

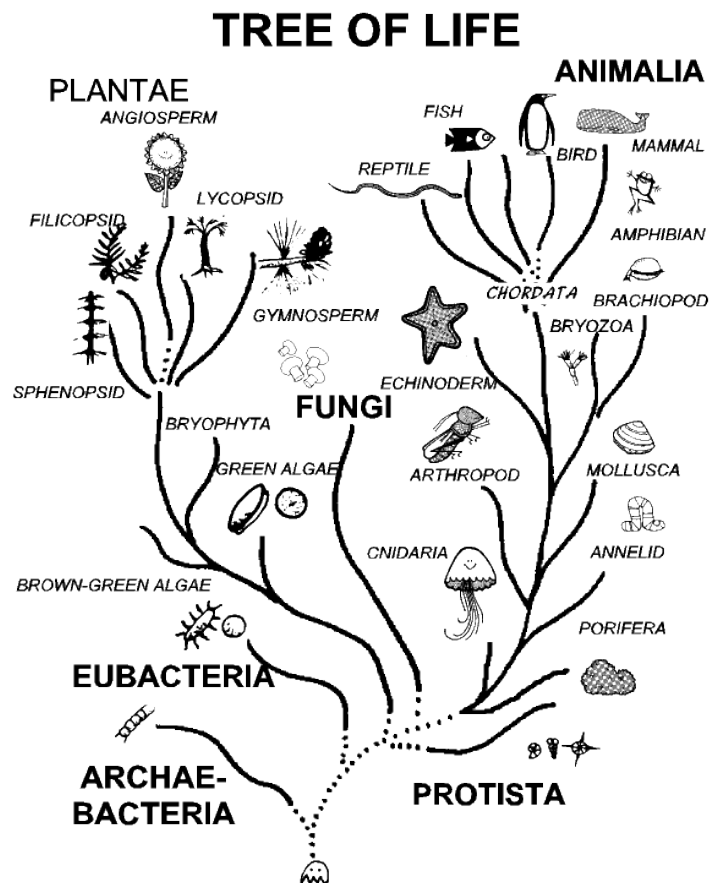
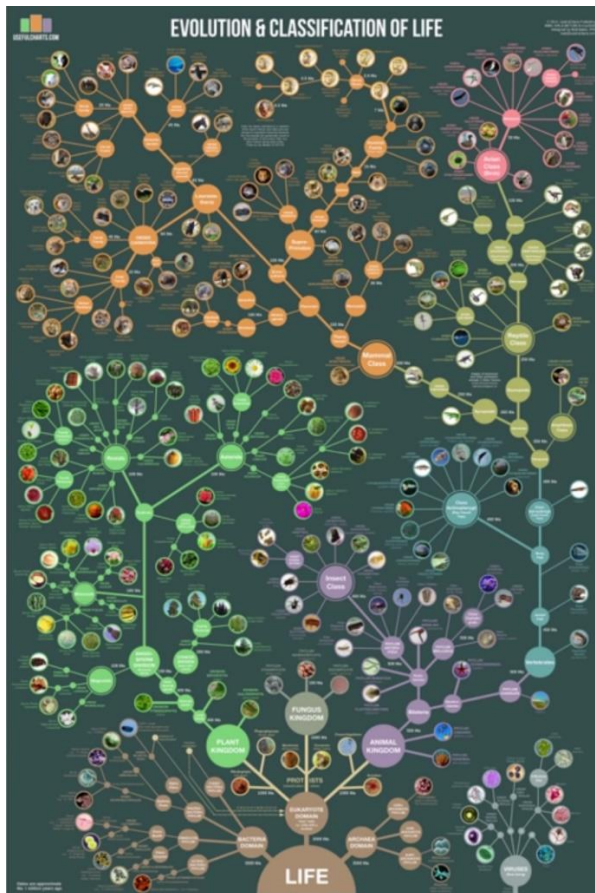
Grade 8 Cell Unit – **Characteristics of Living things**

Name:

Class:

Date:

What Makes something alive? When we are looking for 'life' on other planets, what are we looking for? Little green people or is there a bigger definition? Considering if something is alive or not is an important part of biology. Think of the tree of life:



Just to recap Some concepts from Grade 6 – biodiversity and Grade 7 Interactions in the Environment, here are a couple of videos that will hopefully explain biology a bit more.

This video Explains the Tree of Life and Evolution - <https://youtu.be/AjvLQJ6PIiU>

This video explains the current thinking about the different branches of the Tree of Life - <https://youtu.be/HpXaiG8L28s>

Use the back of this page to make some notes on the videos and be sure to look at them again to get even more information when you rewatch them.

Notes on Videos (Wow points):

- Life has been on Planet Earth for about 4 billion years
- When endosymbiosis happened and complex cells were formed, about 2 billion years ago
- Some species become extinct and others evolve from existing species
- The three domains happened – plants, fungi and animal cells
- The classification of life is based on common (related characteristics) – new branches of life happen when a new attribute is established - older traits are older

Now that we are up to speed on lots of different life, what are the things that characterize all life – what do all forms of life on Earth have in common? Hint – there are six or seven points.

1. Made of cells

2. Require energy

3. Produce waste

4. Respire (exchange gases)

5. Reproduce (keep life going)

6. Respond to their environment

7. Have a definite lifespan

For those who wonder about viruses as a form of life, you can read the following article on this link: <https://biodiversity.utexas.edu/news/entry/are-viruses-alive>