Academic year 2010/2011

Week 22

HAPPY SUMMER! WE WILL MEET AGAIN ON 16th AUGUST 2011!

Week 21

SCIENCE1 grade 8. We discuss the results of investigation about how the rate of radiation affects development of the plants.

SCIENCE2 grade 9. The students continue with their final coursework. Science Day for primary school.

CHEMISTRY grade 7. We discuss how knowledge about acids and bases used in everyday life.

CHEMISTRY grade 8. We discuss how knowledge about organic mater used in everyday life.

CHEMISTRY grade 9. The students continue with their final coursework.

Week 20

SCIENCE1 grade 8. We continue own investigation about how the rate of radiation affects development of the plants.

SCIENCE2 grade 9. The students start with their final coursework.

CHEMISTRY grade 7. We investigate the endothermic and exothermic reactions.

CHEMISTRY grade 8. We investigate esters.

CHEMISTRY grade 9. The students start with their final coursework.

Week 19

SCIENCE1 grade 8. We start the own investigation about how the rate of radiation affects development of the plants.

SCIENCE2 grade 9. We discuss why it is important that students know about the scientific inquiry.

CHEMISTRY grade 7. We discuss and investigate the endothermic and exothermic reactions.

CHEMISTRY grade 8. We discuss what esters are.

CHEMISTRY grade 9. We discuss about production of the drugs.

Week 18

SCIENCE1 grade 8. We are going to plan an investigation about how the rate of radiation affects development of the plants.

SCIENCE2 grade 9. We continue discussion about the scientific world view.

CHEMISTRY grade 7. We investigate the rate of reactions.

CHEMISTRY grade 8. We use titration to determine content of C-vitamin in ordinary juice.

CHEMISTRY grade 9. We discuss ethical values about testing of cosmetics.

Week 17

SCIENCE1 grade 8. We discuss about factors which can affect DNA.

SCIENCE2 grade 9. We are going to discuss the scientific world view.

CHEMISTRY grade 7. We are going to investigate the rate of reactions.

CHEMISTRY grade 8. We are going to investigate the properties of the carboxylic acids.

CHEMISTRY grade 9. We discuss about cosmetics.

Week 16

SCIENCE1 grade 8. We discuss what vaccination is.

SCIENCE2 grade 9. We will watch M. Kaku's movie "Visions of the future" and discuss about gene manipulation.

CHEMISTRY grade 7. We are going to investigate the rate of reactions.

CHEMISTRY grade 8. We will discuss what carboxylic acids are.

CHEMISTRY grade 9. We will discuss what E numbers are.

Week 15

SCIENCE1 grade 8. We will discuss about HIV and AIDS. We discuss about the ELISA test.

SCIENCE2 grade 9. We examine the animal's DNA.

CHEMISTRY grade 7. We will discuss about rate of reactions. How can we measure the rate of a reaction? We are going to plan an investigation about a reactions rate.

CHEMISTRY grade 8. We will continue our own presentations about alcohol.

CHEMISTRY grade 9. We are going to investigate the amount of C-vitamin in different juices.

Week 14

SCIENCE1 grade 8. We will discuss what virus and what bacteria are.

SCIENCE2 grade 9. We are going to use electrophoresis to investigate onion DNA.

CHEMISTRY grade 7. We will describe chemical reactions with chemical equations. We are going to investigate factors which affect chemical reactions.

CHEMISTRY grade 8. We will investigate how many plastic bags there are at home and for what plastic bags may be used for. We are going hold presentations about our investigations about alcohol.

CHEMISTRY grade 9. We will discuss minerals and vitamins function in the human body.

Week 13

SCIENCE1 grade 8. We investigate what blood consists of.(NB! We use the synthetic blood)

SCIENCE2 grade 9. We investigate the onions DNA.

CHEMISTRY grade 7. We discuss about the balancing of chemical equations.

CHEMISTRY grade 8. We investigate the elasticity, the permeability and the impregnation of different plastics.

CHEMISTRY grade 9. We discuss about fat and investigate the chemical properties of fat.

Week 12

SCIENCE1 grade 8. We investigate the different groups of blood and consistence of blood. (NB! We use the synthetic blood)

SCIENCE2 grade 9. We discuss about the constituents of DNA.

CHEMISTRY grade 7. We discuss how to use the periodic table to predict the results of a chemical reaction. We will learn how chemists write down chemical reactions using symbols.

CHEMISTRY grade 8. We are investigating the properties of the natural polymers.

CHEMISTRY grade 9. We are investigating the decomposition of starch. We discuss what enzymes are. We are going to plan an investigation on the enzyme's properties.

Week 11

SCIENCE1 grade 8. We discuss about blood. We investigate the different groups of blood.

SCIENCE2 grade 9. We continue discussion about inheritance.

CHEMISTRY grade 7. We discuss about the Periodic Table.

CHEMISTRY grade 8. We discuss about the monomers and the polymers. We discuss about plastics and we going to plan own investigations about the properties of plastics.

CHEMISTRY grade 9. We investigate how much sugar contains in sweets and juice.

Week 10

SCIENCE1 grade 8. We investigate different organic and synthetic fibres. We use the microscope to create profiles for different fibres.

SCIENCE2 grade 9. We discuss about inheritance and different types of reproduction.

CHEMISTRY grade 7. We plan and conduct own investigations on how to separate salt and sand. We discuss how the water's temperature affects compounds solubility in water.

CHEMISTRY grade 8. We conduct own investigations about alcohols. We discuss how to produce alcohols. We choose essay headlines about alcohols.

CHEMISTRY grade 9.We discuss what carbohydrates are, their chemical properties and roles in the human body.

Week 9

SCIENCE1 grade 8. We use different methods to find and take fingerprints.

SCIENCE2 grade 9. We continue investigating the amount of aspirin in aspirin tablets and level of iron in blood using a titration reaction. (NB. We use synthetic blood only)

CHEMISTRY grade 7. We discuss what chromatography is. We plan and carry out own investigations about the colours used to produce coloured pencils.

CHEMISTRY grade 8. We discuss what alcohols are and their properties.

CHEMISTRY grade 9. We discuss about the chemistry of human body.

Week 8

SPORTS HOLIDAYS

Week 7

SCIENCE1 grade 8. We use different methods to find and take fingerprints.

SCIENCE2 grade 9. We are investigating the amount of aspirin in aspirin tablets and level of iron in blood using a titration reaction. (NB. We use synthetic blood only)

CHEMISTRY grade 7. We discuss the atomic structure.

CHEMISTRY grade 8. We discuss what alkenes and alkynes are. We investigate their properties.

CHEMISTRY grade 9. We discuss about the chemistry of human body.

Week 6

SCIENCE1 grade 8. We familiarize us with different methods to find and take fingerprints.

SCIENCE2 grade 9. We use sodium hydroxide to test for different ions. We are going to plan two investigations about the amount of aspirin in aspirin tablets and level of iron in blood using a titration reaction. (NB. We use synthetic blood only)

CHEMISTRY grade 7. We discuss the symbolic language of chemistry. We discuss the difference between elements, compounds and mixtures.

CHEMISTRY grade 8. We discuss what organic chemistry investigates. We discuss the hydrocarbon

compounds and how we can prove what is and what isn't organic. We discuss what alkanes are and their properties.

CHEMISTRY grade 9. We investigate how much water there is in the crystalline copper sulphate compound.

Week 5

SCIENCE1 grade 8. The final of TekNatur 2011 (the science faire for Swedish speaking schools).

SCIENCE2 grade 9. We discuss about what a chemical quantitative analysis is. We discuss about titration.

CHEMISTRY grade 7. We discuss what subject's chemistry investigates and what a chemical reaction is. We familiarize ourselves with laboratory equipment in chemistry and practice how to use the Bunsen burner safely.

CHEMISTRY grade 8. We discuss displacement reactions and solve problems using the reactivity series of metals.

CHEMISTRY grade 9. We are planning an investigation about how much water is in the crystalline copper sulphate compound.

Week 4

SCIENCE1 grade 8. We are going to create the fingerprints profiles.

SCIENCE2 grade 9. We investigate the levels of carbon dioxide in clouds using a spectrometer.

PHYSICS grade 7. We discuss about the astronauts' equipment to work in space. We present our essays.

CHEMISTRY grade 8. We discuss the reactivity series of metals. We discuss chemical reactions with metals. Oxidation reactions. We are planning an investigation about the oxidation of magnesium.

CHEMISTRY grade 9. We discuss how to use the concept of 1 mole in order to find out the percentage composition of elements.

Week 3

SCIENCE1 grade 8.We discuss different types of fingerprints. We will study methods for finding and taking fingerprints.

SCIENCE2 grade 9. We going to investigate how is spectrometer functioning. Science students going to visit Swedish speaking schools in Pori and Tampere about an optional subject "Discovery and Technology" (Science).

PHYSICS grade 7. We continue our planed investigations. We discuss why airplanes fly. We discuss the origin of pressure under water and Archimedes force. We choose essay headlines.

CHEMISTRY grade 8. We plan and conduct an investigation about the electrolysis of copper sulphate. We choose essay headlines about what electrolysis is used for.

CHEMISTRY grade 9. We discuss how to use the concept of 1 mole in order to find out the molecular formula.

Week 2

SCIENCE1 grade 8. We are discussing about forensic science. We classify different types of crimes. We discuss how knowledge in physics, chemistry and biology helps forensic scientists to solve various crimes.

SCIENCE2 grade 9. We discuss the different types of spectra. We investigate the origin for those different types of spectra. We discuss energy levels and potential wells. We discuss photons and their energy.

PHYSICS grade 7. We discuss the atmospheric pressure. We discuss different possibilities on how to measure the atmospheric pressure. We acquaint ourselves with E. Torrichelli 's barometer. We are planning an investigation about how the altitude affects the atmospheric pressure and how the pressure affects a liquid's boiling point.

CHEMISTRY grade 8. We discuss electrolysis. Why do electrolytes conduct electricity? What are anions and cations? We are going to plan and conduct an investigation about the electrolysis of copper chloride.

CHEMISTRY grade 9. We discuss about the concept of 1 mole.

2010

Week 50

SCIENCE1 grade 8. Own research continues.

SCIENCE2 grade 9. We build a robot that follows a pattern of the floor.

PHYSICS grade 7. We discuss what pressure is. We solve the problems about the pressure.

PHYSICS grade 8. We discuss about electric current heat effects.

PHYSICS grade 9. We discuss about the birth and developing of Solar system.

Week 49

SCIENCE1 grade 8. Own research continues.

SCIENCE2 grade 9. We build a robot that reacts to light.

PHYSICS grade 7. We discuss about heat. We discuss what temperature is. We are going to familiarize with different possibilities to measure temperature. We are going to plan an investigation about temperature changes under transition from one physical state of mater to another.

PHYSICS grade 8. We investigate parameters which affects the resistance of a conductor.

PHYSICS grade 9. We discuss about the stars, their birth and development.

Week 48

SCIENCE1 grade 8. Own research continues.

SCIENCE2 grade 9. We build a robot which reacts to sound.

PHYSICS grade 7. We discuss about molecules. We familiarize with basics of the molecule-kinetic theory. We discuss about diffusion. We are going to describe mater using the molecule-kinetic theory.

PHYSICS grade 8. We discuss what a superconductor is. We will watch a film "Electricity" by UR about possibilities to create superconductors and how to use them.

PHYSICS grade 9.We discuss about different types of galaxies, their birth and development.

November

Week 47

SCIENCE1 grade 8. Own research continues.

SCIENCE2 grade 9. We build a simple robot with four simple moves.

PHYSICS grade 7. We discuss the origin for friction, attachment point and direction of friction forces. We discuss the different types of friction. Advantages and disadvantages of friction. How would the world be like without friction? We are planning an investigation about what factors may

affect frictional forces.

PHYSICS grade 8. We are continuing with our investigations. What factors affect the current strength in a conductor?

PHYSICS grade 9. We discuss about different scientific areas of Astronomy. We investigate different types of telescopes. We discuss about the Big Bang theory.

Week 46

SCIENCE1 grade 8. Own research continues.

SCIENCE2 grade 9. We discuss about LEGO programming and algorithms.

PHYSICS grade 7. We discuss when the normal force is zero. How does this affect humans, animals and plants?

PHYSICS grade 8. We discuss about resistance of conductors. We investigate different possibilities to connect conductors and how these connections affect the properties of electric circuits.

PHYSICS grade 9. We discuss advantages and disadvantages of nuclear power. We discuss what TOKOMAK is. Our guest is Mooses Mehine from the University of Helsinki.

Week 45

SCIENCE1 grade 8. Own research continues.

SCIENCE2 grade 9. We discuss about programming and algorithms.

PHYSICS grade 7. We discuss weight and the normal force. How can we calculate the weight? We discuss body's weight on different planets.

PHYSICS grade 8. We discuss what an electric circuit is and how we can represent its electrical components. We discuss what physical quantities can affect the electric current in conductors. We investigate different possibilities to build butteries.

PHYSICS grade 9. We discuss decay of atomic nuclei, the half-life and chain reactions. We discuss about L. Meitner life and discoveries. We discuss applications of radioactivity.

Science 2 students visit Lyceiparkens school in Porvoo to hold a science day for grades 7.

Week 44

SCIENCE1 grade 8. We begin with our own investigations.

SCIENCE2 grade 9. We discuss about robotics and technology. We watching M. Kaku's movie "Visions of The Future".

PHYSICS grade 7. We discuss about the concept of density. We discuss about Archimedes life and discoveries.

PHYSICS grade 8. We discuss and investigate special properties of amber. We discuss about electrical charges and what properties they have. We investigate the properties of electric field and learn to describe the electric field with help of geometry.

PHYSICS grade 9. We discuss what radioactivity is. We discuss about H. Becquerel's and M. Curie's discoveries. We discuss about different types of radioactive decay.

October

Week 43

SCIENCE1 grade 8. We discuss about the topics of own investigations.

SCIENCE2 grade 9. Students are on Vocational Orientation.

PHYSICS grade 7. We discuss how we can draw the forces. We discuss about concept of resulting force.

PHYSICS grade 8. We investigate the scale of various waves in nature. We look at the first part of the film "Invisible World".

PHYSICS grade 9. Students are on Vocational Orientation.

Week 42

SCIENCE1 grade 8. We discuss about the topics of own investigations.

SCIENCE2 grade 9. Students are on Vocational Orientation.

PHYSICS grade 7. We discuss why objects can change they velocity. We discuss the concept of force.

PHYSICS grade 8. We discuss about usage of lenses. We investigate different defects of vision and ways to correct those defects.

PHYSICS grade 9. Students are on Vocational Orientation.

Week 41

SCIENCE1 grade 8. We discuss about the topics of own investigations.

SCIENCE2 grade 9. We discuss about science versus religion.

PHYSICS grade 7. We discuss about the free fall acceleration on different planets in Solar system.

PHYSICS grade 8. We investigate the properties of different types of lenses.

PHYSICS grade 9. We watch the movie "E = mc2".

Week 40

SCIENCE1 grade 8. We get to know about the possibilities to present experimental data.

SCIENCE2 grade 9. We investigate the Ch. Darwin's biography. We discuss the theory of evolution.

PHYSICS grade 7. We discuss about accelerated movement. We plan an investigation about free fall of different body's.

PHYSICS grade 8. We discuss the refraction of light. We discuss about the index of refraction. We investigate the total reflection and how the optical fibbers are used in practice. We discuss about different types of lenses.

PHYSICS grade 9. We discuss about how A. Einstein explained the energy. We get to know about relativity according A. Einstein.

September

Week 39

SCIENCE1 grade 8. We get to know about the possibilities to minimize the mistakes during the experiment. We will test the sensors and the data loggers.

SCIENCE2 grade 9. We investigate the Earth's geological time scale.

PHYSICS grade 7. We plan and carry out a study on the uniform motion of a caterpillar and a robot.

PHYSICS grade 8. We discuss about the history of light. We investigate various sources of light. We investigate the different opportunities that register light. We discuss about shadows and eclipses.

PHYSICS grade 9. We discuss about types and forms of energy. We discuss about definition of work. We discuss about the law of energy conservation.

Week 38

SC1 grade 8. We get to know about the calculation of mistakes in experiment.

SC2 grade 9. We investigate the history of yeast bacteria.

PHYSICS grade 7. We discuss about different types of motion. We discuss about a uniform motion. We get to know about physical quantities which describe a uniform motion.

PHYSICS grade 8. We discuss the ultrasound. We investigate possibilities to use ultrasound in everyday life. We discuss how the ultrasound is used among the animals.

PHYSICS grade 9. We discuss about generator. We discuss about production of the electricity.

Week 34

SC1 grade 8. We discuss how science will be used in the future. We discuss the various misconceptions about science. We discuss the media's responsibility to present the scientific facts.

SC2 grade 9. We discuss how the adaptation in animals. We will investigate what the SA/V ratio means.

PHYSICS grade 7. What is science? We discuss what living and non-living nature is. We discuss the different areas of knowledge in science. What is Physics? We will learn about the scientific method.

PHYSICS grade 8. We discuss about oscillations and two types pendulums. We discuss about possibilities to describe different oscillations using the physical quantities such as period, frequency and amplitude. We compare a pendulum's oscillations with circular motion.

PHYSICS grade 9. We discuss what magnetism is. History and myths about magnetism. We investigate permanent magnets and the magnetic fields main characteristics.

Week 35

PHYSICS grade 7. We discuss about different physical phenomena. We discuss and learn to use the scientific method.

PHYSICS grade 8. We plan and carry out investigation about what factors affect the pendulum period. We discuss the resonance of various mechanical systems. We discuss about what happened to the Tacoma Bridge.

PHYSICS grade 9. We discuss the Oersted experiment and Law. We discuss about magnetic properties of the matter. We discuss the role of the magnetic field of the Earth and the Sun. What is Northern lights.
We find out:
1. How does a debit card works?
2. For what can magnetic fluid be used?
3. Magnets in medicine.
4. How does levitation train works?

SCIENCE 1 grade 8. We discuss data reliability and validity.

SCIENCE 2 grade 9. We discuss about competition in the animal kingdom, and competition among plants. We investigate how different adaptations help organisms to compete successfully.

Week 36

PHYSICS grade 7. We classify different physical phenomena. We discuss the physical quantities.

PHYSICS grade 8.We discuss about waves. We investigate wave characteristics. We plan an investigation about wave's reflection. We discuss about the speed of waves. We solve problems using math.

PHYSICS grade 9. We discuss about electromagnetic induction. We learn about M. Faraday's experiments. We discuss self-induction. We find out how an induction own works. We watch a movie about using of induction in the metallurgical industry.

SCIENCE 1 grade 8.We discuss about stages of inquiry.

SCIENCE 2 grade 9. We investigate how different adaptations help organisms to compete successfully. We plan an investigation about how temperature affects the reproduction of yeast bacteria.

Week 37

PHYSICS grade 7. We discuss about motion. We discuss what a reference frame is.

PHYSICS grade 8. Is sound a wave? We investigate the properties of waves for sound. We plan an investigation about measuring the speed of sound.

PHYSICS grade 9. We discuss about transformers. We investigate the properties of transformer.

SCIENCE 1 grade 8. We investigate how physical activity affects the pulse.

SCIENCE 2 grade 9. We investigate how temperature affects the reproduction of yeast bacteria.