Investigating changes in mood over time
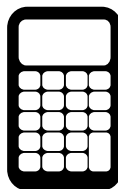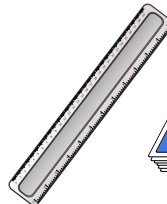
Name:

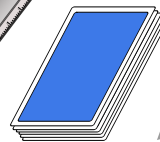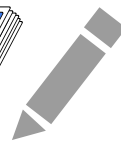Group:

We are going to investigate changes in mood over time, what might be related to changes in mood, and some problems when looking at changes over time.
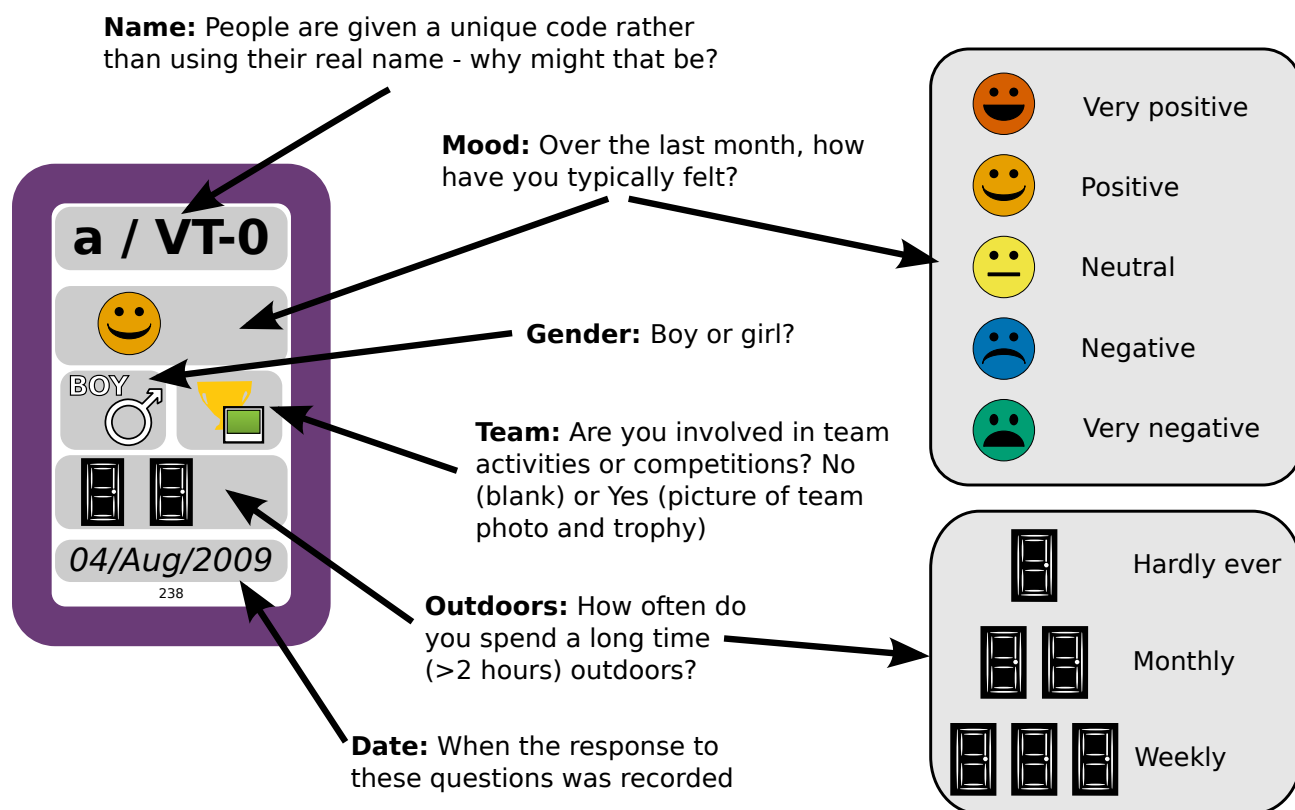
To do this we need to record important characteristics and ask people their mood multiple times.

This will give us several answers from each person over time - this is known as longitudinal data.

Some characteristics and answers can change over time, while others are constant. Can you think of examples of fixed and time-varying things we could ask?

We have asked a group of young people about their mood and some other characteristics at several different times. Each time a person was asked is represented by a card (this means there are multiple cards for each person). Below is an explanation of an example card:

Name: People are given a unique code rather than using their real name - why might that be?

Mood: Over the last month, how have you typically felt?

a / VT-0

Gender: Boy or girl?

BOY

Team: Are you involved in team activities or competitions? No (blank) or Yes (picture of team photo and trophy)

04/Aug/2009
238

Outdoors: How often do you spend a long time (>2 hours) outdoors?

Date: When the response to these questions was recorded

Very positive

Positive

Neutral

Negative

Very negative

Hardly ever

Monthly

Weekly

In this activity you will work as a group to collect the data and investigate what it tells us about changes in people's mood.

You will be given a number of cards. You will then share the information on these cards with the rest of your group.

How many cards do you have at the start?

How many different people (unique names) are among your starting cards?

It is often useful to plot data, this can help understand the types of data we have. It also gives us a visual summary of large and complex data, that would be too much to look at the raw data.

What type of plot should we use?

We will make line plots. Each person will be represented by a line.

What should the axes of our plot be?

We want to show changes in mood over time. So the x-axis should be time and the y-axis should be mood.

How should we go about drawing?

Everyone in your group has part of the data, represented by the cards they currently hold, you will need to share that information so that everyone can draw their own line plot.

Group discussion about how to plot

Date

The dates of each response are given as day/month/year on the bottom of each card. Do we need that level of detail?

As a group discuss what would be the best way to plot the x-axis as time?

Making the lines look different

Each card provides a lot of information, our line plot will only show mood over time.

We could add some of the extra information by drawing lines differently (either changing the colour or changing the way we draw the line - dotted lines and dashed lines).

As a group, discuss possible ways to make the lines different. Assign each member of the group one of these ideas and write it down below.

You are almost ready, as a group, to begin drawing line plots

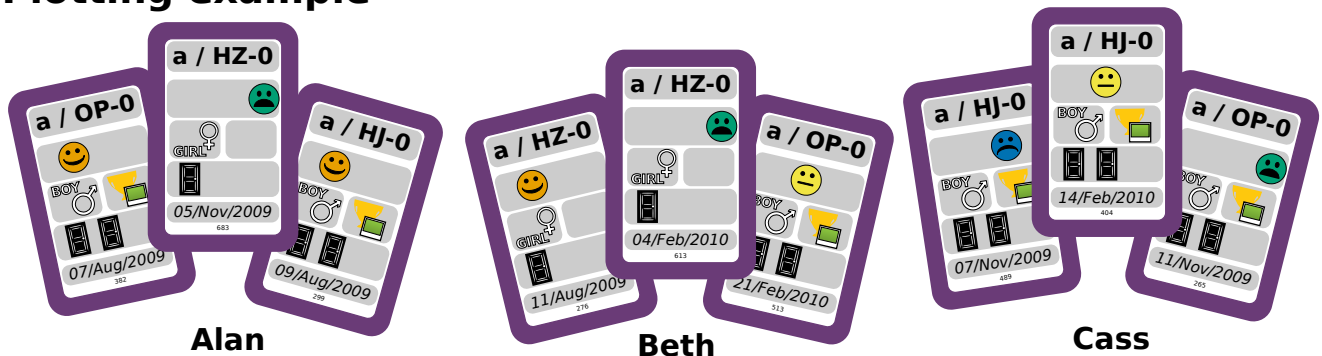The following page describes one approach for the group to draw the line plots.

Before you turn the page, as a group discuss ideas for how you will share the information between everyone so that each member can complete their own line plot.
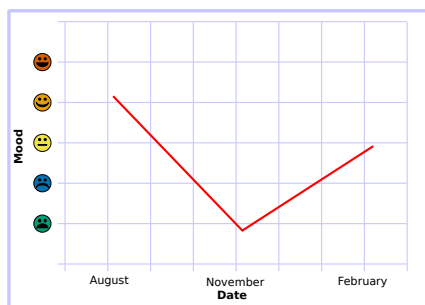
Approach to plotting

(1) Among your group, pick someone to begin. Select a card you hold that corresponds to a response at the beginning of the time period (for example the August 2009 response from person a/VT-0). Announce to the group their mood **and** any characteristics you agreed to plot. Begin drawing that person's line.

(2) Everyone then searches their cards to see who has the next response from that person (this could be the same member of the group). Announce the mood and characteristics on that date. Draw line.

(3) Continue until the last response for this person is read out. That completes this line.

(4) Repeat these steps for a new person, drawn from the cards held by the last member of the group to announce a card.

Plotting example

Alan   **Beth**   **Cass**

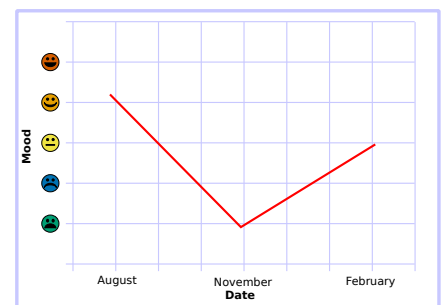This is a group of three: Alan, Beth and Cass. They each have three cards.

Alan's line plot

They agreed to record dates by the month (ignoring day). Alan will colour lines by **boy**/**girl**, Beth not vary colour, and Cass will colour by doors.
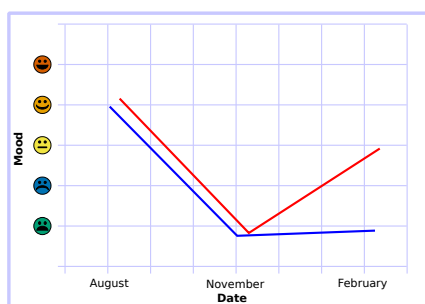
(1) Alan begins by selecting a/OP-0 and announces "Positive, boy, two doors".

(2) Cass has the next response in November and says "Very negative, boy, two doors". Alan and Beth draw the first part of the line.

Beth's line plot

(3) Beth has the final a/OP-0 response and says "Neutral, boy, two doors". Alan and Beth complete their lines.
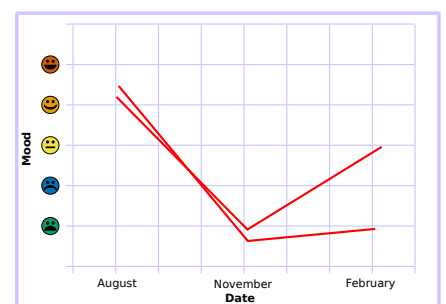

Alan's line plot

(4) Since Beth last announced a card, she begins with a new person.

[1] Beth selects a/HZ-0 and says "Positive, girl, one door".

[2] Alan has the next response and says "Very negative, girl, one door".

[3] Beth has the final response and says "Very negative, girl, one door".

Beth's line plot

[4] Beth has announced all her cards, so Cass will begin with a/HJ-0

Conclusion

Was there anything unexpected about the set of cards your group had?

What have you learnt about changing moods over time?