



Inspiring kids to build a better future with technology.
An annual challenge by **Kids Code Jeunesse**.

Graph Reveal - #kids2030 Challenge

Use a graph for this exercise to understand trends and make predictions.

Remix a project (15-20mins)

Open up this [Scratch project](#) and play from beginning to end.

Create two new sprites:

1. Design two new **sprites** with the **paint editor**.
2. Using the **text tool**, type "2015" for one sprite and "55%" for the second sprite.
3. In the coding section, add the same two events to each sprite:
 - o A **When the green flag clicked** block followed by a **hide** block
 - o A **When space key pressed** block followed by a **hide** block

Plot your data: Use the data from this table to continue coding.

| YEAR | PLASTIC DISPOSAL METHODS BREAKDOWN | | |
|------|------------------------------------|----------------|-------------------|
| | Discarded (%) | Recycled (%) | Incinerated (%) |
| 1980 | 100 | 0 | 0 |
| 1990 | 90 | 2 | 8 |
| 2000 | 76 | 9 | 15 |
| 2005 | 69 | 12.5 | 18.5 |
| 2010 | 62 | 16 | 22 |
| 2015 | 55 | 19.5 | 25.5 |
| 2030 | Predict | Predict | Predict |

1. In the "pencil" **sprite**, use a **set pen color to** block and adjust the color; and a **glide 1 sec to x,y** block to plot the data coordinates for YEAR 2015. Use **two broadcast** blocks to trigger the new sprites. Click "**new message**" and type "2015" for the first block; type "55%" for the second block. Lastly, add a **wait sec** block and set to "4".



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2. Go back to the "2015" **sprite** and from the events category, select the **When I receive** block to activate the sprite's behavior. Add a **show** block, a **go to x,y** and select the appropriate x,y coordinates on the x-axis. Repeat the same directions for the "55%" **sprite**, this time, choosing the appropriate x,y coordinates for its place on the y-axis.
 - What will the squirrel say now?
3. In the "squirrel" **sprite**, add a **when I receive** block and select 2015. Add a **say** block and enter what you want the squirrel to say, to reflect the new data.

Add a new sound

- Add and change the current **sound** blocks to reflect the new data.

Extension

- Using your math skills, predict the discarded rate for year 2030.