**Read about the 7-Level Classification System**

A classification system commonly used today groups organisms into Kingdoms first. Which we already know about! A **kingdom** is the first and largest category. This category contains organisms with similar characteristics, but can still be divided based on their differences, and so Kingdoms can be divided into smaller groups. The smallest classification category is called **species**. Organisms that belong to the same species can mate and produce fertile offspring. Look at the chart below to see how animals are classified:

1. **Write the 7 levels of classification in order.**

**2. What is a Kingdom?**

**3. What is a species?**

**Examples of the Scientific Classification Systems**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Animal | Animal | Animal | Animal |
|  | Arthropoda | Arthropoda | Chordata | Mollusca |
|  | Insecta | Arachnida | Mammalia | Gastropoda |
|  | Diptera | Acarina | Carnivora | Pulmonata |
|  | Muscidae | Ixodidae | Felidae | Limacidae |
|  | *Musca* | *Dermacentor* | *Felis* | *Argiolimax* |
|  | *domestica* | *variabilis* | *domestica* | *reticulatus* |
| **Common Name** | [http://tbn2.google.com/images?q=tbn:eBXuEyUinuIsxM:http://entomology.unl.edu/images/muscidflies/housefly.jpg](http://images.google.com/imgres?imgurl=http://entomology.unl.edu/images/muscidflies/housefly.jpg&imgrefurl=http://entomology.unl.edu/images/muscidflies/index.htm&usg=__CLgOwG-w5kZZBf7eoew84rdw0FU=&h=406&w=600&sz=54&hl=en&start=5&um=1&tbnid=eBXuEyUinuIsxM:&tbnh=91&tbnw=135&prev=/images?q=house+fly&um=1&hl=en&rlz=1T4SUNA_enUS295&sa=N) (house fly) | [http://tbn3.google.com/images?q=tbn:1MsDcHkfZ_LIVM:http://www.thicketofdiversity.org/BTA/Scientists_Information/For_Safety/images/Adult_Female_American_Dog_Tick_300.jpg](http://images.google.com/imgres?imgurl=http://www.thicketofdiversity.org/BTA/Scientists_Information/For_Safety/images/Adult_Female_American_Dog_Tick_300.jpg&imgrefurl=http://www.thicketofdiversity.org/BTA/Scientists_Information/For_Safety/index.shtml&usg=__sCVgVUwfTgeosmeqR8OaKCNqeNc=&h=300&w=300&sz=12&hl=en&start=14&um=1&tbnid=1MsDcHkfZ_LIVM:&tbnh=116&tbnw=116&prev=/images?q=dog+tick&um=1&hl=en&rlz=1T4SUNA_enUS295) (dog tick) | [http://tbn0.google.com/images?q=tbn:tVGQ8fLjFLLC8M:http://vampireclan.zoomshare.com/files/cats/House-Cat-Black-Cat-Closeup.jpg](http://images.google.com/imgres?imgurl=http://vampireclan.zoomshare.com/files/cats/House-Cat-Black-Cat-Closeup.jpg&imgrefurl=http://vampireclan.zoomshare.com/1.html&usg=__HzdNlsq1K0P6_FRd3x5TozxmENA=&h=480&w=468&sz=31&hl=en&start=18&um=1&tbnid=tVGQ8fLjFLLC8M:&tbnh=129&tbnw=126&prev=/images?q=house+cat&um=1&hl=en&rlz=1T4SUNA_enUS295) (house cat) | [http://tbn1.google.com/images?q=tbn:A_J994fFcYyJTM:http://i82.photobucket.com/albums/j280/gardenplansireland/Helixaspersathecommongardensnail.jpg](http://images.google.com/imgres?imgurl=http://i82.photobucket.com/albums/j280/gardenplansireland/Helixaspersathecommongardensnail.jpg&imgrefurl=http://www.gardenplansireland.com/forum/about100.html&usg=__q2HDfXvogVvTmvT-n1bfZvAdTiI=&h=386&w=582&sz=69&hl=en&start=13&um=1&tbnid=A_J994fFcYyJTM:&tbnh=89&tbnw=134&prev=/images?q=garden+slug&um=1&hl=en&rlz=1T4SUNA_enUS295) (gray garden slug |

(Hint: **K**ing **P**hilip **C**ame **O**ver **F**or **G**ood **S**paghetti)

**4. What level has the organisms with the *least* in common?**

**5. What level contains organisms with the *most* in common?**

**But Why?**

Scientists have identified over one million kinds on Earth. That’s a large number, and it keeps growing with new discoveries all the time. Imagine how difficult it would be to find information about one organism if you had no idea even where to begin. It is a lot easier if similar organisms are placed into groups.

1. **How many organisms are there on Earth?**

**2. Why is that sometimes a problem?**

Organizing living things into groups is exactly what scientists have done. Scientists group organisms based on similarities, just as stores put milk with dairy products and tomatoes with other fruits and vegetables. **Classification** is the process of grouping things based on their similarities. Scientists use classification to organize living things into groups so that the organisms are easier to study. The scientific study of how living things are classified is called **taxonomy**. Taxonomy is useful because once an organism is classified, a scientist knows a lot about that organism.

**3. Define classification:**

**4. What is the scientific study of how things are classified?**

**5. Why is taxonomy useful?**

**6. How do you think scientists *find* the characteristics of organisms they use to classify them with?**

**After**

**1. Why does the 7-Level Classification system have so many groups within each other?**