



My Planet Rules! - Teacher's Notes



"My Kitchen Rules" is an Australian TV competitive cooking program where teams of two contestants vie for superiority in cooking special dishes. Their efforts are judged by two experts and there is also "Peoples' Choice" input from the audience.

The activity below is inspired by this format.

Materials per student pair

1. The worksheet
2. Access to information, posters, the Internet and/or boxes of books.

Method

1. Student pairs are given or select one planet from the four rocky planets and one from the four gas planets that circle our Sun.
2. They then research the diameter, average distance from the Sun, ingredients (things the planet is made up of) and special features for each - filling in the data sheet provided.
3. They should then turn their attention to convincing their classmates that their planets have the Wow Factor!

ASIDE: You may wish to have a short discussion on whether the Asteroid Belt should be included as a proto-planet which never had enough mass to create the gravity necessary to create a fifth rocky planet.





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To support this activity the following might be discussed as a class.

Name the four innermost rocky planets and the four outermost gas planets?

Innermost rocky planets

Mercury, Venus, Earth and Mars

Outermost gas planets

Jupiter, Uranus, Saturn and Neptune

What ingredients would you need to create our Solar System?

Every planet needs

1. The Sun. Why? The gravitational pull from the Sun holds it in position. The Sun also provides energy in the form of heat, light and other electromagnetic radiation. Planets do not create their own energy.
2. Other planets near it. Why? Their gravitational pull also holds it in position.
3. A moon or moons. Why? Moons help their planets from developing wobbly rotations because gas lags behind solid. Before Earth had its Moon it wobbled creating great heat and terrible winds. The surface was molten. The arrival of the asteroid impact that remelted our surface and created our moon meant Earth's rotation stabilised, the surface solidified and life could begin.
4. An orbit which takes it round the Sun



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Ingredients to Build a Planet

Gases such as:

Ammonia, Argon, Carbon dioxide, Helium, Hydrogen, Hydrogen cyanide, Neon, Nitrogen, Oxygen and Steam or water vapour.

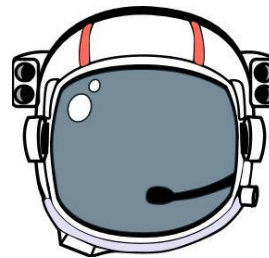
Liquids such as:

Sulphuric acid, Ammonia, Water

Solids which make up rocks and dust such as:

Aluminium, Gold, Iron, Magnesium, Nickel, Sodium, Silicon, Ice

Of course each planet is different so you will not use all of these ingredients and indeed may have to add some extra yourself.



Wow Factor - People's Choice Input

Each planet is unique. What is especially interesting about your planet?

Student answers will vary

Student's worksheets can be boarded to provide reference material for the rest of the class.

You may wish to discuss whether distances should be given in kilometres (km) or in Astronomical Units (AU). 1AU is the distance of the Earth from the Sun.



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