REFERENCES

Adolphus, T. & Arokoyu, (2012). Improving Literacy among Secondary School Students through Interfration of Information and Communication Technology. ARPN *Journal of Science and Technology*, 2(5): 444-448.

Aldila, C. (2017). Pengembangan Lembar Kerja Peserta Didik (LKPD) Berbasis STEM Untuk Menumbuhkan Keterampilan Berpikir Kreatif Siswa. *Jurnal FKIP Universitas Lampung.* 5(4): 85-89.

Asmuniv. (2015). *Pendekatan Terpadu Pendidikan STEM Upaya Mempersiapkan Sumber Daya Manusia Indonesia yang Memiliki Pengetahuan Interdisipliner dalam Menyongsong Kebutuhan Bidang Karir Pekerjaan Masyarakat Ekonomi Asean (MEA)*. Published on Friday, 15 Mei 2015.

Diaz, D., & King, P. (2007). *Adapting a Post-Secondary STEM Instructional Model to K-5 Mathematics Instruction.* Clemson: Clemson University.

Dipuja, D. A., Lufri, L. & Ahda, Y. (2018). Development Biology Worksheet Oriented Accelerated Learning on Plantae and Ecosystem for 10th-Grade Senior High School Students. *In IOP Conference Series: Materials Science and Engineering,* 335 (1) p. 012092.

Ennis, R. H. (2011). *Critical Thinking Assessment*. Theory into Practice. Vol,32, No 3, Hal 179-186.

Fardiaz. (2003). *Polusi Air dan Udara.* Penerbit Kanisius. Yogyakarta.

Firman, H. (2015). *Pendidikan Sains Berbasis STEM: Konsep, Pengembangan, dan Peranan Riset Pascasarjana.* Seminar Nasional Pendidikan IPA dan PKLH, Universitas Pakuan Bogor, Indonesia.

Gustani, I. (2016). Development and Validation of Science Technology, Engineering and Mathematics (STEM) based instructional material. *Journal of*

Mathematics, Science, and Computer Science Education (MSCEIS 2016): https://doi.org/10.1063/1.4983969

Jefriadi, J., Ahda Y. & Sumarmin, R. (2018). Validity of Student Worksheet Based Problem-Based Learning for 9th Grade Junior High School in Living organism Inheritance and Food Biotechnology. *In IOP Conference Series: Materials Science and Engineering,* 335 (1), p. 012088.

Kelley. & Todd R. (2016). *A conceptual framework for integrated STEM education. International Journal of STEM Education*. 1 - 11.

Kesumawati., Nila. & Allen Retta. (2017). *Pengantar Statistika Penelitian*. Depok: Rajawali Pres.

Khabibah, E.N., Masykuri, M. & Maridi, M. (2017). The effectiveness of Module Based on Discovery Learning to Increase Generic Science Skills. *Journal of Education and Learning,* 11(2), 146-153.

Laboy. & Rush. (2010). *Integrated STEM education through project-based learning* [Online]. Integrated-STEM-through Project-based-Learning, Diakses tanggal 2 Februari 2019.

Mukono, H.J. (2008). *Pencemaran Udara dan Pengaruhnya Terhadap Gangguan Saluran Pernafasan.* Airlangga University Press. Surabaya.

National Research Council. (2011). *Successful K-12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering, and Mathematics.* Washington, DC: The National Academies Press.

Norsanty, U.O. & Zahra C. (2017). Pengembangan Lembar Kerja Siswa Materi Lingkaran Berbasis Pembelajaran Guided Discovery untuk SMP Kelas VIII. *Jurnal Pendidikan Matematika* 2 (1): 12-22

Nurkhalisa, S. (2017). *STEM Approach Based Environmental to Improving Learning Outcomes and Student Character.* Departemen of Integrated Science, Universitas Negeri Semarang.

Pangesti, K.I. (2017). Bahan Ajar Berbasis STEM *(Science, Technology, Engineering, and Mathematics)* untuk Meningkatkan Penguasaan Konsep Siswa SMA. Unnes Physics Education Journal 6 (3). Tersedia di *http://journal.unnes.ac.id/sju/index.php/upej.*

Permanasari, A. (2016). *STEM Education*: *Inovasi dalam Menapaki Pendidikan Abad 21*. Prosiding Seminar Nasional Ipa. Bandung : Universitas Pendidikan Indonesia.

Pertiwi, R.S., Abdurrahman. & Rosidin,U. (2017) Efektivitas LKS STEM untuk Melatih Keterampilan Berpikir Kreatif Siswa *Jurnal Pembelajaran Fisika.* 5(2): 11-19.

Prastowo, A. (2012). *Panduan kreatif membuat bahan ajar inovatif menciptakan metode pembelajaran yang menarik dan menyenangkan.* Yogyakarta: Diva Press

Pratama, A. (2017). *Pengembangan Lembar Kerja Peserta Siswa dengan pendekatan sains Teknologi Masyarakat untuk Meningkatkan Literasi sains Siswa Pada Materi Pencemaran Lingkungan. Tesis FKIP Jurusan Biologi*. Bandar Lampung : Universitas Lampung. PEMBASAHAN. Diakses tanggal 2 Februari 2019.

Rodger. (2013). *The Case for STEM Education Challenges and Opportunities.* Arlington: National Science Teacher Assosiation

Sanders, M.E. (2009). Integrative STEM: Primer [in some places titled STEM, STEM Education, STEMmania]. *The Technology Teacher*, 68(4), 20-26)

Saragih, S. (2015). *Aplikasi SPSS Dalam Statistik Penelitian Pendidikan*. Medan: Perdana Publishing.

Satchwell, R. & Loepp, F.L. (2002). *Designing and Implementing an Integrated Mathematics, Science, and Technology Curriculum for the Middle School.* Retrieved 2010-9 November from Journal of Industrial Teacher Education.

Strimel, G. & Grubbs, M. (2016). Positioning Technology and engineering Education as a key force in STEM Education. *Journal of Technology Education*, 27(2): 21-37.

Sutiyatmini, E. (2018). The Effect of STEM Based on Issues to Curiosity and Critical Thinking Skill. *E-Journal Pendidikan IPA* Vol 7 No 5 Tahun 2018

Syabani, P., Darmawati, & Febrita, E. (2018). Development Of Students Worksheet Based On Constructivist Approach To Material Changes And Conservation Of Living Environment For Learning Biology Tenth Grade Senior High School. *Jurnal Online Mahasiswa, 5(1).*

Thiagarajan, S., Semmel, D.S. & Semmel, M. (1974). *Instructional Development for training teacher of expectional children.* Minneapolis, Minnesota: Leadership Training Institude/ Speciel Education University of Minnesota.

Torlakson, T. (2014). Innovate: *A Blueprint for Science, Technology, Engineering, and Mathematics California Public Education.* California: State Superintendent of Public Instruction

Trianto, (2014). *Model Pembelajaran Terpadu : Konsep, Strategi, dan Implementasinya dalam Kurikulum Tingkat Satuan Pendidikan (KTSP).* Jakarta. Bumi Aksara

Trianto. (2008). *Mendesain pembelajaran kontekstual (countextual teaching and learning) di kelas.* Jakarta: Cerdas Pustaka.

Utami, I. S., Septiyanto, R. F., Wibowo, F. C. & Suryana, A. (2017). *Pengembangan STEM- (Science, Technology, Engineering, Mathematics and Animation) Berbasis Kearifan Lokal dalam Pembelajaran Fisika Al-Biruni*, 6(1), 67-73.

Wardhana. & Wisnu. (2004), *Dampak Pencemaran Lingkungan* (Edisi Revisi), Andi Offset, Yogyakarta.

Winarni, Z. & Koes. (2016). STEM: *Apa, Mengapa, dan Bagaimana. Prosding Semnas Pendidikan IPA Pascasarjana UM*. 1 (1): 976-98.

Wulandari, R. (2017). Berpikir Ilmiah Siswa dalam Pembelajaran IPA untuk Meningkatkan Literasi Sains. *Journal of Science Education*, 1(1):29-35.