THIS WEEK IN BI 102

PORTFOLIO #1 IS DUE TUESDAY JAN. 20 BY 5:00 P.M., 131 WNGR

TUESDAY LECTURE



Mutation and Variation Explore how genetic mutations lead to variation.

LECTURE

THURSDAY

Development The role of DNA in progression from a fertilized egg to an entire organism.





Variation Numerous examples of mutations leading to variation within species.

LABORATORY



Reproduction and Growth The role of genetics in life cycles of various species.

ON-LINE READINGS



Mutations, Epigenetics, Fruit Flies Historical and current advances.



Work Ahead for Tuesday's Lecture

Read "<u>Mutations</u>" and answer the following questions.

In a "**point**" mutation, a single ____ may be changed within DNA.

In an **insertion** mutation, base pairs are _____ to the DNA molecule. In a **deletion** mutation base pairs are

What is actually duplicated in a **duplication** mutation?

In a **translocation** mutation, a piece of one chromosome becomes attached to a ______ chromosome.



Bring your activity manual to lab and recitation.

Work Ahead for Thursday's Lecture

Read "<u>Epigenetics</u>" and answer the following questions.

After reading over the article, describe in your own words what "epigenetics" means.

What attaches to DNA, altering how it can function?

From the article, how does a rat female's behaviors impact her pups?

JAN 19 - JAN 23 2015

Work Ahead for Laboratory

Read "Fruit Flies" and answer these questions.

What does a typical "wild type" fruit fly look like? (eye color and body color)

Provide two reasons for why fruit flies are good organisms for genetics research:

In the activity manual, look over the *Reproduction and Growth* lab (p. 57) to answer these questions.

Humans have 23 homologous pairs of chromosomes in most cells. Where did each chromosome in a pair come from? (Questions #2&3, p. 57)

What are the **gametes** in humans? (Question #6, p. 58)

Work Ahead for Recitation

In the activity manual, read over the *Variation* recitation (p. 47) to answer these questions.

What is the source of variation that produces new alleles? _____ (title of Station C, p. 48)

In Station C, you will be observing germinating irradiated radish seeds. In the photo, the seeds to the left were not exposed to radiation and are called "controls." The seeds to the



Best way to study?

Write possible exam

questions using the

objectives in Appendix A (p. 183)

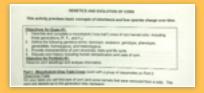
right were exposed to different levels of radiation. Why is it important to have "controls" that do not receive the experimental treatment?

Exam #1 is next Monday, Jan. 26, 7:00 - 7:50 p.m.

Bring your photo ID, #2 pencil, and eraser. Room assignments will be announced in lab and posted at the course website.

WEEK THREE

Resources for Exam Studying



Course Materials: Your lecture notes, filled in laboratory and recitation activities, and any other study materials you create.

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Course Objectives: Located in Appendix A and at the course website.

APPENDIX D BI 102 14 Exams and Answer Keys (*) Memorphy these mans is got terretical because new exems are written every yets to methic danges in course context. Newwer they may be useful as study gottes for this patr's seams.					
Last Year's Exams: Located in Appendix D.					
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Weekly Online Previews: This one and the rest posted at the course website.