An open source lesson by

PRIMARY BUSINESS PARTNERSHIP

Red Pike EDUCATION

Florence Nightingale Rose Chart

Also known as a coxcomb Chart

Lesson time (estimated)
1 hour

Resources

For this session you will need each learner to have:

- Rose chart template (paper-based resource);
- Scoring template (paper -based resource);
- 3 dice, physical or digital: https://www.random.org/dice/;
- Pen/pencil;
- 3 different coloured pens/pencils.

There is also a presentation video available via PBP for this session.

Learning outcomes

- Gain awareness of data presentation in professional roles;
- Gain awareness of less-common chart types;
- Be able to gather data by following basic algorithms;
- Be able to plot one-variable data onto a coxcomb chart;
- Be able to plot stacked data onto a coxcomb chart;
- Gain knowledge of the term 'intervention';
- Gain understanding of intervention impact through investigation.

Lesson Plan

Presentation video

- About the lesson author
- Less common data representation
- Florence Nightingale's Rose charts
- Introducing the 1st activity

video pause

Activity 1: Data collection for half of the coxcomb chart.

At this point the teacher may wish to help pupils or provide additional guidance if the video was not clear.

Fill in the table for the first 12 turns: Pupils must gather scores by rolling two dice (physical or digital), and add their scores, before multiplying by two.

For example, rolling a [3] and a [5] would score 8 X 2 = 16

Activity 2: Complete coxcomb chart for first 12 turns.

Using one colour, mark on the scores for each of the first 12 sectors.

Resume video:

- Introducing the intervention rules

video pause

Discussion: Will the interventions have much/any effect?
If so, which will have more effect?

Resume video:

- How to plot the stacked element of the chart

Activity 3: Data collection for the 2nd half of the coxcomb chart

Roll ***three*** dice for each turn and score according to the rules:

Intervention A: Each turn, roll three dice but only add the smallest and largest

Intervention B: Each turn, roll three dice, add the two largest and subtract the smallest.

For example, rolling a [3] [5] [6] would score:

A = 3 + 6 = 9
B = 5 + 6 – 3 = 8

Fill in the table for these last 12 more turns.

Activity 4: Completing the Coxcomb chart

Select a colour for each intervention.
Plot A for turns 13-24 in one colour.
Stack-plot* B for turns 13-24 in a different colour.

*if A=9 and B=8 then the line for B would be drawn at 17 on the polar axis.

Video resume:

- Conclusions

Activity/Discussion:

Analyse if the interventions had an effect on the shape of your chart and what this tells us.

Analyse if it is possible to tell if one intervention was more effective than the other.