

## Honors Biology Project 2016

### Kingdoms

NAME \_\_\_\_\_

DUE DATE \_\_\_\_\_

**\*\*\*This project is 1 Required Formative grade and 1 Optional Summative grade!!**

The 1<sup>st</sup> **REQUIRED** Formative grade is for a poster of your kingdom information, and you teaching the kingdom to a small group of your peers.

The 2<sup>nd</sup> **OPTIONAL** Summative grade is for the model you will be asked to build to represent your kingdom.

**\*\*Both the required poster project and the optional summative model are INDIVIDUAL projects.**

**\*\*\*If you turn your project in late, it will lose 1 letter grade of points per day.**

#### Instructions:

1. Draw a kingdom name from the “hat”.

2. Use your class notes, text and the internet to research the kingdom.

You will need to find the following:

a. In which domain are members of this kingdom classified?

b. Where do members of this kingdom live?

c. What are some common examples of members of this kingdom?

d. How do they get their energy? (Mode of nutrition)

e. How do they reproduce?

f. When we classify them into smaller taxonomic groups, what trait(s) do we use?

g. What are the main groups of them

AND what are some examples for each of the groups?

h. How do members of this kingdom help man?

i. How do members of this kingdom hurt man?

j. How do members of this kingdom play special roles in ecosystems?

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**\*\*Note:** While researching, watch for colorful pictures and labeled diagrams you can include in your poster!

*Each kingdom has some required diagrams and/or pictures. They are:*

**\*Virus – 4 different examples of viruses, AND both the lytic and lysogenic cycles**

**\*Eubacteria - must include the 3 main shapes of bacteria, binary fission, and the two colors you would see when they are gram stained, and WHY THIS IS IMPORTANT!!!**

**\*Protista – must include Volvox, Euglena, Giant Kelp, Paramecium, Ameba, diatoms, Slime mold and 1 reproductive cycle of any of them**

**\*Fungi – must include mushrooms, yeast, morels, puffballs, bread mold, shelf fungi**

**\*Plantae – must include pictures of ferns, trees, grasses, flowers, seeds, fruits, stems and roots**

**\*Animalia – must include pictures of at least 9 different kinds of invertebrates, AND 5 different classes of vertebrates! You must also include 1 labelled diagram of internal anatomy for the grasshopper and the fish.**

### **REQUIRED FORMATIVE GRADE #1**

**3. Design a poster to present all of this information and to use in your teaching. This is your Required FORMATIVE GRADE!**

**Your poster will be graded as follows:**

<b>Topic</b>	<b>Points Possible</b>
Neatness & permanent lettering (no pencil)	10
Colorful	10
Has all the required information from the research (5 points per item listed a-j, see instructions.)	50
Has a minimum of 10 colorful pictures and/or diagrams, with captions	10
Teaching the information to your peers	20
	<b>100</b>

### **OPTIONAL SUMMATIVE GRADE #2**

**4. Make a 3-D, colorful model of 1 representative organism from your kingdom.**

**You must include a colorful key identifying the main parts of your model.**

**The key must also include the function of each part of the model.**

**The following is a list of which model needs included with which kingdom.**

**Virus – Bacteriophage (Text p. 372)**

**Eubacteria – Basic bacterium (Text P.361)**

**Protista – Paramecium (Text p. 384) OR Euglena (Text p. 390)**

**Fungi – Mushroom (Text P. 402)**

**Plantae – Flower (Text P.442)**

**Animalia – Earthworm (P. 506) OR Snail (P. 508) OR Grasshopper (P. 525)**

**OR Fish (P. 549) (you pick which one!!!)**

**Your model will be graded as follows:**

<b>Topic</b>	<b>Points Possible</b>
Model is 3 –D	20
Model is Colorful	20
There is a Colorful Key, and each part of the model is included on it	20
The key includes information on the function of each part. (Example: The capsid of the virus helps protect the DNA)	20
The model is creative and NOT made of edible parts	20
<b>TOTAL</b>	<b>100</b>

**BONUS: Extra Credit can be earned on EACH PART of the project for exceptional and creative work!!! (Put some EFFORT into this, please!!!)**

**FINAL NOTE: If you cannot get materials to do this project, you must notify the teacher in person BEFORE \_\_\_\_\_, so they can assist you. Otherwise, no excuses!!!**