What the eye sees first

Read a chart on paper, then build your first one

Names _____

Part A: pairs, on paper, laptops closed; the chart to criticise is on the projector. Part B: alone, in Superset, dataset `games_clean` (database `Dades classe`, schema `public`): 26,685 Steam games, one row per game. A chart is the **HUD** of your data: it has half a second of the reader's attention.

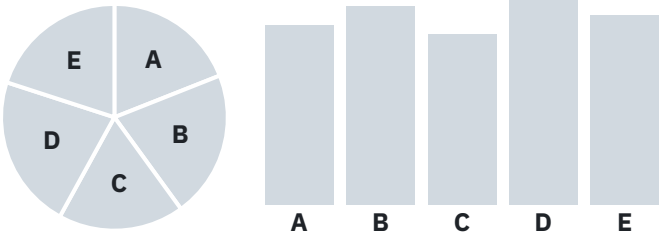
Reference

Attribute	In a chart
Colour	One highlighted bar among grey ones.
Size / length	Bar length, point size.
Position	Height of a point on an axis.
Shape	Different markers per series.

N.	Four rules for a readable chart
1	**Position beats angle** (Cleveland and McGill, 1984).
2	**Colour means something**: a highlight, a category or a state. Never decoration.
3	**Hierarchy**: decide what must be seen first; make it the biggest or the only coloured thing.
4	**Data-ink** (Tufte, 1983): erase the ink that shows no data.

The four on the left are **preattentive attributes**: your eye reads them before you decide to look. They work for one thing at a time. About 1 in 12 men and 1 in 200 women do not tell red from green well: add a label to any colour.

Part A · On paper (15 min)



A1 · The eye test. Both pictures show the same five values. Cover the bars with your hand.

From the **pie**, biggest to smallest: _____

Now from the **bars**: _____

Same order? _____ Which was faster? _____

What did your eye compare in the pie? _____

And in the bars? _____

The chart on the projector. One line each. For A4, use the rules of the reference.

A2 What do you see first? Is that what matters?

_____

A3 What question is this chart trying to answer?

_____

A4 Which rules does it break?

_____

A5 What ink could you erase without losing any data?

_____

A6 Sketch the chart that answers A3. Only the shape: no numbers, no decoration.

Part B · Your first chart (20 min)

Games by price band. How many Steam games are there in each price band? Open Superset in your browser.

Step	Do this	You should see / write
1	**Charts → + Chart**. In **Choose a dataset** pick `games_clean`; in **Choose chart type** pick **Bar Chart**. Press **Create new chart**.	An empty chart with the **Data** tab on its left.
2	In the **Data** tab: drag `price_band` to **X-axis**. In **Metrics** choose `COUNT(*)`.	Both controls filled in.
3	Press **Create chart**. From now on the button says **Update chart**.	Bars: how many? _____ In which order? _____
4	**X-Axis Sort By** → `COUNT(*)`. Untick **X-Axis Sort Ascending**. **Update chart**.	Bars from tallest to shortest. Tallest band: _____
5	Hover over the tallest bar. Then look at **Results**, under the chart.	Hover box: _____ Exact number: _____
6	**Save** (top right) → **Chart name**: `UT3 · Games by price band` → **Save**.	**Charts** lists it. The prefix `UT3 ·` is compulsory all unit.

B1 After step 3 the bars were in an order nobody asked for. Which rule did step 4 apply?

B2 Which preattentive attribute shows the answer on your chart?

B3 What on your chart shows no data? Would you erase it, or does it carry meaning?

B4 Swap screens with your neighbour. Ask A2–A5 about **their** chart and give them one piece of advice.

Done when Every blank is filled · the chart is saved as `UT3 · Games by price band`. **Fast?** Switch **Metrics** to `AVG(price)` and **Update chart**: why did the tallest bar change? Do not save that one.

Stuck?

- **`games_clean` is not in the dataset list**: **Datasets → + Dataset** → database `Dades classe`, schema `public`, table `games_clean` → create it, then start step 1 again.
- **One single bar with 26,685**: `price_band` was not dropped on **X-axis**. Drag it there.
- **Bars in many colours with a legend**: a column sits in **Dimensions**. Remove it with the ×.
- **Superset does not open**: pair up with a neighbour and tell the teacher.

At home Chart hunt: bring on Wednesday a screenshot of one chart from a news site, a game or an app, with questions A2 and A5 answered under it.