CORNELL NOTES

AVID
Decades of College Dreams

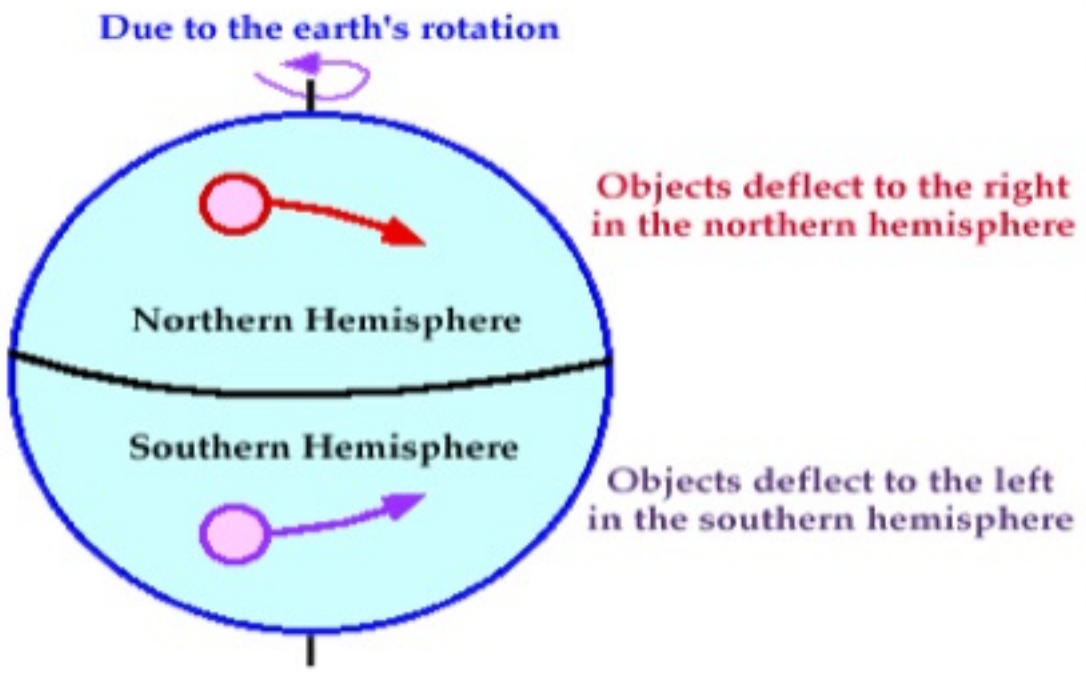
TOPIC/OBJECTIVE: Coriolis effect

NAME:

CLASS/PERIOD: Science 8

DATE: 3/27/15

ESSENTIAL QUESTION: Identify the Coriolis effect and what it looks like?

QUESTIONS:	NOTES:
What is the Coriolis effect?	★ Coriolis effect – Apparent force due to rotation of Earth
Which directions do winds turn?	1. N. Hemisphere - Wind turns right 2. S. Hemisphere - Wind turns left
What does the strength depend on?	Strength depends on latitude and wind speed of arp the current weather conditions
Depict the Coriolis effect	
*Winds and rotation	

SUMMARY: The Coriolis effect is the apparent force due to rotation of the earth. The winds move while the Earth rotates. Objects deflect right in the northern hemisphere. The objects deflect in the left in the Southern Hemisphere. The Coriolis effect takes a role in weather conditions.

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TOPIC/OBJECTIVE: Plate tectonics

NAME:

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ESSENTIAL QUESTION: What is the Continental Drift theory and who proposed it?

QUESTIONS:	NOTES:
Who proposed the Theory of plate Tectonics?	Alfred Wegener proposed the continental drift theory, now referred as the theory of plate tectonics.
In your own words, explain the theory?	Continental drift theory (Theory of tectonic plates) suggests that at one time all the Earth's land masses were joined together, forming a super Continent. Pangea.
What evidence did Alfred use?	1. Shapes of continents fit together 2. Same fossils + plants + animals (Founded in diff. areas) 3. Landscapes 4. Climate from before to today 5. Continents moving away
What was the reason scientists made fun Of him?	Alfred was unable to prove what powerful force moved the landmasses

SUMMARY:
In 1912, Alfred Wegener, a meteorologist, and geophysicist proposed the continental drift theory. He had 5 main supporting evidence for his theory. Despite the evidence, he could not explain the powerful force that moved the land masses. Pangea was a super continent.

Radioactive Decay

9/17
Wed

∝ (ALPHA)

β (BETA)

γ (gamma)

9/15
Mon

NUCLEAR CHEMISTRY

EQ: What is radiation and what are the three main types of radiation?

How is chemical reaction different then Nuclear reaction?

Chemical vs. Nuclear reactions
↳ chemical rxns involve the transfer or sharing of (e^-)
↳ Nuclear rxns involve changes in the nuclei of atoms

What are Isotopes?

Isotopes
- atoms with the same # of (p+) and diff. # of neutrons (n^0)
↳ EX: C-12 C-14 (higher mass)
↑ more neutrons!
- unstable isotopes (too many or too few n^0)
  - becomes stable by undergoing changes in the nucleus
  ↳ releases large amounts of E (energy)

What are the 3 types of radiation and their symbol?

Radiation
- energy released
- 3 types
  - α (alpha)
  - releases α particle ^4_2He
  - β (beta)
  - release β particle $-^0_1e$
  - γ (gamma)
    gamma ray & γ → has no mass, no pr

Chemical reactions are way different then nuclear reaction.. Chemical reactions involve the transfer or sharing of electron. Isotopes are atoms with the same number of protons and different number of neutrons. There types of radiation are alpha, beta, and gamma

Summary:	Questions:
Act. 1A (diffusion) showcases the ability of molecules to travel between the dialysis bag and the beaker. The lab shows how molecule size restricts passage of starch, glucose, and iodine. Act. 1B (osmosis) shows how certain molarities of sucrose cause more or less change in that percentage. The higher the molarity of sucrose, the higher the percent change in the	What is kinetic energy? what causes process of diffusion? What is diffusion? What is an example of diffusion?

Topic: Diffusion and Osmosis 11/14/07

Essential Questions:

① What is the process of diffusion and osmosis in a membrane system?

② What is the effect of solute concentration or water potential as it relates to living plant tissues?

Notes:

① life of cell depends on the fact that atoms & molecules have kin. energy
always in motion

② Kinetic energy causes mole. 2 bump into each other / move in new directions
result of molecular motion = process of diffusion

③ diffusion: random movement of molecules from area of ↑ concen. to area of ↓ concen.

– eventually = will be reached

* i.e. open bottle of H_2O (odor of rotten eggs) in 1 corner → opposite corner will perceive smell: bottle has higher

Topic: Diffusion and Osmosis

11/14/09

Summary (cont.)

Therefore, water will move to areas of higher water potential, also known as higher molarities. In activity 1 C, (water potential) as the sucrose solution became more molar, the potatoes lost mass because of the water potential.

Questions:

How are diffusion and osmosis different?

How does active transport process move substances?

What will last intake?

Notes (cont.)

? Still don't understand the diff.

④ special case of diffusion = **osmosis** = diffusion of H_2O through a selectively permeable membrane

⑤ permeable mem. = allows 4 diffusion of certain solutes + H_2O from a region of ↑ H_2O potential to region of ↓ water

⑥ **water potential** = measure of free energy of water in a solution

⑦ **active transport** = process uses energy from ATP to move substances through the cell membrane
- regions of ↓ concen. of the substance into ↑

⑧ Experiment -
- measure diffus. of small