Can you change how people think?

This page is for the teacher only.

The students conducting the study will need to be introduced to different information at specific points – this has been made clear on each lesson plan.

Background

When children first start to learn about science, they tend to start with the physical world and the ways in which variables can be manipulated to change outcomes.

This project is an introduction to psychology and is designed to show how it is also possible to influence how people think.

The feedback from your class has helped Dr Sallie Baxendale design this project, thank you for all your input.

You can ask Sallie questions at any time using the Enquiry Zone so other teachers can see the answers, or email s.baxendale@ucl.ac.uk if it is urgent.

Overview

In this experiment the children in your class will be shown a photograph of a girl aged 11. The photo comes with a caption. 'This is Hannah. She is 11 years old.'
They will all rate how pretty they think she is on a scale of 1 – 10.

This is the neutral condition. The children have no information about the girl and are just rating her physical appearance. They will work out the mean score for the whole class.

They will then create two further conditions:
- In the positive condition, they will create a positive story about the girl.
- In the negative condition they will create a mean story about the girl.

They will then go out to collect their own data asking other children to rate the photograph. Half of your class will read the negative story before asking someone to rate how pretty they think the girl is. Half of the class will read the positive story to someone before asking someone to rate the photograph. They may also want to collect data on the person doing the rating – how old are they? Are they boys or girls?

It is important that the children who are rating the photograph after hearing the stories do not know about the purpose of the study so they will need to be from a different class. It is also important that they only get to rate the photograph once, either in the positive or negative condition.

The children will then work out the mean attractiveness score for the positive condition and the negative condition and plot the mean scores on a bar graph next to their own mean score for the neutral condition. Did their stories influence how people think?

After the experiment

Once you have collected your mean scores for the neutral, positive and negative conditions, send them to *I'm a Scientist (*michaela@mangorol.la*)*, ideally by the end of June. Sallie will collate a summary report for all the schools who have taken part and you can see how your data compared to that collected by other students in different parts of the country in the Enquiry Zone.

Lesson Plans

This study will take approximately 4 lessons. A follow-up assembly would also be good so that the whole school can learn about the study.

These lesson plans offer *support,* as well as *challenge* opportunities to give students them more ownership over how they do the study. Links to different subjects are also highlighted using the symbols below:

Numeracy	**Literacy**	**Science**	**Ethics / PSHE**

Lesson 1: Introduction

Tell the students: "We are going to do an investigation over the next few lessons/ days to see if we can change how people think. Today we will discuss how people's thoughts can be affected. We will also create a 1-10 scale for beauty, look at a picture of a made-up person and rate how attractive we think they are."

Activity 1 – Class Discussion

Can you change how people think? Is it possible to do this without them knowing? When might this happen in everyday life? Adverts?
How do we decide if we like someone or not?

Activity 2 – Beauty scale

As a class, create a rating scale of 1-10 for how pretty/attractive someone looks– what words would be at either extreme? What words would be in the middle?

Example:

1	2	3	4	5	6	7	8	9	10
Really Ugly		Not very Pretty		In the middle		Quite pretty			Really, really pretty

SUPPORT – Provide students with suggestions for the bottom and top of the scale.

CHALLENGE – Encourage students to come up with their own descriptors along the scale. How many adjectives can they use? Have they considered where the middle of the scale is?

Activity 3 – Rating Beauty
Once you have the rating scale accepted by the whole class, show the class the picture and read "This is Hannah. She is 11 years old." Each individual in the class should use the scale to rate the photograph of Hannah on a scale of 1-10. Work out the mean score for the class. This will be the neutral score that is used for comparison later. SUPPORT – Show students how to calculate a mean using a different example. CHALLENGE – Encourage students to consider other averages. Can they work out a median or mode? What is the range for this data?

Activity 4 – Class Discussion
What did you base your judgements on? Do you think your opinion would change if you knew more about this person? Could we change other people's opinions by telling them about this person?

Lesson 2: Story Time

Tell the students: "Today we are going to create 2 very different stories to do with Hannah. One story will show Hannah in a positive way and one story will show Hannah in a negative way."

Activity 1 – Class Discussion

This discussion should help the students plan their stories.

Discuss examples of positive, negative and neutral statements we could use to describe Hannah. The stories should be realistic and reflect examples of good and bad behaviour that the children encounter in their everyday lives.

To help the children create the stories they should think of the positive or negative traits they want to use (eg kindness, generosity, empathy, meanness, jealousy, selfishness etc) and then think of an example they could put into a description.

Examples:
Positive – Hannah shared her packed lunch when her friend forgot hers.
Negative - Hannah was picking her nose in assembly yesterday.
Neutral – Hannah lives around the corner from school.

Activity 2 – Write the stories

Half the class will write positive stores and half will write a negative ones about the girl in the photograph. Ideally the stories should include:
Positive Story= 2 neutral features and 3 positive features
Negative story= 2 neutral features and 3 negative features

The stories must start in the same way:
"This is Hannah. She is eleven years old…"

SUPPORT – Put students in groups to help each other. Use the examples from the starter to structure their answers

CHALLENGE – Encourage students to use more descriptive language. More able students can write their stories individually.

Activity 3 – Choose 2 stories

At the end of the lesson the children/teacher should decide on the positive and negative story they will use for their experiment. You may want to combine different stories or pick a winning positive and a winning negative story.

Activity 4 – Class Discussion

If we read one of these stories about Hannah before we show someone her photo, will it change how attractive they think she is?
CHALLENGE – Write a prediction for the investigation. What do you expect to find?

Lesson 3: Data Collection

Tell the students: "Today we are going to collect data on how attractive other people think Hannah is. Before we ask them to rate her beauty using the scale we made in lesson 1, we will read them either the positive or the negative story about her."

Activity 1 – Planning (class discussion)

Discuss how you will collect the data. Half the class will tell the positive story & half will tell the negative story. Who will go to which class? How will you keep this a fair test? Do we need to collect any other information about the people rating Hannah's photo (how old they are, if they are a boy or a girl)? What is the best way to record this information quickly?

SUPPORT – Provide students with a results table to collect their data in.

CHALLENGE – Students create a results table which will allow them to collect all the information they need. Students come up with the explanation for their subjects of what they are doing (see below), which must avoid telling their subjects what they expect to happen (to keep it a fair test).

Activity 2 – Data Collection

Divide the class into two (positive and negative groups) and send them out to collect their data. They can use the script below to introduce the activity to each 'subject'.

Script for collecting responses– "We are doing a science investigation to do with how people see beauty. We are going to tell you a little bit about someone and show you their picture. When we show you their picture, we want you to decide how attractive this person is on a scale of 1-10 where 1 is _____ and 10 is _____." *(more able students could explain more about their beauty scale here)*.

"This is Hannah. She is eleven years old…" *(followed by positive or negative story)*.

They should also note down how old the person rating is and their gender. The more ratings they get the better!

Lesson 4: Analysis and Interpretation

Tell the students: "This lesson we are going to look at the results from our investigation and see what we found."

Activity 1 – Calculating means

Work out the mean scores for the group who heard the positive story and the group who heard the negative story.

SUPPORT – Remind students of how to calculate a mean. Guide them through the first calculation.

CHALLENGE – Encourage students to calculate other means e.g. the mean for boys who hear the positive story vs. the mean for girls who heard the positive story or the mean for KS1 students who heard the positive story vs. the mean for KS2 students who heard the positive story.

Activity 2 – Bar charts

Plot these scores on a bar chart.

Example:

□ Neutral
■ Positive Story
■ Negative Story

SUPPORT – Help students to draw accurate scales on their y axis. Support them with labelling the axes.

CHALLENGE – Encourage students to draw graphs for other means e.g. the mean for boys who hear the positive story vs. the mean for girls who heard the positive story or the mean for KS1 students who heard the positive story vs. the mean for KS2 students who heard the positive story.

Activity 3 – Results Discussion

Did your stories influence how attractive people found Hannah?
Is how nice you are as a person actually related to how pretty you are on the outside?
Why do people get these things mixed up?

Extra Activities (if time permits)

Is there a difference in the ratings between younger and older students?
Is there a difference in the ratings between boys and girls?
Are boys or girls more susceptible to positive or negative stories?
Ethics – Is it right to rate people's beauty in this way? Why, why not?

Feedback Assembly

If the schedule permits it would be great if the children could present their study and the results to the school, particularly the other children who have been their 'subjects'. This will show all the students that their time and input has been worthwhile.