



Hertzsprung-Russel Diagram

Plotting a Star Graph

Classroom Activity

Material List:

- String
- Scissors
- Open space
- HR diagram cards
- HR diagram hints

Outline

In this activity work as a class to create a classroom-sized, Hertzsprung-Russell diagram showing the lifecycle of stars.

You will be given a number of different stars with different luminosities and temperatures. Using these create a graph, with appropriate axis to plot the stars on.

Procedure:

1

Lay all the cards out across the floor and separate them into the three categories, star cards, axis title cards and axis value cards.

2

Use the string to make axis for your graph.



Online Observatory: onlineobservatory.eu

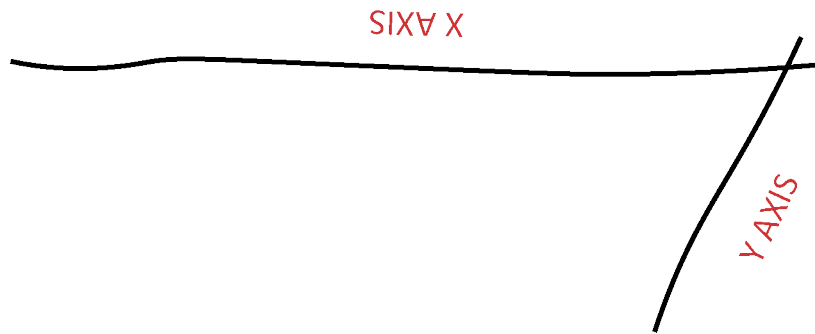
The online observatory collaboration consists of the following partners:

Baldone Observatory, Brorfelde Observatory, Cardiff University, Harestua Solar Observatory, Helsinki Observatory



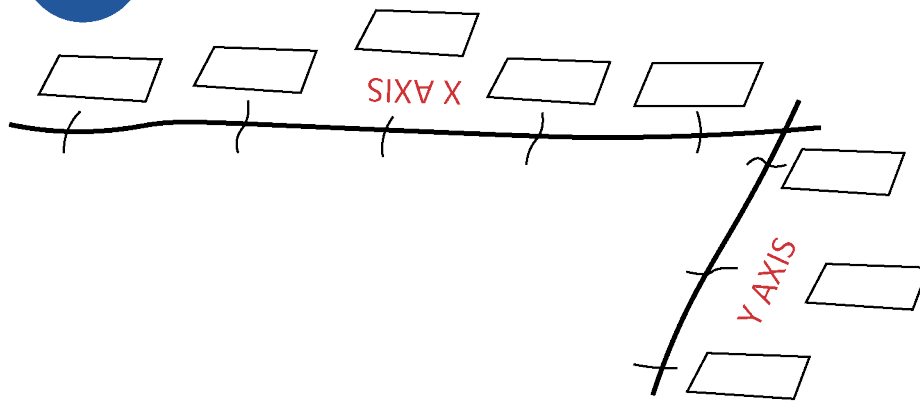
3

Decide which titles to use for each of the axis.



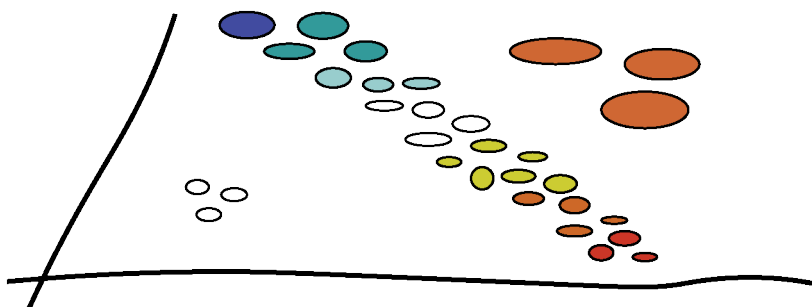
4

Assign values to point on the axis.



5

Place the stars on the graph, making sure to put them on the correct spot.





Assessment:

- Can you describe how the graph looks? Are stars clumped together in certain areas or spread out? Why might the graph look this way?
- Do you think the stars stay at a fixed position on the graph for their entire lifetime?
- Can you identify any red giants/supergiants or white dwarfs?
- Is there a diagonal strip of stars? This is the Main Sequence. What determines a star's position on the main sequence strip?

Further Activities:

Locate the Sun on your Hertzsprung-Russel Diagram.