Is it Alive? PowerPoint Notes
Cells function similarly in all living organisms.

Organisms
An organism is a ______________________ of __________. Yeast is a living organism. Each tiny sphere is an individual living thing.

Biologists often use five basic rules to classify something as living or nonliving.

Five Characteristics of Living Things
1. Living things ______________ to their surroundings.
2. Living things ___________ and ______________.
3. Living things are able to ________________.
4. Living things use ________________.
5. Living things are made of smaller building blocks called _____________.

1. Living things respond to their surroundings.
   All living things respond to a ______________________. The sunlight is a stimulus and the frog’s choice to sun himself is called a ________________.

2. Living things grow and develop.
   Growth refers to an ________________ in ____________ and to an ________________ in number of _____________.

3. Living things are able to reproduce.
   The process of ________________ ___________ of the same kind of organism is called ________________.

4. Living things use energy.
   All living things take materials from their surroundings such as ____________, ____________, and ____________ and use these materials to get _________________.

5. Living things are made of smaller building blocks called cells.
   A cell is the ________________ ________________ of a living thing.
Francisco Redi
Before the 1600s, many people thought that living things spontaneously
_______________ from non-living things! Francisco Redi provided evidence
that that ______________ (maggots) came from eggs not rotting meat. Redi
was an Italian medical doctor. He performed an experiment that demonstrated
that maggots in rotting meat came from flies that laid ______________, not
from the ______________ itself. This showed that living things do not come from
_______________ things.

Now, let’s look at an organism to review the five characteristics of life.
Are barnacles alive?
1. Barnacles ______________ to their environment by ______________ their ______________ at low tide,
and opening them at high tide.
2. Barnacles ______________ and ______________. They begin life as free-swimming creatures. Once
they find a good spot, they “glue” themselves to a rock and ______________ a shell.
3. Barnacles ______________. After fertilization from a male barnacle, females hold the
______________ in their shells until they ______________.
4. By waving their legs, barnacles capture ______________. They use ______________ from the food to
move their legs, open and close their shells, and carry out all ______________ ______________.
5. If you examined the legs of a barnacle with a microscope you would see that they are made of
individual ______________.

Pick something that is alive and use the five characteristics of life to explain and illustrate why
it is alive. (5 points)