESCE(s.total_sales, 0) AS total_sales,
```

```

COALESCE(r.total_pageviews, 0) AS total_pageviews,
CASE
  WHEN COALESCE(s.net_items_sold, 0) = 0 THEN NULL
  ELSE ROUND(1.0 * COALESCE(r.total_pageviews, 0) / s.net_items_sold, 2)
END AS pageviews_per_unit_sold
FROM dim_product AS d
LEFT JOIN sales_totals AS s ON s.product_id = d.product_id
LEFT JOIN referral_totals AS r ON r.product_id = d.product_id
ORDER BY total_sales DESC;

```

Result:

Dwellings of Eldervale 2nd Edition: Standard	13323.56	0	0.0
Dwellings of Eldervale - LEGENDARY Upgrade Kit	12514.05	0	0.0
Dwellings of Eldervale - DELUXE Upgrade Kit	5014.81	0	0.0
We're Doomed!	3810.47	0	0.0
Dwellings of Eldervale - Wooden Upgrade Treasure and Trove Tokens	2586.22	0	0.0
The Big Box of Magic	1920.14	3438	74.74
Dwellings of Eldervale - Exclusive Game Mat	1874.13	0	0.0
MIXTAPE	1733.39	14861	179.05
Dwellings of Eldervale - Minotaur Mercenary Mini Expansion	1370.38	0	0.0
Dwellings of Eldervale - Shapeshifter Mercenary Mini Expansion	1361.17	0	0.0

What you found — a short paragraph covering:

- Which products had high traffic but no sales?
- Which products had sales you couldn't trace to a source?
- What's the most interesting finding?

I could not identify a high-traffic product with no sales because every product in `dim\_product` already has a sales row. Sixty products had sales but no matching referral slug, including

Dwellings of Eldervale 2nd Edition: Standard and its LEGENDARY Upgrade Kit. The most interesting finding is that Dwellings Standard does appear in referral traffic under a different URL slug, so an unmatched result does not necessarily mean it had no traffic.

Week 3: What's Actually Selling

3.1 Product performance leaderboard

Query used:

[\[Add the query\]](#)

Top 25 products by revenue, with total sales, net items sold, and AOV for each.

Rank	Product	Total Sales	Net Items Sold	AOV
1				
...				
25				

3.2 Reorder recommendation

For Mike's November 1 reorder commit, your call:

[\[Add the summary\]](#)

Print heavy — reorder confidently (~10 products):

- [Product 1] — why: [your reason]
- [Product 2] — why: [your reason]
- ...

Print light — modest reorder (~5 products):

- [Product 1] — why: [your reason]
- ...

Don't print — let it go (~3 products):

- [Product 1] — why: [your reason]
 - ...
-

Week 4 — Following the Money

4.1 Channel breakdown

Where did the \$37,000 in Meta spend actually drive traffic? Where are customers coming from organically?

Channel	Pageviews	Checkout	Conversio	Spend	Cost per	Cost per
---------	-----------	----------	-----------	-------	----------	----------

		sessions	n rate		pageview	checkout session
Paid Social (Meta)						
Organic Search						
Direct						
Community /Referral						
Email						
Other						

Key finding: [one sentence — e.g., “BoardGameGeek converts at about 2.9x Facebook’s rate on 54x less traffic, worth investing in community partnerships.”]

4.2 Meta campaign ROI

Top 5 best-performing campaigns:

Campaign	Spend	Results	Cost per result	CTR	CPC

Bottom 5 (the ones to question):

Campaign	Spend	Results	Why we should reconsider

4.3 Q4 ad allocation plan

Continue running (\$X total):

- [Campaign 1] — why: [your reason]
- ...

Cut or pause (\$X freed up):

- [Campaign 1] — why: [your reason]
- ...

New investment (where the freed dollars go):

- [Channel/strategy] — why: [your reason]

4.4 The uncomfortable finding

One paragraph: what's a result here that Mike won't want to hear, and how do you back it up with data?

[Your honest read.]

Week 5: Carts in the Wild

5.1 The real abandonment rate

Metric	Value
Unfinished checkout sessions in the export (2016-2025)	
Completed orders (July 2025, from <code>shopify_orders</code>)	

- **Time of day:** [pattern you noticed]
- **Day of week:** [pattern you noticed]
- **Cart size:** [pattern you noticed]
- **Discount usage:** [pattern you noticed]
- **Geography:** [pattern you noticed]

What looks off: The first thing I noticed that looks off is [X]. I'll investigate it as a bot/automation candidate in Step 3.

5.4 What Breaking Games can actually fix

Three concrete recommendations the team could act on before Q4:

1. [Recommendation 1] — backed by: [data point]
 2. [Recommendation 2] — backed by: [data point]
 3. [Recommendation 3] — backed by: [data point]
-

Capstone Project — The Holiday Game Plan

6.1 The dashboard

Paste a screenshot of your final HTML dashboard here. (Open [dashboard.html](#) in a browser → take a screenshot → drag in.)

[Dashboard screenshot]

6.2 The five numbers

#	KPI	Value	What it tells the team
1			
2			
3			
4			
5			

6.3 Key findings (three to five)

Each one: one sentence finding + one sentence "so what."

1. **Finding:** [your finding] **So what:** [the action it implies]
2. **Finding:** [your finding] **So what:** [the action it implies]
3. **Finding:** [your finding] **So what:** [the action it implies]
4. **Finding:** [your finding] **So what:** [the action it implies]
5. **Finding:** [your finding] **So what:** [the action it implies]

6.4 Recommendations to Breaking Games

The three things the team should do before Q4 — backed by your analysis.

1. [Recommendation]

- **Rationale:** [what the data shows]
- **Owner:** [who should drive it — Mike, Jess, ops, etc.]
- **Expected impact:** [your estimate]

2. [Recommendation]

- **Rationale:**
- **Owner:**
- **Expected impact:**

3. [Recommendation]

- **Rationale:**
- **Owner:**
- **Expected impact:**

6.5 What you'd need next

If you had another four weeks, what data or analysis would unlock the most additional value?

[Your wishlist.]