Being a Professional Mathematician

The public image of professional mathematicians – worksheet

Exercise	Notes for tutors
1) Draw a sketch of a mathematician.	
What do the sketches say about your idea of a mathematician?	Consider age, gender, race of sketched figures.
	Consider accessories (Spectacles? Beards?)
Search Microsoft clipart or Google Images for "mathematician". What kind of images come up?	Are these positive or negative images? Do students draw people like themselves?
	Do clipart images reflect similar assumptions?
2) What do mathematical jokes tell us about being a mathematician?	
Consider (some of) the following jokes at www.BeingAMathematician.org/Jokes:	Discuss the assumptions behind the jokes.
• Three logicians go into a bar… (Spiked Math)	Eg mathematician, doctor, and lawyer: is there a hidden assumption that any professional is male? Search Microsoft clipart for images of "doctor" and "lawyer". Do the results reflect on the assumptions in this joke?
• The Null Hypothesis (xkcd)	
And four jokes that are part of mathematicians' folklore:	
• The mathematician, the doctor and the lawyer	
• The mathematician, the engineer and the computer scientist	How old is this joke? Are the attitudes it embodies still current?
• The racehorse study	
• Putting out a fire	Are jokes used to define a profession, to distinguish it from others, to create a sense of community (you belong to the community if you find these jokes funny)?
In each case:	
i) Explain the point of the joke	
ii) Do you think it is funny?	
iii) Would a non-mathematician think it is funny?	
iv) Does it present a positive image of a mathematician?	
v) Does it make assumptions about the age, gender and other characteristics of the mathematician?	
Analyse other jokes about mathematicians in the same way.	
Why do professional communities tell jokes about their profession?	

3) What images of mathematicians are available to the general public?

- What (contemporary and historical) mathematicians are known to the public?

- Think of TV programmes, films, novels etc involving (real or fictitious) mathematicians. Do these appeal to mathematicians, non-mathematicians or both?

What are typical characteristics of fictional mathematicians?

How are they used by their creators? For example, are fictional mathematicians generally

- Intelligent
- Attractive
- Evil
- Introverted
- Ambitious
- Successful

How are "scientists" portrayed in fiction and popular culture? Is that different from "mathematicians"?

Do the characteristics of these (real or fictional) publicly-known mathematicians match those of real mathematicians you have come across?

Do they match the characteristics of mathematicians you have identified in answering the previous questions?

What impression of mathematicians is conveyed in recent biographies of mathematicians such as Paul Erdos, Simon Norton and Grigori Perelman?

Expect answers to include:
Real mathematicians – probably very few.
Marcus du Sautoy? Stephen Hawking? Dara O'Briain? Carol Vorderman?

TV programmes:
Dara O'Briain's School of Hard Sums
Numb3rs
Marcus du Sautoy's *The Code*
The Big Bang Theory

Novels:
The curious incident of the dog in the night-time
PopCo
Pythagorean Crimes

Is "mathematician" shorthand for "intelligent"?
Are mathematicians portrayed as scheming villains?
Is this different from the portrayal of scientists?

Does the public image of mathematicians focus on the most eccentric?

If you sample random mathematicians in the St Andrews biographical archive, do you get a different perspective?

4)   How do people respond in social situations when you tell them you are studying maths?

Which aspects of the responses are positive and which are negative?

Possible answers:

Positive: people think you are intelligent

Negative: People are intimidated, or write you off as an uncool nerd.