PERBANDINGAN KOMPETENSI ANTARA KURIKULUM KTSP DENGAN IGSE (Physics Science)

Heru Kuswanto

Kelas VII Semester 1

Standar Kompetensi	Kompetensi Dasar	IGSE
1. Memahami prosedur ilmiah untuk mempelajari benda-benda alam dengan menggunakan peralatan	1.1. Mendeskripsikan besaran pokok dan besaran turunan beserta satuannya 1.2. Mendeskripsikan pengertian suhu dan pengukurannya 1.3. Melakukan pengukuran dasar secara teliti dengan menggunakan alat ukur yang sesuai dan sering digunakan dalam kehidupan sehari-hari 1.4. Membuat grafik berdasarkan data hasil pengukuran, menganalisis dan mengkomunikasikannya	1. use and describe the use of rules and measuring cylinders to determine a length or a volume 2. use and describe the use of clocks and devices for measuring an interval of time 3. use and describe the use of a mechanical method for the measurement of a small distance 4. measure and describe how to measure a short interval of time (including the period of a pendulum) 5. show familiarity with the idea of the mass of a body 6. state that weight is a force 7. demonstrate understanding

		that weights (and hence masses) may be compared using a balance 8. demonstrate an understanding that mass is a property which 'resists' change in motion 9. describe, and use the concept of, weight as the effect of a gravitational field on a mass 10. describe an experiment to determine the density of a liquid and of a regularly shaped solid and make the necessary calculation 11. describe the determination of the density of an irregularly shaped solid by the method of displacement and make the necessary calculation

Kelas VII Semester 2

Standar Kompetensi	Kompetensi Dasar	IGSE
8. Memahami wujud zat dan perubahannya	8.1 Menyelidiki sifat-sifat zat berdasarkan wujudnya dan penerapannya dalam kehidupan sehari-hari	1. state the distinguishing properties of solids, liquids and gases 2. describe qualitatively the molecular structure of solids, liquids and gases 3. interpret the temperature of a gas in terms of the motion of its molecules 4. describe qualitatively the pressure of a gas in terms of the motion of its molecules 5. describe qualitatively the effect of a change of temperature on the pressure of a gas at constant volume 6. show an understanding of the random motion of particles in a suspension as evidence for the kinetic molecular model of matter

		7. describe this motion (sometimes known as Brownian motion) in terms of random molecular bombardment 8. relate the properties of solids, liquids and gases to the forces and distances between molecules and to the motion of the molecules
	8.2 Mendeskripsikan konsep massa jenis dalam kehidupan sehari-hari dan penerapannya	1. describe an experiment to determine the density of a liquid and of a regularly shaped solid and make the necessary calculation 2. describe the determination of the density of an irregularly shaped solid by the method of displacement and make the necessary calculation
	8.3 Melakukan percobaan yang berkaitan dengan pemuaian dan penerapannya	1. describe qualitatively the thermal expansion

	dalam kehidupan sehari-hari	of solids, liquids and gases 2. identify and explain some of the everyday applications and consequences of thermal expansion 3. describe qualitatively the effect of a change of temperature on the volume of a gas at constant pressure 4. show an appreciation of the relative order of magnitude of the expansion of solids,liquids and gases 5. appreciate how a physical property which varies with temperature may be used for the measurement of temperature and state examples of such properties 6. recognise the need for and identify fixed points

		7. describe the structure and action of liquidin-glass thermometers 8. demonstrate understanding of sensitivity,range and linearity 9. relate a rise in temperature of a body to an increase in internal energy 10. show an understanding of the term thermal capacity 11. describe an experiment to measure the specific heat capacity of a substance 12. describe melting and boiling in terms of energy input without a change in temperature 13. state the meaning of melting point and boiling point 14. describe condensation and solidification 15. use the terms latent

		heat of vaporization and latent heat of fusion and give a molecular interpretation of latent heat 16. describe an experiment to measure specific latent heats for steam and for ice
	3. Mendeskripsikan peran kalor dalam mengubah wujud zat dan suhu suatu benda serta penerapannya dalam kehidupan sehari-hari	1. describe evaporation in terms of the escape of more-energetic molecules from the surface of a liquid 2. relate evaporation and the consequent Cooling 3. demonstrate an understanding of how temperature, surface area and draught over a surface influence evaporation 4. relate the change in volume of a gas to change in pressure applied to the gas at constant temperature

		5. recall and use the equation pV constant at constant temperature 6. describe experiments to demonstrate the properties of good and bad conductors of heat 7. give a simple molecular account of heat transfer in solids 8. relate convection in fluids to density changes and describe experiments to illustrate convection 9. identify infra-red radiation as part of the electromagnetic spectrum 10. describe experiments to show the properties of good and bad emitters and good and bad absorbers of infra-red radiation 11. identify and explain some of the everyday applications and

		consequences of conduction, convection and radiation