Life on other planets

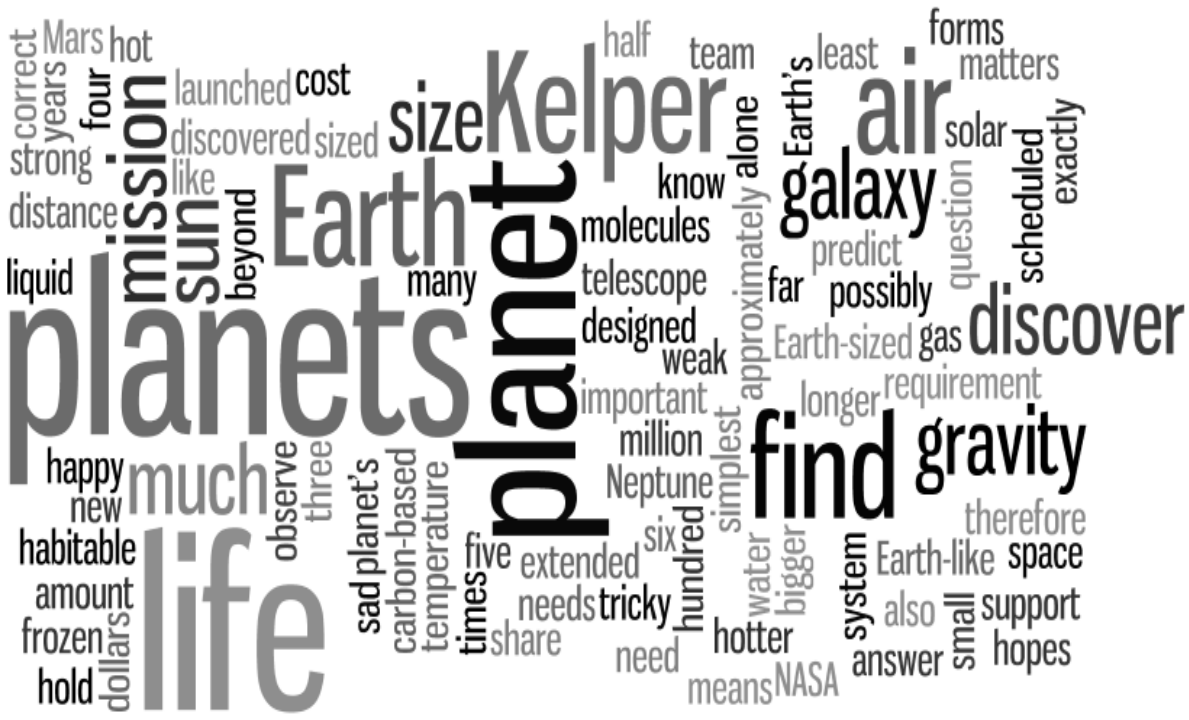
Worksheet Task 1
These are the planets that orbit the sun:

Earth Jupiter Mars Mercury Neptune (Pluto) Saturn Uranus Venus

Can you put the planets in order? Here's a clue: My Very Excellent Mother Just Sent Us Nine Pizzas.

Worksheet Task 2
Look at the word cloud. The words are from a text. Circle the biggest words then complete this sentence:

I think the text is about **……**
……



The word cloud was created here: http://www.wordle.net/

Worksheet Task 3
Now read the text. Was your prediction in Task 2 correct?

How many planets are there in our galaxy? That's a **tricky** question to answer. Are there other planets that support life? That's exactly what the Kepler mission hopes to discover.

NASA launched the Kepler space telescope, designed to find habitable planets, in 2009. So far it has discovered five new Earth-sized planets beyond our solar system. These planets are hotter than the Earth's sun – much too hot for life as we know it. The Kepler team predict that they will need **at least three** years (and possibly longer) to find an Earth-like planet.

The simplest requirement for a planet to have life (carbon-based life like on Earth) is for there to be liquid water (not frozen or gas) so the distance from the planet's sun and therefore temperature are important. There also needs to be the correct amount of air. If a planet is as small as Mars (half the size of Earth) its **weak** gravity means that it can't hold on to air molecules. If a planet is Neptune sized (four times bigger than Earth) it has very strong gravity and too much air. So **size** matters too.

The cost of the mission is approximately six hundred million dollars. It is scheduled to observe until 2013 but this could be extended. Will we be sad if we discover we are **alone** in our galaxy or happy if we find that we share it with other life forms?

Glossary
tricky – difficult
at least three - three or more
weak – the opposite of strong
size – dimension, if a thing is big or small
alone – with no other people

Worksheet Task 4
Read and match 1-6 with a-e to make sentences about the text.

1 The Kepler space telescope	a) are not in our solar system.
2 Kepler has found five planets that	b) will not have enough air.
3 A planet can support life if it	c) will have too much air.
4 A very small planet	d) is looking for life on other planets.
5 An extremely big planet	e) about $600 million on the mission. .
6 NASA willl spend	f) has water and air.

Worksheet Task 5
A) Underline these numbers in the text:

2009 - *This is the year that*……..
5 - ……
3 - ……
½ - ……
4 - ……
600 000000 - ……
2013 - ……

B) Cover the text. Work with a partner and try to remember what the numbers refer to. Make notes then look at the text to check.

Worksheet Task 6
Discuss these questions with a partner:

Do you think the Kepler mission will find life on other planets?
What other things do you know about space exploration?
Is it a good idea to spend $600 million on space exploration?
Why does NASA want to find habitable planets?

Worksheet Task 7
Imagine that the Kepler mission finds life on a distant planet. NASA wants to send some objects representing Earth to the new planet. Add more items to NASA's list of objects:

an encyclopaedia
a computer
photographs of world leaders
a bottle of sea water
…….
……..
…….
……..