Lesson 1: You're the Judges!

Lesson

Lesson I – You're the Judges! Introduce I'm a Scientist. Choose and rank criteria by which

to judge the scientists.

Learning objective:

- Consider a range of criteria and understand that different (important) values may need to be weighed against each other.
- Prepare students to think critically about the responses scientists offer.

Other learning outcomes:

- Encourages students to consider criteria to use in deciding which scientist to vote for and how to judge their work.
- Promotes use of sophisticated criteria, not trivial issues.
- Gives students ownership of criteria.

Curriculum links:

- · Science as human endeavour
- Consider ethical, social and practical aspects of science.

Resources:

List of criteria on page 6 and in the 'Lesson 1 – You're the judges'

Access to I'm a Scientist website (<u>www.imascientist.org.au</u>)

Format

Starter: 5 minutes

Explain the I'm a Scientist event briefly (show the site on a projector or interactive whiteboard if possible). They have the power to decide who wins. What ideas do they have about science at the moment? Will they change?

Activity 1: up to 10 minutes

- 1) This activity can be done as a class or as individuals.
- 2) Ask students what occurs to them when they think about science these should be off the top of their heads, and can include anything.
- 3) Ask students what their favourite and their least favourite things are about science.
- 4) Get the students to log in to the site and fill in their profiles.
- 5) You may want to keep a copy of the class's ideas as this activity is helpful for students to reflect on their own learning

Activity 2: 25 minutes

- 1) Display the criteria list.
- 2) Get students to discuss each one and vote whether the criteria are IMPORTANT or NOT IMPORTANT when choosing which scientists to vote for. Aim to choose about 10-15 important criteria.
- 3) Get the class to whittle the important criteria down to the five most important criteria. Write these five criteria on the board.
- 4) Get the class to rank the five most important criteria.

Plenary: 10 minutes

- Brainstorm any other criteria that aren't on the list, that students might consider important when judging scientists.
- Overall message: This will help you judge the scientists as a scientist.

Suggested Homework:

Look at the website and see how each scientist in your zone performs on the five most important criteria your class selected.

Watch the critical thinking animations (see extension below).

Suggested adaptations

Support:

Less justification necessary. Lead students into the rationale behind their decisions.

Extension:



Teachers wishing to undertake a more detailed consideration of critical thinking may chose to explore the DIISRTE resource at TechNyou (http://education.technyou.edu.au/critical-thinking) and its accompanying animations (compiled at http://bridge8.wordpress.com/2012/01/30/critical-thinking-animations for your convenience).

Lesson Plans

Lesson 1: You're the Judges!

Criteria list

- · My work makes people laugh
- I go to events, like lectures, to tell people about my work
- My work will save some lives, but not many people have the disease I study
- My work won't save any lives, but will seriously improve lots of lives (e.g. helping people to walk again)
- · My conclusions are based on lots of accurate data
- My work will improve the field of cosmetic plastic surgery
- My work could make me a lot of money
- · I am married
- · My work could help me to get a Nobel Prize
- I'm very good-looking
- My work will help us to protect the environment
- · My work will help make cars that go faster
- · My work will help us create replacements for plastics that we currently make out of oil
- · Lots of other scientists think my work is wrong
- I give lots of money to charity
- I don't harm any animals in my work
- I use instruments we have had in our lab for years. I know there's newer ones on the market but I'd rather spend the money on other things.
- I drive a sports car
- My work will help us understand in more detail how animals that live in the desert adapt to their surroundings
- I believe in God
- I don't believe in God
- My work will help us to understand how our brains work
- · My work will help us explore space
- · I'm wearing really cool trainers
- · My work will help companies make more money
- My work will mean more people can have access to safe drinking water
- My work will create new knowledge
- My work will help people around the world to communicate faster
- I'm an orphan
- · Lots of other scientists think my work is right
- I have tested my theory in lots of ways and haven't been able to disprove it