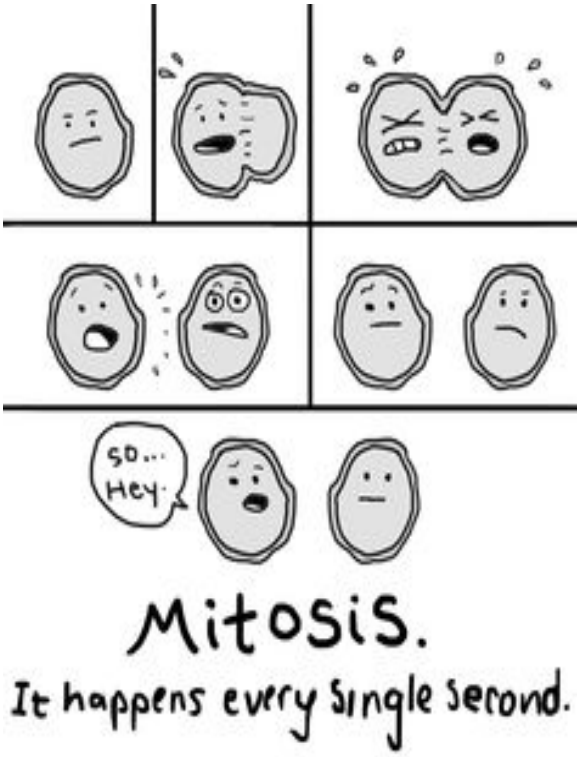
Name_____ Period: _____ Cycle 4 March 27 – May 19

Integrated Science Study Guide (7th)
(Weeks 1 & 2)

I'm obsessed with insects, particularly insect flight. I think the evolution of insect flight is perhaps one of the most important events in the history of life. Without insects, there'd be no flowering plants. Without flowering plants, there would be no clever, fruit-eating primates giving TED Talks.
---Michael Dickinson

The fate of nations is intimately bound up with their powers of reproduction. All nations and all empires first felt decadence gnawing at them when their birth rate fell off.
---Benito Mussolini



Overview
Reproduction passes information from parent to offspring. Asexual reproduction requires one parent and produces nearly identical offspring. Sexual reproduction requires two parents, and provides variety in a species. This variety may allow the species to adapt to changes in the environment and help the species survive. A species may change due to the passing of traits naturally or by techniques used and developed by science. Genetic information is passes on in a predictable manner.

Essential questions:
- How is the prediction of traits in offspring relevant to you, your family, your species?
- How is an organism's structural features related to its function?

Week 1: Due March 31

_____ _____1. Read the overview and quotes with the class and mark them up.

_____ _____2. Make vocabulary cards or fill out vocabulary sheets for the following words: **acquired trait, inherited trait, asexual reproduction, sexual reproduction, genetics, gene, allele, mitosis, meiosis, homozygous, heterozygous, binary fission, (asexual) budding**.

_____ _____3. Participate in and take notes on the lesson: Levels of Organization

_____ _____4. Review Organs and Organ Systems; complete the Organ Systems Graphic Organizer

_____ _____5. Watch the following video clip on sexual and asexual reproduction: http://goo.gl/pzrf3s

_____ _____6. Complete the worksheet that goes the above clip on asexual v. sexual reproduction: Asexual vs. Sexual Reproduction worksheet.

_____ _____7. Participate in and take notes on the lesson: Cellular Reproduction: Mitosis.

_____ _____8. Complete the Graphic Organizer: Phases of Mitosis

_____ _____9. Complete the lab activity: Observing Mitosis Lab (Onion Root Tips)

Week 2: Due April 14

_____ _____ 10. Participate in and take notes on the lesson: Gregor Mendel, Inheritance, and the Punnett Square.

_____ _____11. Read and take notes on pp. 110-115 of the Prentice Hall Life Science textbook.

_____ _____12. Complete the Assessment questions 1-2 on p. 115 of the Prentice Hall Life Science textbook.

_____ _____13. Participate in and take notes on the lesson: Some Human Dominant and Recessive Traits

_____ _____114. Complete the Family Album worksheet.

_____ _____15. Participate in and complete the Activity: Take a Class Survey.

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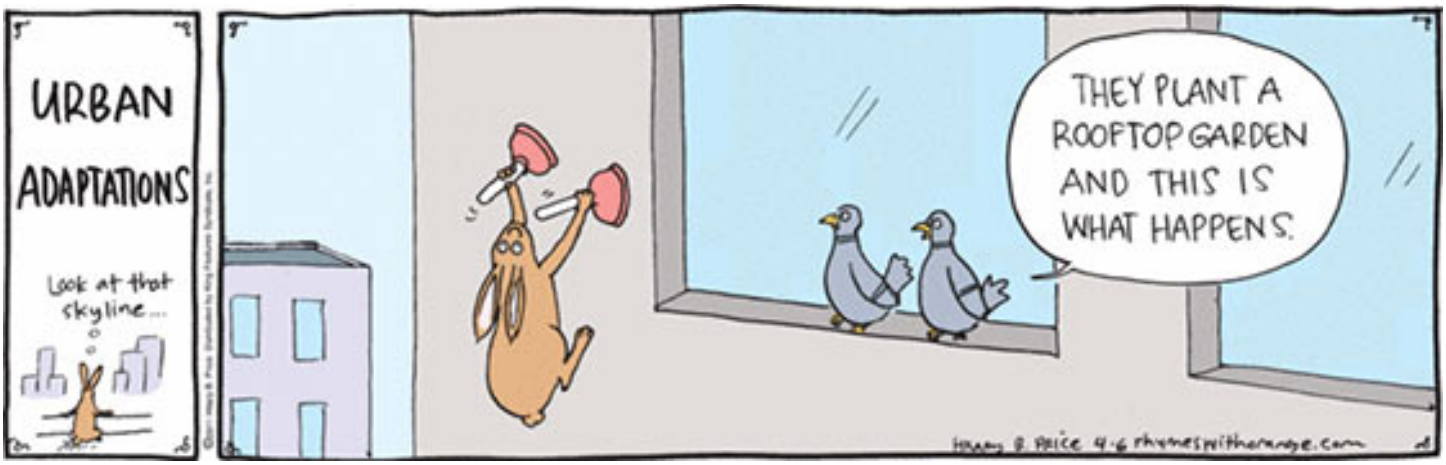
Integrated Science Study Guide (7th)
(Weeks 3, 4, & 5)



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Essential questions:

- How is the prediction of traits in offspring relevant to you, your family, your species?
- How is an organism's structural features related to its function?

Week 3: Due April 21

_____ _____12. Participate in and take notes on the lesson: Inherited vs. Acquired Traits.

_____ _____13. Complete the worksheet: Bikini Bottom Genetics.

_____ _____3. **Personal Project**: Begin creating a family pedigree chart for a recessive gene through 3 generations of your own family (see worksheet) [Due April 15!].

Week 4: SAGE

Name_____ Period: _____ Cycle 4 March 27 – May 19

Week 5: Due May 5

_____ _____16. Participate in and take notes on the lesson: Traits, Adaptation, and Selective Breeding.

_____ _____17. Participate in the in-class activity: Battle of the Beaks.

_____ _____18. Complete the activity worksheet: Battle of the Beaks.

Name_____ Period: _____ Cycle 4 March 27 – May 19

Integrated Science Study Guide (7th)
(Weeks 6 & 7)

Overview

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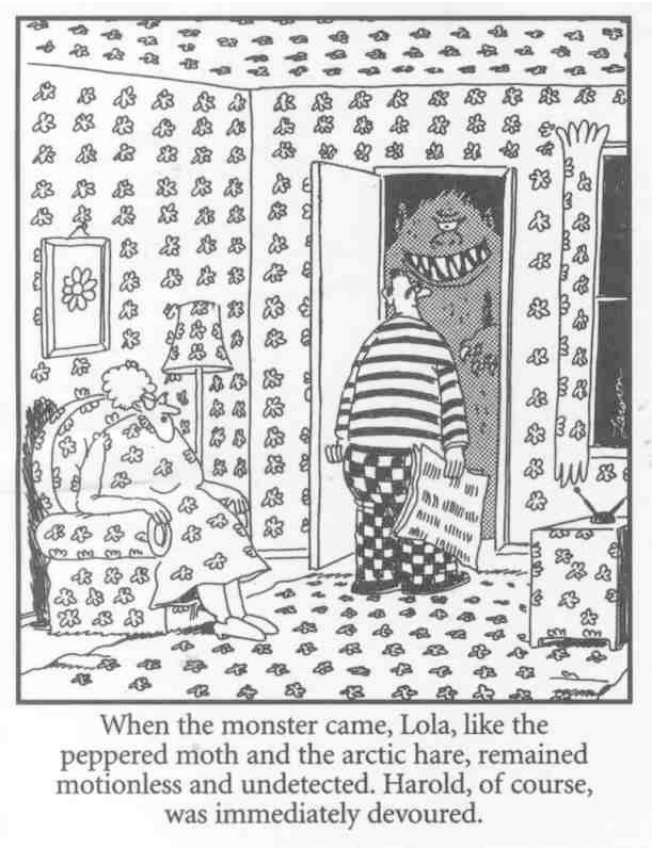

When the monster came, Lola, like the peppered moth and the arctic hare, remained motionless and undetected. Harold, of course, was immediately devoured.

Essential questions:

- How is the prediction of traits in offspring relevant to you, your family, your species?
- How is an organism's structural features related to its function?

Week 6 & 7: Due April 22

_____ _____12. In Class, watch the documentary film: Dogs Decoded.

_____ _____13. Complete the handout and questions from the film: Dogs Decoded

_____ _____19. Participate in the in-class activity: The Mating Game

_____ _____20. Complete the activity worksheet: The Mating Game

_____ _____21. Complete the Adaptations Fold-up Directions: On the outside of the foldable, draw a picture of an example of the adaptation. On the inside, write how that adaptation helps specific organisms.

Week 8: Due April 29

_____ _____22. Review for and take the unit test.

_____ _____23. Take the SAGE test!

Name_____ Period: _____ Cycle 4 March 27 – May 19

_____ _____24. Watch the in-class documentary film: The Botany of Desire (Apples)

_____ _____25. Complete the reading guide and questions on: The Botany of Desire (Apples)