

**DEVELOPING CHARACTER BASED MODULE FOR NATURAL  
SCIENCE SUBJECT IN 4<sup>TH</sup> GRADE OF ELEMENTARY SCHOOL**

*Presented to Faculty Of Tarbiyah And Teaching Sciences of State Islamic  
University Maulana Malik Ibrahim Malang in partial fulfillment of the  
requirement for the degree of Sarjana Pendidikan Islam (S.Pd.I)*

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Appendixes : 4 (Four) Exemplar

Dear,  
Dean of the Tarbiyah and Teaching Sciences Faculty  
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At  
Malang

Assalamu'alaikum Wr. Wb.

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So, please tolerate presence.

Wassalamu'alaikum Wr. Wb.

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## APPROVAL SHEET

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SUBJECT IN 4<sup>TH</sup> GRADE OF ELEMENTARY SCHOOL

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been stated

**PASSED**

and has been approved by the board of examiners as the requirement for degree of  
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## STATEMENT

I certify that the skripsi with title *Developing Character Based Module For Natural Science Subject In 4<sup>th</sup> Grade Of Elementary School* is truly my original work. It does not incorporater any materials previously written or published by another person, except those indicated in quotations and bibliography. Due to fact, I am the only person who responsible for the thesis if there is any objection or claim for others.

Malang, May 14<sup>th</sup>, 2014

Mustika Andayani

## OFFERING

Dedicated my skripsi for...

- My beloved mother and father, always give support for writer
- My beloved brother and sisters always give support for writer
  - My fiance always give support for writer
  - My friends in boarding house
- My friends at International Class Program (ICP) Teaching Education  
Islamic Elementary School Maulana Malik Ibrahim State Islamic  
University of MALANG “2010”
- My friends in Teaching Education Islamic Elementary School Maulana  
Malik Ibrahim State Islamic University of MALANG
  - And all my friends give support for writer

By: Mustika Andayani

## MOTTO



“Tidak boleh dengki dan iri hati kecuali dalam 2 hal: iri hati terhadap orang yang dikaruniai harta dan dia selalu menginfakannya pada malam hari dan siang hari.

Juga iri hati kepada yang diberi kepandaian membaca Al-Qur’an, dan dia membacanya setiap malam dan siang hari.”

(H.R Bukhari dan Muslim)

Science Without Religion Is Blind



## PREFACE



الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ وَبِهِ نَسْتَعِينُ عَلَى أُمُورِ الدُّنْيَا وَالْآخِرَةِ. أَشْهَدُ أَنْ لَا إِلَهَ إِلَّا اللَّهُ  
وَأَشْهَدُ أَنَّ مُحَمَّدًا رَسُولُ اللَّهِ. اَللّٰهُمَّ صَلِّ وَسَلِّمْ عَلَى مُحَمَّدٍ وَعَلَى آلِهِ وَصَحْبِهِ  
أَجْمَعِينَ أَمَّا بَعْدُ.

Praise author prayed to Allah the Almighty, who has given grace, taufiq, and His guidance. Only by the power of his thesis with the title "Developing Character Based Module For Natural Science Subject In 4<sup>th</sup> Grade Of Elementary School" can be completed on time.

Not to forget, blessings and greetings may always give to the Prophet Muhammad, who had been brought to the religion of Islam. Hopefully with finishing thesis with the title "Developing Character Based Module For Natural Science Subject In 4<sup>th</sup> Grade Of Elementary School", give benefits to all parties.

This thesis describes the develop character in one of all teaching material is module. The writer make module of natural science subject based character for 4<sup>th</sup> grade in elementary school or Islamic of elementary school. The character is very important to building in self of each student to get good human in the next generation. So the learning and teaching process in school have to integrate with character values appropriate with material of subject lesson.



Students not only get comprehension of material but have good behaviour and moral after learn.

With the completion of this report, the writer do not forget to say thank you for:

1. Mr. Musiri and Mrs. Martini, my beloved father and mother that always give prayers and support, both moral and material to writer.
2. My beloved brother and sisters give prayers and support to writer.
3. Prof. Dr. H. Mudjia Rahardjo, M.Si, as the Rector of the State Islamic University Maulana Malik Ibrahim Of Malang.
4. Dr. Nur Ali, M. Pd, as the Dean of Tarbiyah and Teaching Sciences Faculty of State Islamic University Maulana Malik Ibrahim Of Malang.
5. Dr. M. Walid, MA, as head of Teaching Education Islamic Elementary School Department of State Islamic University Maulana Malik Ibrahim Of Malang.
6. Mrs Ulfah Muhayani, MPP, as thesis supervisor.
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10. My all the friends of the class in Teaching Education Islamic Elementary School Department of International Class Program of State Islamic University Maulana Malik Ibrahim Of Malang.

The authors are aware that in the preparation of this report there are still many mistakes for arrange this report, so writer expected critiques and suggestions from all parties to improve the next report. Hopefully, this thesis provides benefits to all parties. Amin Yaa Rabbal Alamin.

Malang, May 14<sup>th</sup>, 2014

Writer

## GUIDELINES FOR LATIN ARABIC TRANSLITERATION

Writing Arabic-Latin transliteration in this thesis using transliteration guidelines based on the joint decision of the Minister of Religious Affairs and Ministry of Education and Culture, no.1581987 and no.0543b/U/1987 which can be broadly described as follows:

### A. Alfabeth

ا	= a	ز	= z	ق	= q
ب	= b	س	= s	ك	= k
ت	= t	ش	= sy	ل	= l
ث	= ts	ص	= sh	م	= m
ج	= j	ض	= dl	ن	= n
ح	= <u>h</u>	ط	= th	و	= w
خ	= kh	ظ	= zh	ة	= h
د	= d	ع	= ‘	ء	= ‘
ذ	= dz	غ	= gh	ي	= y
ر	= r	ف	= f		

### B. Long Vocal

Vocal (a) long	= /a/
Vocal (i) long	= /i/
Vocal (u) long	= /u/

### C. Diphthong Vowel

أو	=	au
أي	=	ai
أو	=	/u/
إي	=	/i/

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Field Test at Large Group .....94

## ABSTRACT

Andayani, Mustika. 2014. *Developing Character Based Module For Natural Science Subject In 4<sup>th</sup> Grade Of Elementary School*. Skripsi, Teacher Education of Islamic Elementary School Department, Faculty Of Tarbiyah And Teaching Sciences, The State Islamic University Maulana Malik Ibrahim Of Malang. Advisor: Ulfah Muhayani, MPP.

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**Key Words:** Module, Character

Module is one of materials teaching that have smallest unit that can be studied independently and give systematic composition and interesting to be used by students in achieving the learning objectives. Based on the curriculum of KTSP, according to Mujtahid one of KTSP principles is study to believing and pious to God Almighty and have good personality, the mean is the learning activity not only give and transferring knowledge to students but formed character values in self of students. Character is nature, personality, moral of people. Character of people is the values contained in each individual personality.

Cause in the some school not find the materials of teaching based character, so the objectives of this research is to develop character based module for natural science subject in 4<sup>th</sup> grade of elementary school.

Based on the research objectives it, this research use method of research is research and development adopted Borg and Gall model. The stages of research are exploration, planning, developing product, validating product, revising product, and product trial. The subject of assessment this product are material expert, integration of character expert, media expert, teacher of natural science subject, and students of 4<sup>th</sup> grade in elementary school.

To knowing the feasible and validity of product development conducted assessment from experts, teacher and students. The results of assessment are 1) validation from material expert get 88,5% the criteria is good product, the meaning is valid and not need to be revision, 2) validation from integration of character expert get 90,6% the criteria is better product, the meaning is very valid and not need to be revision, 3) validation from media expert get 88% the criteria good product, the meaning is valid and not need to be revision, 4) assessment from teacher of natural science subject get 91,9% the criteria is better product, the meaning is very valid and not need to be revision, 5) assessment from students of small group trial get 78% the criteria good product, the meaning is valid and not need to be revision, and 6) assessment from students of large group trial get 79,9% the criteria good product, the meaning is valid and not need to be revision. The assessment of teacher and students got after conducted field test.

## CHAPTER I

### INTRODUCTION

This chapter explained about: A) Background Of Study, B) Research Questions, C) Research Objectives, D) Benefits Of Research, E) Significance Of The Study Development, F) Assumptions and Limitations of Development, and G) Definition of Terms. The explanation completely, as follows:

#### A. Background Of Study

On the curriculum of KTSP 2006 have been used until now, according to Mujtahid have one of all principles are study to believing and pious to God Almighty, study to understand and coplehend, study to able implement and act effectively, study to life together and usefull to other, study to build and find the identity with learning process of active, creative, effective, and pleasurable.<sup>1</sup> Then education not only to give knowledge but to formed and buil the character in self of students. The explanation it supported with explain of Peraturan Pemerintah Republik Indonesia No.19 In 2005 about Standar Nasional Pendidikan is now the paradigm of learning process give more role for students to develop the potential adn creativity of them self to formed a person have spiritual force of religious, good moral, good personality, hace intelligence, aesthetics, body and spiritual healthy, and skill needed to them self, society, nation, and state.<sup>2</sup>

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<sup>1</sup> Jamal Ma'mur Asmani. Tips Efektif Aplikasi KTSP Di Sekolah (Jogjakarta: BENING, 2010), page. 73.

<sup>2</sup> Tim Pustaka Yustisia. PANDUAN PENYUSUNAN KTSP LENGKAP (Kurikulum Tingkat Satuan Pendidikan) SD, SMP DAN SMA (Yogyakarta: Pustaka Yistisia, 2007), page. 30.

In UU Sisdiknas 2003, explain too that national of education have function to formed nature and nation culture dignity in give intelligence life of nation to development the potential of students so that become people have believe and pious to God Almighty, good moral, healthy, erudite, capable, creative, stand alone, and become democratic member of country and responsible.<sup>3</sup> From the explain it that education aimed to formed and growing the character of students with develop the moral and personality of students so birth intelligence human and to do something based religious values.

The personality of students can not formed instantly in self of students. The formed this character need long time process with teaching and learning in school. Then in learning process, teacher not only give knowledge but have to able formed good moral of students personality good socialization with their friends and society to support their learning.

On the learning activity need sources of learning appropriate with objectives of education is emphasize on religious, moral, and personality of students. Source of learning as book, module, students worksheet, pictures, etc. But so far in learning with use KTSP curriculum have not found source of learning emphasize on religious, moral, and personality of students or integrated with character values.

So this research aims to develop one of all sources of learning material is module based character. According Goldschmid, learning modules as a kind of units planned learning activities, designed to help students complete certain

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<sup>3</sup> Anwar Arifin. Memahami Paradigma Baru Pendidikan Nasional Dalam Undang Undang Sisdiknas (Jakarta: Ditjen Kelembagaan Agama Islam Depag, 2003), page. 68.

objectives.<sup>4</sup> Module is one of learning resources systematically arranged and interesting that can be done independently by the student to achieve the desired competencies. This module can help students to master the material completeness so that students can understand the material in depth.

The good modules is referring to the appropriate curriculum and has a goal to be achieved the learning indicators accordance with the expected competencies. The contents of the module must be appropriate with the indicators to be achieved by students and have to appropriate with the times/era. In the module there are examples and exercises to give deep understanding for students.

This research and development based on the module development conducted by Safa'atun with title “*Pengembangan Modul IPA Fisika berbasis Integrasi-Interkoneksi Untuk Siswa SMP/MTs*”, the content of module a lot of information out competencies that must be achieved, for example about science news and reflection columns, so the content of the material is presented as the fulfillment of basic competence is not so visible. In the study conducted Safa'atun had similarities is to develop products in the form of modules and use the development model of Borg and Gall. The differences of Safa'atun research with this study is the subject of the intended students of SMP / MTs whereas the intended subject of study students SD / MI, subjects of learning developed by Safa'atun is Physical Science the connected with the Qur'an while this research develop natural science subject based on the character.

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<sup>4</sup> Muclishin Riyadhi. *Pengertian, Kelebihan, Kelemahan Modul Pembelajaran* (<http://www.kajianpustaka.com/2013/03/pengertian-kelebihan-kelemahan-modul-pembelajaran.html#ixzz2dDMRKY2L>), download at 28<sup>th</sup> August 2013 on 06. 28 WIB)



Based on the background, research and development will be conducted research with the title “Developing Character Based Module For Natural Science Subject In 4<sup>th</sup> Grade of Elementary School”.

## **B. Research Questions**

The research question is:

1. How the process to develop character based module for natural science subject in 4<sup>th</sup> grade of Elementary School?
2. How validity of module based character for natural science subject in 4<sup>th</sup> grade of Elementary School?

## **C. Research Objectives**

This study is aimed:

1. To knowing process of develop character based module for the natural science subject in 4<sup>th</sup> grade of Elementary School.
2. To knowing validity of module based character for natural science subject in 4<sup>th</sup> grade of Elementary School.

## **D. Benefits of Research**

The results of this development are expected to be beneficial to:

1. For Science

This research is expected to contribute ideas to the world of education, especially learning natural science of primary school or islamic elementary



school as reference materials in the learning process.

## 2. For Teacher

This research expected to contribute ideas in implementing the learning process and be able add insight and knowledge in developing his abilities. Beside it is also expected to increase motivation of teacher in developing teaching material either module or book accordance with the character of the students so that it can increase the comprehension of students deeply and insert the character values.

## 3. For Student

This research is expected to improve understanding and foster the value of the character of the students to be more fond of nature and the environment. In addition, to increase interest of students in learning and reading with product development in the form of this module.

## 4. For Institute/ School

For schools are researched, to improve the quality of education, especially in natural science and as consideration to use of teaching material. Moreover, this module expected to be support of the primary book and gives a new nuance in the learning process, especially in the natural science subjects.

### E. Significance of The Study Development

Research and development also aims develop new products and to improve products that has been exist and used by an institution.<sup>5</sup> Development of a product is a way to resolve the problems faced by teachers in education. With the research and development is expected to give solutions to problems faced by teachers in the learning process.

In the modern era, many found the values of the character of young people who deteriorated, and often do much delinquency adverse parties, it should be in education instill the values of character in students so to be a useful man. These values should inculcated early in order to unified and be in the spirit in students, so until they adult the character values remain invested brought by them.

The character values should be integrated in every learning process because the characters can be shaped by the experience of individuals. In this study, besides aims to produce a product in the form module also aims to instill character values in student though not all character values can be applied to this product.

From the explanation, it can be concluded that the development of this module is very important, which is to provide a solution to the problem of Natural Sciences learning experienced by teachers and students in understanding the material change in Appearance Of Earth And Celestial Objects. With the existence of this development will help teachers in solving problems that occurred in the learning process. It also can help students to better understand the material and the development of teaching materials can cultivate character in them selves

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<sup>5</sup> Nana Syaodih Sukmadinata. *Metode Penelitian Pendidikan* (Bandung: PT REMAJA ROSDAKARYA, 2008), page. 164.

of students so that have a excellent personality and they are expected to be more concerned with the nature and the environment around them.

## **F. Assumptions and Limitations of Development**

### **1. Assumptions of Development**

The underlying assumptions in research and development are:

- a. With the development of this module students will better understand the material change in the appearance of the earth and the celestial.
- b. After obtaining the learning process with developed of the teaching materials, students have the expected character values according to the material.

### **2. Limitations of Development**

In research and development, the researchers take development limitations as follows:

#### **a. Development Limitation**

In this development, the product will be produced in the form of modules that explained changes in the appearance of the earth and the celestial and their effect on the physical environment a much deeper will enhance understanding of students and character values on the self of students.

b. The Matter of Lesson

Development of this module is limited to the material on the fourth grade Elementary School / Islamic Elementary School 2<sup>nd</sup> semester with the subject as follows:

- 1) Changes in the appearance of the earth and celestial Object
- 2) The causes of changes in the appearance of the earth
- 3) The change in the physical environment and effect on land

c. The Research Subject

Subject of research in the development of this module is in the student of fourth grade SDN 1 Ngadirejo Trenggalek.

d. The Location Research

The location of research in SD Negeri 1 Ngadirejo RT. 26/ RW. 08, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek.

**G. Definition of Terms**

Definitions of terms in the study developing character based module for natural science subject in 4<sup>th</sup> grade of elementary school, described by the researcher are:

1. Development

Development is a new product that completes existing products and can be accounted. Development an organized knowledge to help solve problems in society, including in education undertaken to develop to be good

something or perfect.<sup>6</sup> So, development is a process to improve what the existing to produce a better product than before.

## 2. Natural Science Learning

Natural Science teaching is learning that can provide knowledge about the student residence life and can provide benefits in the everyday lives of students. Moreover, in learning natural science also give good knowledge about natural are mortal inanimate objects and all that is in the earth and space<sup>7</sup>. So learning of natural science is a conscious effort as a process in the acceptance of knowledge about nature and the environment. On learning natural science students can learn about the environment and the students can learn how to keep the environment.

## 3. Module

Module is compiled of study materials that systematically refers to the curriculum and can be studied independently in a specific time.<sup>8</sup> Module is one of the materials that have the smallest unit that can be studied independently and provide a systematic composition and interesting to be used by students in achieving the learning objectives. The module is based on the preparation of suitability curriculum and contents of the module must be in accordance with the expected competencies as well as information provided must up to date follow the development of science and era.

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<sup>6</sup> Isniatun Munawaroh. *Urgensi Penelitian dan Pengembangan* (<http://staff.uny.ac.id/sites/default/files/PENELITIAN%20PENGEMBANGAN.pdf>, download at 7<sup>th</sup> July 2013 on 04:42 WIB.)

<sup>7</sup> Trianto. *Model Pembelajaran Terpadu*, (Jakarta: PT Bumi Aksara, 2010), page. 142.

<sup>8</sup> Purwanto, dkk. *Pengembangan Modul*, (Jakarta: PUSTEKKOM Depdiknas, 2007), page. 9.



#### 4. Character

The meaning of character according to Kamus Besar Bahasa Indonesia is psychological characteristics, moral that distinguish a person with the other. The people have characteristic are the people has characters, personality, or nature.<sup>9</sup> While the characterless, is personality, behavior, character, and nature. Thus, the character is the values contained in each individual personality. The essential character inculcated early so people have a good personality. Character in learning process is important to give the character values on every matter which accepted student.

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<sup>9</sup>Akhmad Muhamimin Azzet. Urgensi Pendidikan Karakter Di Indonesia, (Jogjakarta: Ar-Ruzz Media, 2011), page. 16.



## CHAPTER II

### STUDY OF LITERATURES

This chapter explain about: A) Previous Research and B) Review Related Literature. The previous research explain about the last researchs has related with this research and development. The review related literature explain about theories as references to this research and development of modul. The explanation completely, as follows:

#### A. Previous Research

In relation with this study, researchers reviewed several previous research related to teaching materials, especially the module. Study were found by researchers that study made by Safa'atun in 2013 with the title "*Pengembangan Modul IPA Fisika Berbasis Integrasi-Interkoneksi untuk Siswa SMP/MTs* ", the result is a quality module has excellent categories based on assessment of the content experts, design experts, interconnect integration experts, and Physical science teacher. Module development is feasible to be used as a learning resource based on the interconnect integration. Students response to the module also has a high percentage that the small-scale trial to obtain the percentage of 91.67%, while the large-scale field trial to obtain the percentage of 84, 46%.<sup>1</sup>

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<sup>1</sup> Safa'atun, "Pengembangan Modul IPA Fisika Berbasis Integrasi-Interkoneksi Untuk Siswa SMP/MTs", *Skripsi*, Program Studi Pendidikan Fisika Fakultas Sains Dan Teknologi Universitas Islam Negeri Sunan Kalijaga Yogyakarta, 2013, page. 61.

This study has similarities with previous studies that is developing teaching materials products in the form of modules for teaching science and research styles adopted Borg and Gall. Differences in this study with previous studies is the subject of the trial in terms of previous research that students of SMP / MTs whereas in this study are students of SD / MI and research conducted by Safa'atun based on the integration-interconnect of the connecting material to study Al-Quran , whereas in this study based on the character of the students on the growing character of religion by recognizing the power of God who created the world and is responsible for nature. In a previous study developed a module with science subject especially physics and the study subjects developed modules with more basic science to elementary school.

The second previous research related to the thesis that modules made by Uvi Marni in 2013 with the title " *Penyusunan Modul Biologi Sistem Reproduksi Manusia Berdasarkan Kurikulum Tingkat Satuan Pendidikan (KTSP) untuk Siswa Kelas XI Semester II SMA/MA* ", the result is that the module has very good quality so that it can be used as a reference by the teacher in the learning and teaching materials can be independently for the students. The research has a very good quality after getting assessment of two biology teachers and 24 students of SMA Negeri I Prambanan. Assessment of teacher related to aspects of the presentation of the material and get a percentage of 82% and 80.50% so it said to be good. Assessment of students related with the material aspects, presentation,

and graphic get a percentage 90.40%, 91.30%, and 85.40% so it has a very good quality.<sup>2</sup>

This study has similarities with previous research that produces modules and aim to know developing the product. While the difference is on the style of research, in previous studies using the model ADDIE (analysis, design, and development) and in this study using the model of Borg and Gall. Another difference is in terms of test subjects to previous studies of SMA / MA and in this study the subjects students SD / MI, subjects who developed a module for the Science of Biology previous research while developing research on teaching science, and previous research based on a curriculum unit level education whereas in this study developed a module-based character.

Researcher was review a book based character publisher by Erlangga and writer is Haryanto with title “Sains untuk SD/MI Kelas IV”. The similarities with this research are the presented material integrate with chracter values and to students 4<sup>th</sup> grade of Elementary School. But there are some difference between book by Erlangga and this module development are book Erlangga use 2013 curriculum integrate with character values whereas in this research the module use KTSP curriculum have aims to develop character values in self of students, character values in natural science book by Erlangga developed with experiment activity and mention the character in experiment activity. On the module development in this research, character values integration with material of module

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<sup>2</sup> Uvi Marni, “Penyusunan Modul Biologi Sistem Reproduksi Manusia Berdasarkan Kurikulum Tingkat Satuan Pendidikan (KTSP) Untuk Siswa Kelas XI Semester II SMA/MA”, *Skripsi*, Program Studi Pendidikan Biologi Fakultas Sains Dan Teknologi Universitas Islam Negeri Sunan Kalijaga Yogyakarta, 2013, page. 71.

and activities of students in module appropriate with material can growing and formed character values and with observation activity.

Character values in module integrate character are religious, love to read, curiosity, care for environment, creativity, social care, responsibility, and toil. But character values of all material in natural science book by Erlangga are dicipline, toil, responsibility, curiosity, communicative, creative and honest. The different character values in module development there are religious, love to read, care for environment, and social care.

## **B. Review of Related Literature**

Review of related literature are as follows:

### **1. Module**

#### **a. Definition of The Module**

According to Nasution module is a stand-alone unit and arranged into a series of learning activities that aim to achieve the objectives that have been formulated clearly.<sup>3</sup> The Module is the smallest unit of a subject that can stand alone and be used independently in the learning process.<sup>4</sup> Module is a teaching materials compiled systematically with clear learning objectives and based on the prevailing curriculum. The

<sup>3</sup> Khusni Syauqi. *Artikel Pengembangan Media Pembelajaran Modul Interaktif Las Busur Manual Di SMA Negeri 1 Sedayu* (<http://eprints.uny.ac.id/7548/1/artikel%20pengembangan%20media%20pembelajaran%20modul%20interaktif%20las%20busur%20manual%20di%20smk%20n%201%20sedayu.pdf>. Download at 5<sup>th</sup> September 2013, on 08:35 WIB)

<sup>4</sup> Lembaga Administrasi Negara, "Peraturan Kepala Lembaga Administrasi Negara Nomor: 5 Tahun 2009 Tentang Pedoman Penulisan Modul Pendidikan dan Pelatihan" ([http://www.ditbin-widyaiswara.or.id/pdf/PERKALAN No 5 TH 2009 PEDOMAN PENULISAN MODUL.pdf](http://www.ditbin-widyaiswara.or.id/pdf/PERKALAN%20No%205%20TH%202009%20PEDOMAN%20PENULISAN%20MODUL.pdf), download at 28<sup>th</sup> August 2013, on 06. 15 WIB.)

module can be studied in a specified period according to the ability of each individual. With the use of this module means that every individual realizes it has different abilities, so that with the module can help students to understand the material thoroughly explained in module. The module arranged in an interesting and organized that every example and exercises relevant with the module content.

b. The Goals Using of Module

The goals using of the module are:

- 1) Students can participate in education appropriate with them speed and ability.
- 2) Students can learn the material contained in one unit with a teacher guidance and without the guidance of teachers.
- 3) Students have the freedom to ask questions about material that has not been clear for the teacher.
- 4) Students become the center of learning where students actively in each learning activity.

c. The Characteristic of Module

Characteristic of module are:

- 1) Self instructional is student be able to learn independently without the guidance of another person so that students not only to study the materials in school with a teacher guide, but they can learn at home on their own.



- 2) Self contained, is the material on one unit of competency are arranged on a module.
- 3) Stand alone is module developed can be used without any support media or the other learning material.
- 4) Adaptif is the module have adaptiveness on the development of science and always give updated information.
- 5) User friendly is the module using language appropriate with the user, so the user can receive the understanding module easily.
- 6) Consistency is the use of font, pictures, space, laying the compositions of the module must be consistent.<sup>5</sup>

#### d. The Advantage Of Using Modules

Advantages use the module are as follows:

- 1) Giving feedback as soon as possible so that ignorance or misunderstandings students in learning modules quickly repaired.
- 2) Students have complete mastery and have a opportunity to get the highest score.
- 3) The module has a clear purpose and direction so that students can achieve well.
- 4) Module is more flexible based on student ability.

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<sup>5</sup> Muclishin Riyadhi., *loc. cit.*



## 2. Natural Science Learning

### a. Meaning of Natural Science

In Depdiknas according to curriculum of KTSP the natural science is a way to knowing about nature sistematically as fact and concept with the discovery process.<sup>6</sup> The natural science as process to implement learning to drilled skill of process how the way to found of natural science product are observing, measuring, predicting, classifying, comparing, give conclude, formulating hypotheses, conducting experiment, analyzing data, and communicating the result of research.

### b. Objectives of Natural Science

The objectives of natural science learning in elementary school according curriculum of KTSP are:<sup>7</sup>

- 1) Acquire believe for God Almighty based existence and beauty of his creation nature.
- 2) Develop knowledge and comprehension concepts of natural science useful and can applied in everyday life.
- 3) Develop the curiosity, possitive attitude, and awareness of students about the relationship of interplay between science, environment, technology and society.
- 4) Increase the awaranness to participate in maintain, keep, and preserving natural environment as a creation of God.

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<sup>6</sup> Ahmed Rajieb. *Hakikat IPA*. [http://utakatikituk.blogspot.com/2013/03/hakikat-ipa-a\\_17.html](http://utakatikituk.blogspot.com/2013/03/hakikat-ipa-a_17.html).  
Download: Date 14 Juni 2013 at 03. 35 WIB.

<sup>7</sup> *Ibid.*,

- 5) Acquire supply of knowledge, concepts, and natural science skill as base to continue education to junior or senior high school.

From explain it can concluded that objective of natural science is to growing and increase the believe of students for God, develop comprehend and knowledge, develop curiosity to self of students, and growing the care of students for environment so they are able to maintain and preserve environment has been given Got to human.

#### c. Function of Natural Science

The function of natural science as follow:<sup>8</sup>

- 1) Natural science can build human thought eith specific characteristics.
- 2) Explain the relationship between various natural phenomena.
- 3) Predicting is prediction of natural science base on the consistency or regularity of natural phenomena.
- 4) Mastering or control nature to human welfare. With natural science, human can process the natural resources and can prevent or avoid catastrophic cause natural phenomena.

From explain it, natural science has many function for life are can explain variety of natural phenomena relation, as base knowledge to processing resources of nature so give benefits for human and can develop human mind.

#### d. Characteristic to Learn Natural Science

The characteristic to learn natural science as follow:<sup>9</sup>

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<sup>8</sup> *Ibid.*.

<sup>9</sup> Wasih Djojosoediro. *Pengembangan dan Pembelajaran IPA SD*. ([http://tpardede.wikispaces.com/file/view/ipa\\_unit\\_1.pdf](http://tpardede.wikispaces.com/file/view/ipa_unit_1.pdf)). Date of download 14 Juni 2013 at 03.40 WIB. page. 9.

- 1) The learning process of natural science involve all five sense, all thinking process, and various muscle movement.
- 2) Learn natural science conducted use variety techniques, for examples: observation, exploration, and experiment.
- 3) Learn natural science need variety instruments to help the observation.
- 4) Learn natural science is active process is the learning activity have to carried out by students.

Characteristic to learn natural science is in learning process the students is the main in learning activity use them all five sense and do variety observation and experiment to know the truth an event or natural phenomena and use variety instrument to support the learning activity so student know and understand the knowledge and can communicate with give truth information to other was found.

### 3. The Character

The character education is very important in forming the values of the personality of students or an individual, because the individual is not enough to have knowledge, but they should be able to understand the science because they have a good understanding of their knowledge, it will take them on good behavior. Good understanding of the individual will be encouraged on good behavior. It is as said by Theodore Roosevelt that to educate a person in mind and not in morals is to educate a menace to society.

Character education is constructed in education refers to Article 3 of the Law on System of National Education Number 20 Year 2003, that works to develop national education and character development and civilization of a dignified nation in the context of the intellectual life of the nation, aimed at developing the potential of students to become human being who beliefs and fear of God Almighty, noble, healthy, knowledgeable, skilled, creative, independent, and become citizens of a democratic and responsible.<sup>10</sup>

a. Definition of Character

According to David Elkind and Freddy Sweet Ph. D. character is a conscious effort to understand and care for other people based on ethical values. When we want our children to have a variety of characters that is true, then we have to assess what they are doing it right and doing what they believe is right. Even in the face of various problems of the outside and inside. According to Simon Philips, the character is a collection of values that lead to a system, which underlies the thinking, attitudes, and behaviors are displayed.<sup>11</sup> According to Winnie character has two terms, namely the first to show how person of behaves, when individuals do behave badly then he manifests bad behavior, but when people behave better then he manifests good behavior. According to Wiinie the second is the character related with

<sup>10</sup> Sa'dun Akbar, *Revitalisasi Pendidikan Karakter Di Sekolah Dasar* (<http://library.um.ac.id/index.php/Pidato-Pengukuhan-Guru-Besar/revitalisasi-pendidikan-karakter-di-sekolah-dasar.html>). Pdf, download at 28 Juny 2013 on 05.55 WIB. Page. 7.)

<sup>11</sup> Fatchul Mu'in. *Pendidikan Karakter Konstruksi Teoritik & Praktik* (Jogjakarta: AR-RUZZ MEDIA, 2011), page. 160.

personality is a person can be said to be characteristic if the behaviour appropriate moral in environment.<sup>12</sup>

In the discourse of character education gives the message that spiritual and religious values can not be separated from the educational character. In the Islamic perspective, character education includes three main are values morals, manners, and exemplary. This moral shown the responsibility, manners is demonstrating good behavior and exemplary is qualities of character that is displayed by a good Muslim who followed the example of Prophet Muhammad SAW.<sup>13</sup>

Character education for children should be done early in school and outside school. So that children can explore character education necessary habituation in life. This character education can be realized by give examples, communicate, interact with the environment, and so on. Cultivation of character in children is not directly visible success in a short time but it needs to process for a child or student unfamiliar with the characters implanted in them.

#### b. The Aims of Character Education

Objective of character education is to encourage the birth of good children who have good manners. If an individual has a good behavior and a commitment to doing things the future people will be more clearly than individuals who do not have a good character. According to

<sup>12</sup> *Ibid.*,

<sup>13</sup> Abdul Majid dan Dian Andayani. *Pendidikan Karakter Perspektif Islam* (Bandung: PT Remaja Rosdakarya, 2011), page. 58.



the Heritage Foundation character education have aims to establish the character of the whole character is to develop the physical, emotional, social, creative, spiritual, and intellectual students optimally.<sup>14</sup>

Some character education goals include:<sup>15</sup>

- 1) Instill values that exist within the individual and improving the system of collective life that respects individual freedom.
- 2) To improve the quality of education that leads to the achievement of the character and morals of students and can use the knowledge manifested in the values of the characters in his daily life.
- 3) To create and provide a sense of confidence, work skills, ability to interact, empathy, and communication skills.

#### c. Integrated Character Education With Learning

The learning process is designed to make students able to master a predetermined minimum competency curriculum and is able to make the students care about each other and their environment, and apply the values of the characters in his life. The character education should be fostered in the learning activities and integrated with appropriate subjects, so that students are able to understand and perform deeply knowledge of the values contained from the knowledge they have acquired.

The values of character education that need to be inculcated in students as in the following table.<sup>16</sup>

<sup>14</sup> Tuhana Taufiq Andrianto. *Mengembangkan Karakter Sukses Anak Di Era Cyber* (Jogjakarta: AR-RUZZ MEDIA, 2011), page. 93.

<sup>15</sup> Jamal Ma'mur Asmani. *Buku Panduan Internalisasi Pendidikan Karakter Di Sekolah* (Jogjakarta: DIVA Press, 2011), page. 42.



**Tabel 2.1 The Values of Character and Description of Character**

No.	Values of Character	Description
1.	Religious	Attitudes and behaviors are obedient in implementing teachings of their religion, tolerant of other religions worship implementation, and living in harmony with other faiths.
2.	Honest	Behavior based on efforts to make himself as one who can always be trusted in words, actions, and employment.
3.	Tolerance	Attitudes and actions that respect the differences of religion, race, ethnicity, opinions, attitudes, and actions of others who are different from themselves.
4.	Dicipline	Actions showing the behavior orderly and obedient to the various rules and regulations.
5.	Toil	Behaviors that indicate an earnest effort to overcome barriers to learning and completing assignments and tasks as well as possible.
6.	Creative	Thinking and doing things to produce new

<sup>16</sup> Humaidillah Kurniadi Wardana, “ Pengembangan Bahan Ajar Suhu dan Kalor Untuk Siswa Madrasah Aliyah (MA) Kelas IX Semester II Berorientasi Konstruktivisme dan Pendidikan Karakter”, *Skripsi*, Fakultas Matematika dan Ilmu Pengetahuan Alam UM, 2011, hlm. 17.

		way or result of something that has been owned.
7.	Stand Alone	Attitudes and behaviors that are not easy to depend on others to complete tasks.
8.	Democratic	Way of thinking, behaving, and act the same rights and obligations judging himself and others.
9.	Curiosity	Attitudes and actions are always trying to find more depth and breadth of the things he learned, seen, and heard.
10.	Spirit of Nationalism	Way of think, act, and insightful that puts the interests of the nation above self-interest and group.
11.	Love of Country	Way of thinking, behaving, and doing the show loyalty, concern, dab a high appreciation of the language, the physical environment, social, cultural, economic, and political nation.
12.	Cherishes Echievements	Attitudes and actions that encourage him to produce something useful for society, and recognize, and respect success of others.
13.	Friendly/ communicative	Actions that show a sense of love to talk, hang out, and work together with others.

14.	Love peace	Attitudes, words, and actions that make other people feel happy and safe on her presence.
15.	Love to read	Habits take time to read the various readings which provide for her benevolence.
16.	Care for the environment	Attitudes and actions that always seeks to prevent damage to the surrounding natural environment, and to develop efforts to improve the environmental damage that has occurred.
17.	Social care	Attitudes and actions have always want to give help other people and communities in need.
18.	Responsibility	Attitudes and behavior of people to carry out their duties and obligations, he should do, for themselves, the community, the environment (natural, social and cultural), country and God Almighty.

#### 4. Integration Character In Teaching of Natural Science Subject

Integration character in teaching of natural science subject can be done with developing basic competence specified on learning indicators that used as a measure of student success in achieving specified minimum standards.

From these indicators can be determined what the character values of the expected learning outcomes science.<sup>17</sup> From science learning experiences of students also get character values such as curiosity, diligent and do not give up (hard work), care for the environment, have a feeling of gratitude to God after studying natural science and so on.

On the other side, the natural science learning can also be integrated with the character of self-value that students are able to solve problems using concepts and obtained experiences in learning science with everyday experience. With the integration of continuous characters on learning will give children emotional intelligence so that they can support their intellectual face the future with life challenges they will face. Investment process not only requires an understanding of character but require early habituation. Students know the good and bad behavior that is realized in their daily lives to adulthood.

Each subject has a materials consisting of knowledge, skills, and attitudes to measure competency standards expected. But various forms of instructional materials should have an element of cultivation and fostering attitudes and values of the characters in each learning activity.

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<sup>17</sup> Insih Wilujeng, “Implementasi Pendidikan Karakter Dalam Pembelajaran IPA(SAINS)”, Artikel, FMIPA. UNY, 2011

## CHAPTER III

### RESEARCH METHODOLOGY

In third chapter explain about the method of research used in this research. This chapter include A) Method of development and B) Model of development, the completely explanation as follows.

#### A. Method of Development

The method of this research is research and development method. Research and development is a process or steps to development an existing product, wich can be give responsibility.<sup>27</sup>

According to Borg and Gall, educational research and development is a process used to develop and validate educational products.<sup>28</sup> In this research and development, researcher develop a product appropriate with objectives and necessity in education found in field. After the product developed then revise and correct the deficiencies found in the product. After that do field test until show attainment of objectives from this research.<sup>29</sup>

#### B. Model of Development

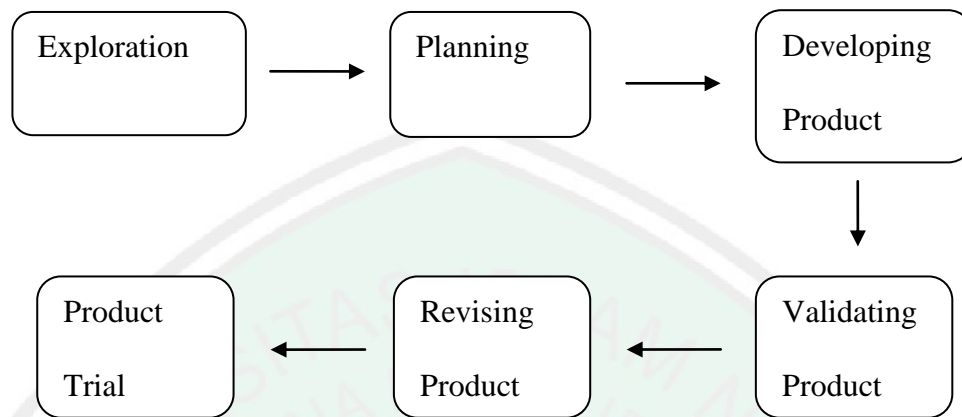
Model of development in this study refers to the experiments that have been conducted on the Far West Laboratory research and development adopted Borg and Gall (1989) style. The steps of research and development is as follows:

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<sup>27</sup> Nana Syaodih Sukmadinata, *loc. cit.*

<sup>28</sup> Walter R. Borg and Meredith Damien Gall. *Educational Research* (New York: Longman Inc, 1979), page. 624.

<sup>29</sup> *Ibid.*



The explain completely of each stages, as follows:

a. Exploration

At the exploration stage researchers to collect data and information to measure the needs that exist in the field. The result of observation in SDN 1 Ngadirejo, learning material used in school have not based character values so researcher interest to develop material learning based character.

The result of review a book of natural science from Erlangga publishing the writer is Haryanto, a book has been integrate with character values but the character only intgrate in experiment activity. Character values it is not integrate directly with material. So in develop module base character will be develop charater values with variety activities of students that exist in module and appropriate with material. The advantage of this module development there are religious value, love to read, care for environment, and social care.



## b. Planning

In the planning stage is done studies curriculum with the aim to determine the material to be presented in the module and to learn some competencies that must be achieved by students. With the review of the curriculum, the developer can determine the topic to be presented in the materials.

Before receiving the material changes appearance of the earth and celestial bodies, students have been studying the earth and the universe of natural phenomena and the influence of the sun in the everyday life in second grade and the appearance of the surface of the earth, the weather, and their effects on humans at third grade.

Based on unit level education curriculum (KTSP), changes appearance of the earth and celestial objects in fourth grade at second semesters, as follows:<sup>30</sup>

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<sup>30</sup> Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 22 Tahun 2006 Tentang Standar Isi untuk Satuan Pendidikan Dasar dan Menengah.

**Table 3.1 Competence Standard And Basic Competence Material Changes****Appearance Of The Earth And Celestial Objects**

<b>Competence Standard</b> <i>(Standar Kompetensi)</i>	<b>Basic Competence (<i>Kompetensi Dasar</i>)</b>
<b>Earth and the Universe</b> <i>(Bumi dan Alam Semesta)</i>  9. Understanding changes appearance of the earth and celestial objects <i>(Memahami perubahan kenampakan permukaan bumi dan benda langit)</i>	9.1 Describe the change appearance of the earth <i>(Mendeskripsikan perubahan kenampakan bumi)</i>  9.2 Describe position of the moon and earth appearance from day to day <i>(Mendeskripsikan posisi bulan dan kenampakan bumi dari hari ke hari)</i>

Character values that will be integrated in this module are as in the table.

**Table 3.2 Capacity Of Value Character That Integrated With The Material  
In The Module**

No.	Indicator of Learning	Value of Character
1.	Explain the change of earth appearance ( <i>Menjelaskan perubahan kenampakan bumi</i> )	Religious, curiosity, toil, responsibility, care for environment and love to read.
2.	Observe the occurrence of day and night ( <i>Mengamati terjadinya siang dan malam</i> )	
3.	Explain the change of moon position for a month ( <i>Menjelaskan perubahan kenampakan posisi bulan selama satu bulan</i> )	
4.	Explain the impact in earth as a result of change the earth and celestial objects appearance ( <i>Menjelaskan dampak yang terjadi pada bumi akibat adanya perubahan kenampakan bumi dan benda langit</i> )	
5.	Discuss the appearance of stars at night ( <i>Mendiskusikan kenampakan bintang pada malam hari</i> )	
6.	Explain the flux and reflux of sea water and abrasion ( <i>Menjelaskan terjadinya pasang naik dan turun air laut dan abrasi.</i> )	

### c. Developing Product

Development of resulting product in the form of modules with subject changes appearance of the earth and celestial bodies in fourth grade that can be used by teachers and students with the following specifications:

- 1) The resulting product is a module.
- 2) Module design using a variety of layouts for front cover and back cover, designed attractively to give image that suitable with the content of module. On the cover of this module, process of writing using variety lettering to get cover the cover that can attract students to learn. The title of this module is "MODUL BERBASIS KARAKTER Perubahan Kenampakan Bumi & Benda Langit Berbasis Karakter Untuk Kelas 4 SD/MI". On the back cover includes a little summary of the material.
- 3) The content of module are material and example with real images/ colored so that students can find the picture in their life and in sub chapter inserted personality value to invast and cultivate of student character.
- 4) On the module includes are competence standard, base competence, the objectives of learning, mind map, and material of module. The composition of this module are the pictures as an example, task groups, curious, unfamiliar words, love read, activities of student, vocabulary of natural science, variety of character values, a glossary, a summary of the material, and independent assignments in the form of exercises.
- 5) Module has some part of activities are:

- (a) Pre activity consisting of the delivery of competency standards, base competencies, learning objectives, and introduction of material with explore information from students about the material to be delivered.
  - (b) Main activity is comprised of subject matter, the pictures as an example, variety of character values, activities of student, vocabulary of natural science, task group can show the character of cooperation (search on the internet or laboratory mini), want to know (in the form of some information that has not known by students), and unfamiliar words.
  - (c) Post Activity aims to enhance the understand of student are task of group, a glossary, a summary of the material, and independent assignments in the form of exercises.
- 6) All the compositions on the module is organized in accordance with the layout so balanced on the matter with other compositions.
  - 7) Description of the contents of the module using A4 paper using Maiandra GD and Comic Sans MS font with the size are 14 and 12. Any part of the contents of books and pictures in design attractively. The usage language is communicative with the selection of the correct word so that children do not feel tired and bored when reading the material.

#### d. Validating Product

##### 1) Design Validation

In this validation there are validation of content, integration of character validation and design/media validation. This validation to know



validity of the product that will developed and are foundational in revising the development of this product.

## 2) Subject Validation

Subject validation of the study are three lecturers with the criteria are as follows:

### a) The Content Expert

- (1) Agus Mukti Prabowo, M.Pd is a lecture of Faculty of Tarbiyah and Teaching Sciences and have competence in natural science of Primary School.
- (2) Deeply understand about teaching and learning and material of science in Primary School.
- (3) Has written numerous books on science.
- (4) Assess the suitability of competency standards, learning objectives, the concept of material accuracy, content modules, and suitability exercise with the expected competencies.

### b) The Media Expert

- (1) Dr. Muhammad Walid, MA is a lecture of Faculty of Tarbiyah and Teaching Sciences and lead of Teaching Education Islamic Elementary School Department. And he is a lecture of resource development and media of learning subject.
- (2) He have competency to designing instructional materials.
- (3) Already have experience of designing teaching materials especially modules.



- (4) Assess aspects of the product on display and placement of every composition of product suitability with the material.

c) The Integration Character Expert

- (1) Dr. Muhammad Walid, MA is a lecture of Faculty of Tarbiyah and Teaching Sciences and lead of Teaching Education Islamic Elementary School Department.
- (2) He have competence to integrate the characters in learning, especially for elementary school learning.
- (3) Already have experience making teaching materials to integrate character.
- (4) Assess the product on the integration aspects of character values on modules developed.

e. Revising Product

At this stage of the product revision aims to improve the viability and quality of the product in terms of organizing the composition of modules (design), content/materials modules, and integration of character after getting various suggestions for improvement of material experts, media experts, and integration character expert.

f. Product Trial

(1) Trial Design

The trial design to determine the feasibility of the products developed, with the following stages:

- (a) Revised teaching materials from review of content expert, integration of character expert, and design expert.
- (b) Conduct stage I trials are trials for small groups with 5 students of 4<sup>th</sup> grade in SDN 1 Ngadirejo Trenggalek.
- (c) Collect the data to measure the validity of the module, if not valid then be revised.
- (d) After a valid or has been revised, then conduct a phase II trial of the large group with 10 students of 4<sup>th</sup> grade in SDN 1 Ngadirejo Trenggalek.
- (e) To collect data to measure the feasibility and interest in the teaching materials developed.
- (f) Make revisions if it is not valid seen from the results of data collection. If it is valid then the final product development.

## (2) Subject Trial

Subject trial are a content expert, a design expert, an integration character expert, a teacher of natural science, and students of 4<sup>th</sup> grade in SDN 1 Ngadirejo Trenggalek. With the provisions of the learning process using unit level education curriculum (KTSP).

## (3) Data Kind

Data used in this study are:

- (a) Qualitative data were taken from the criticism, suggestions, comments subject test. To collect the qualitative data from direct or indirect interviews, description part of questionnaire and observations relating

to the developer when the product was applied to the learning process to knowing interest in the product. Interviews were conducted with students and teachers as teaching materials to get users comments, criticisms, and suggestions.

- (b) Quantitative data is the form of assessments given by the test subjects. This quantitative data is taken from a questionnaire. Functioning questionnaire for assessment of product content experts, design experts, integration of character expert, teachers, and students.

#### (4) Instrument of Collecting Data

Instrument of collecting the data such as questionnaires, list of interviews, and observation. Questionnaire is used to knowing product feasibility and interest in the subject of trial the product that is developed. Register interview function to guide interviews so get the comments and suggestions. Observation guidelines become the guide in observations of student interest in the learning process when using the product developed. It also can describe the situation and circumstances of the effectiveness of the learning product.

#### (5) Data Analysis Techniques

Describe all data from questionnaire, interview, suggestions, comments, criticisms, opinions, and observations to determine the validity, quality and interest of the subject products in trial the product. Data from questionnaire translated use Linkert scale has five levels than analyzed with calculate the percentage of item score of each answer from each

statements item of questionnaire. The table of five levels as criteria of validity/feasibility of material teaching as follows.<sup>31</sup>

**Table 3.3 The Criteria of Validity/Fesibility of Teaching Material**

Percentage (%)	Qualification	Criteria of Validity/Fesibility
90 – 100	Better	Very valid, not need revision
75 – 89	Good	Valid, not need revision
65 – 74	Fairly Well	Valid enough, need revision
55 – 64	Less	Less valid, need revision
0 – 54	Very Less	Not valid, full revision

To determine the percentage use formula as follow:<sup>32</sup>

$$P = \frac{\sum X}{\sum Xi} \times 100\%$$

**Information:**

$\sum X$  : The total of answers assessment

$\sum Xi$  : The total of highest answers

Persen (P) : Percentage of level validity

If score of validation obtained minimal 65, so the teaching material developed it can be used as teaching material in activity learning in school.<sup>33</sup> The results of data analysis are assessment and responses from questionnaire by validation experts used as material to revision the product developed.

<sup>31</sup> Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan R & D* (Bandung:CV.ALFABETA, 2008), page.135.

<sup>32</sup> Suharsimi Arikunto, *Dasar-Dasar Evaluasi Pendidikan (Edisi Revisi)* (Jakarta:Bumi Aksara, 1999), page. 112.

<sup>33</sup> Sugiyono, *loc. cit.*

## CHAPTER IV

### THE RESULT OF RESEARCH AND DEVELOPMENT

This chapter explain about the result of research and development and description of module integrate character.

#### A. The Result of Research and Development

The result of research and development as follow:

##### 1. Requirement Analysis

Based on the background of this research is objectives of education not only give and transferring knowledge and information but also build, formed, and growing character values in self of students, so birth the intelligent students and do something based character values.

To building and forming character values in self of students with learning activities and need material learning emphasize on character values to create the real of education objective. And so far not find material learning of natural science emphasize on character values. But there is a book of natural science use 2013 curriculum is the writer Haryanto and publisher by Erlangga publishing company is base and integration character values but only mention of character values in experiment activity, not directly with material. So module development integrate character values directly with material and activities students on module.



## 2. Module Development

Description of module development are:

- a. The title of this module is "MODUL BERBASIS KARAKTER Perubahan Kenampakan Bumi & Benda Langit Berbasis Karakter Untuk Kelas 4 SD/MI". On the back cover includes a little summary of the material.
- b. Module has some part of activities are:
  - 1) Pre activity consisting of the delivery of competency standards, base competencies, learning objectives, and introduction of material with explore information from students about the material to be delivered.
  - 2) Main activity is comprised of subject matter, the pictures as an example, variety of character values, activities of student, vocabulary of natural science, task group can show the character of cooperation (search on the internet or laboratory mini), want to know (in the form of some information that has not known by students), and unfamiliar words.
  - 3) Post Activity aims to enhance the understand of student are task of group, a glossary, a summary of the material, and independent assignments in the form of exercises.
- c. All the compositions on the module is organized in accordance with the layout so balanced on the matter with other compositions.
- d. Description of the contents of the module using A4 paper using Maiandra GD and Comic Sans MS font with the size are 14 and 12. Any part of the

contents of books and pictures in design attractively. The usage language is communicative with the selection of the correct word so that children do not feel tired and bored when reading the material.

### **3. Data Presentation of Expert Validation and Analysis Data**

The data obtained from research and development there are two kind are quantitative data and qualitative data. Data obtained from expert validation and field testing. The expert validation consists of material expert validation, integration character expert validation, and media expert validation. The data from field test obtained from responses of students and teacher related with the development product. That all validation explained as follows.

Expert validation was held on March 18<sup>th</sup>, 2014 until April 16<sup>th</sup>, 2014. Data of validation obtained from the result of assessment for module is done by three validators are material expert, media expert, and character integration expert. Assessment by integration of character held on March 19<sup>th</sup>, 2014 and assessment by material expert was held on March 21<sup>th</sup>, 2014. While assessment by media expert was held on March 19<sup>th</sup>, 2014 but need to be revised so researcher get the result of assessment by media expert on April 16<sup>th</sup>, 2014.

Data obtained from quantitative and qualitatif data. Quantitative data obtained by assessment questionnaire with Linkert Scale and qualitative data obtained by comments and suggestions both written and verbal and from observation when conducting research. For assessment questionnaires of material expert validator, integration of character expert, media expert, and teacher of IV grade as follows.

**Table 4.1 Criteria of Scoring Questionnaire of Validation of Material Expert, Integration of Character Expert, Media Expert, and Teacher of IV Grade**

No.	Jawaban	Keterangan	Skor
1.	SB	<i>Sangat Baik</i>	4
2.	B	<i>Baik</i>	3
3.	K	<i>Kurang</i>	2
4.	SK	<i>Sangat Kurang</i>	1

While the questionnaire to students of IV grade, the value scoring criteria as follows.

**Table 4.2 The Criteria of Scoring Questionnaire of Students**

No.	Jawaban	Keterangan	Skor
1.	5	<i>Sangat Baik</i>	5
2.	4	<i>Baik</i>	4
3.	3	<i>Cukup</i>	3
4.	2	<i>Kurang</i>	2
5.	1	<i>Sangat Kurang</i>	1

The explanation of presentation of data and analysis data the result of expert validation are material expert validation, integration of character expert validation, and media expert validation, as follows.

a. Material Expert Validation

1) Quantitative Data

The result of quantitative data by material expert validation can be explain with this table.



**Table 4.3 Assessment Data of Nataural Science Subject Module Based Character On Material *Perubahan Kenampakan Permukaan Bumi Dan Benda Langit* In <sup>4th</sup> Grade of Elementary School by Material Expert**

No.	Statements	$\sum X$	$\sum Xi$	Percent (%)	Validity Criteria	Explanation
1.	The content of material relevan with Competency Standard	3	4	75	Valid	Not Revision
2.	The content relevant with indicators and purposes of learning	3	4	75	Valid	Not Revision
3.	Accuracy of title appropriate with concept of material	4	4	100	Valid	Not Revision
4.	Mind mapping shows the content of material easily understood	4	4	100	Valid	Not Revision
5.	Integration of character values appropriate with content of material	4	4	100	Valid	Not Revision
6.	Examples appropriate with the material presented	3	4	75	Valid	Not Revision
7.	Pictures can hel the students to understand the material presented	3	4	75	Valid	Not Revision
8.	There is a summary appropriate with the core points of material content	4	4	100	Valid	Not Revision



9.	Glossary appropriate with the material presented	4	4	100	Valid	Not Revision
10.	The presentation of glossary appropriate with accuracy terms, the alphabet serially, and appropriate with writing system	4	4	100	Valid	Not Revision
11.	Additional information the unknown of students related with presented material	3	4	75	Valid	Not Revision
12.	Material presented in module is presented in coherent and systematic	4	4	100	Valid	Not Revision
13.	Arranging sub-chapters have related with title so that became a unitary	4	4	100	Valid	Not Revision
14.	Language used communicative and interesting to learned	4	4	100	Valid	Not Revision
15.	The sentences used clear and easy to understand	4	4	100	Valid	Not Revision
16.	Using language appropriate with EYD	4	4	100	Valid	Not Revision
17.	There are not ambiguous sentences	3	4	75	Valid	Not Revision
18.	The language use appropriate with with the stage of development of students	3	4	75	Valid	Not Revision
19.	Exercise of evaluation appropriate with competency standard and	3	4	75	Valid	Not Revision

	indicators					
20.	Exercise of evaluation equitable the easy level and difficulty level	3	4	75	Valid	Not Revision
21.	The components of module is adequate as learning material	3	4	75	Valid	Not Revision
22.	The comprehensiveness and deepness of the module content	3	4	75	Valid	Not Revision
23.	Consistency of teaching material format	4	4	100	Valid	Not Revision
24.	Attractiveness of the module design	4	4	100	Valid	Not Revision
<b>Total</b>		<b>85</b>	<b>96</b>	<b>88,5</b>	<b>Valid</b>	<b>Not Revision</b>

**Information:**

$\sum X$  : The total of answers assessment

$\sum Xi$  : The total of highest answers

Persen (P) : Percentage of level validity

$$P = \frac{\sum X}{\sum Xi} \times 100\%$$

In the table 4.3, the results of validation assessment of natural science module by material expert is good with validity percentage 88,5% so that it is valid and does not need to be revised. The following is analysis each item of questionnaires assessment to validation the material of natural science module.

- a) Number 1 show that the according to material expert, the content of material relevan with Competency Standard with validation percentage is 75%.
- b) Number 2 show that the according to material expert, the content relevant with indicators and purposes of learning with validation percentage is 75%.
- c) Number 3 show that the according to material expert, accuracy of title appropriate with concept of material with validation percentage is 100%.
- d) Number 4 show that the according to material expert, mind mapping shows the content of material easily understood with validation percentage is 100%.
- e) Number 5 show that the according to material expert, integration of character values appropriate with content of material with validation percentage is 100%.
- f) Number 6 show that the according to material expert, examples appropriate with the material presented with validation percentage is 75%.

- g) Number 7 show that the according to material expert, pictures can hel the students to understand the material presented with validation percentage is 75%.
- h) Number 8 show that the according to material expert, there is a summary appropriate with the core points of material content with validation percentage is 100%.
- i) Number 9 show that the according to material expert, glossary appropriate with the material presented with validation percentage is 100%.
- j) Number 10 show that the according to material expert, the presentation of glossary appropriate with accuracy terms, the alphabet serially, and appropriate with writing system with validation percentage is 100%.
- k) Number 11 show that the according to material expert, additional information the unknown of students related with presented material with validation percentage is 75%.
- l) Number 12 show that the according to material expert, material presented in module is presented in coherent and systematic with validation percentage is 100%.
- m)Number 13 show that the according to material expert, arranging sub-chapters have related with title so that became a unitary with validation percentage is 100%.
- n) Number 14 show that the according to material expert, language used communicative and interesting to learned with validation percentage is 100%.

- o) Number 15 show that the according to material expert, the sentences used clear and easy to understand with validation percentage is 100%.
- p) Number 16 show that the according to material expert, using language appropriate with EYD with validation percentage is 100%.
- q) Number 17 show that the according to material expert, there are not ambiguous sentences with validation percentage is 75%.
- r) Number 18 show that the according to material expert, the language use appropriate with with the stage of development of students with validation percentage is 75%.
- s) Number 19 show that the according to material expert, exercise of evaluation appropriate with competency standard and indicators with validation percentage is 75%.
- t) Number 20 show that the according to material expert, exercise of evaluation equitable the easy level and difficulty level with validation percentage is 75%.
- u) Number 21 show that the according to material expert, the components of module is adequate as learning material with validation percentage is 75%.
- v) Number 22 show that the according to material expert, the comprehensiveness and deepness of the module content with validation percentage is 75%.
- w) Number 23 show that the according to material expert, consistency of teaching material format with validation percentage is 100%.



- x) Number 24 show that the according to material expert, attractiveness of the module design with validation percentage is 100%.

## 2) Qualitative Data

When conducting validation for material expert, researcher were given some suggestions are the theory of module are still little and too many story on the module. Moreover, there are some statements in module can give rise to multiple meaning and can give ambiguous meaning for students, as follow:

<b>Modul IPA Berbasis Karakter</b>	<b>Kelas 4</b>
<p>Benda langit sangat banyak, misalnya planet, meteor, bintang, dan lain sebagainya. Setiap hari kalian pasti melihat beberapa benda langit. Sebutkan benda langit yang selalu kalian lihat setiap hari pada siang hari dan malam hari, pada kolom berikut ini!</p>	

In the statement can give ambiguous meaning and make confuse for students. So have to revising in part it.

## 3) Revisi Produk

Based on the suggestion from material expert, then the revised module as follows:

<b>Modul IPA Berbasis Karakter</b>	<b>Kelas 4</b>
<p>Benda langit sangat banyak, misalnya planet, meteor, bintang, dan lain sebagainya. Setiap hari kalian pasti melihat beberapa benda langit. Sebutkan benda langit yang selalu kalian lihat setiap hari pada siang hari dan malam hari, pada kolom berikut ini!</p>	

Before Revision

Modul IPA Berbasis Karakter
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Kelas 4
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Sebutkan benda langit yang selalu kalian lihat setiap hari pada siang hari dan malam hari, pada kolom berikut ini!

After Revision

b. Integration of Character Expert Validation

1) Quantitative Data

The result of quantitative data by integration of character expert validation can be explain with this table.

**Table 4.4 Assessment Data of Nataural Science Subject Module Based Character On Material *Perubahan Kenampakan Permukaan Bumi Dan Benda Langit* In <sup>4th</sup> Grade of Elementary School by Integration of Character Expert**

No.	Statements	$\sum X$	$\sum Xi$	Percent (%)	Validity Criteria	Explanation
1.	Suitability of values character that integration with material of modul	3	4	75	Valid	Not Revision
2.	Religious value integrated with the material of module	4	4	100	Valid	Not Revision
3.	Presentation of religious value in module make the belief of students become high for the power and greatness of God	4	4	100	Valid	Not Revision
4.	The integration character with material of modul make the students have feel care for the environment	4	4	100	Valid	Not Revision
5.	The material in module make the students have feel responsibility to keep their environment	4	4	100	Valid	Not Revision
6.	The module can improve the creativity of students	4	4	100	Valid	Not Revision

7.	The overall of module is can attractive student interest to reading so foster the love reading character	3	4	75	Valid	Not Revision
8.	The exercises in the module to growing the standalone character on students	3	4	75	Valid	Not Revision
<b>Total</b>		<b>29</b>	<b>32</b>	<b>90,6</b>	<b>Valid</b>	<b>Not Revision</b>

**Information:**

$\sum X$  : The total of answers assessment

$\sum Xi$  : The total of highest answers

Persen (P) : Percentage of level validity

$$P = \frac{\sum X}{\sum Xi} \times 100\%$$

In the table 4.4, the results of assessment of natural science module by character integration is better with validity percentage 90,6% so this modul can be said very valid and does not need to be revised. The following is analiysis of each items of assessment questionnaire to integration of character validation for natural science module.

- a) Number 1 show that the according to integration of character expert, suitability of values character that integration with material of modul with validation percentage is 75%.
- b) Number 2 show that the according to integration of character expert, religious value integrated with the material of module with validation percentage is 100%.
- c) Number 3 show that the according to integration of character expert, presentation of religious value in module make the belief of students become high for the power and greatness of God with validation percentage is 100%.
- d) Number 4 show that the according to integration of character expert, the integration character with material of modul make the students have feel care for the environment with validation percentage is 100%.
- e) Number 5 show that the according to integration of character expert, the material in module make the students have feel responsibility to keep their environment with validation percentage is 100%.



- f) Number 6 show that the according to integration of character expert, the module can improve the creativity of students with validation percentage is 100%.
- g) Number 7 show that the according to integration of character expert, The overall of module is can attractive student interest to reading so foster the love reading character with validation percentage is 75%.
- h) Number 8 show that the according to integration of character expert, the exercises in the module to growing the standalone character on students with validation percentage is 75%.

## 2) Qualitative Data

Qualitative data obtained from Integration of character expert validation, the presented integration character with material of modul is good and there are many character integrated with the material of module so the students can get a lot of build character from the material of natural science module. So, the researcher did not do revision from character integration aspects.

## c. Media Expert Validation

### 1) Quantitative Data

The result of quantitative data by media expert validation can be explain with this table.

**Table 4.5 Assessment Data of Nataural Science Subject Module Based Character On Material *Perubahan Kenampakan Permukaan Bumi Dan Benda Langit* In <sup>4th</sup> Grade of Elementary School By Media Expert**

No.	Statements	$\sum X$	$\sum Xi$	Percent (%)	Validity Criteria	Explanation
1.	The design of overall in module	4	4	100	Valid	Not Revision
2.	Suitability pictures with title on cover	4	4	100	Valid	Not Revision
3.	Mind mapping on mudule	3	4	75	Valid	Not Revision
4.	The use of letters on cover, chapters, sub-chapters, and material content	4	4	100	Valid	Not Revision
5.	Consistency use of spacing between title with the first line, between title with the first teks	4	4	100	Valid	Not Revision
6.	Clarity of writing or typing	4	4	100	Valid	Not Revision
7.	Consistency of use of numbering	4	4	100	Valid	Not Revision

8.	The use of column format appropriate with the shape and size of paper	3	4	75	Valid	Not Revision
9.	The writing words to emphasizing marks use the attract color and clear	3	4	75	Valid	Not Revision
10.	Consistency of use of letters	4	4	100	Valid	Not Revision
11.	The accuracy of type letters to each component of module	4	4	100	Valid	Not Revision
12.	The accuracy of component module placement	3	4	75	Valid	Not Revision
13.	The shape and size of font is easy to read	4	4	100	Valid	Not Revision
14.	The accuracy use capital letters	4	4	100	Valid	Not Revision
15.	Comparison the letters appropriate with chapter, sub-chapters, and content of material	3	4	75	Valid	Not Revision
16.	The accuracy of structuring presentation of paragraphs of material	4	4	100	Valid	Not Revision
17.	The accuracy of learning activity compotsition placement	3	4	75	Valid	Not Revision
18.	The use language is easy in teaching material	3	4	75	Valid	Not Revision

19.	Suitability language with the correct spelling	3	4	75	Valid	Not Revision
20.	Suitability the size of pictures needs in material and tasks presented	4	4	100	Valid	Not Revision
21.	The pictures to shows message of material presented clear and attractive	3	4	75	Valid	Not Revision
22.	Suitability between content of exercise with purpose of learning	3	4	75	Valid	Not Revision
23.	Suitability of types and forms of assessment	3	4	75	Valid	Not Revision
<b>Total</b>		<b>81</b>	<b>92</b>	<b>88</b>	<b>Valid</b>	<b>Not Revision</b>

**Information:**

$\sum X$  : The total of answers assessment

$\sum Xi$  : The total of highest answers

Persen (P) : Percentage of level validity

$$P = \frac{\sum X}{\sum Xi} \times 100\%$$

In table 4.5, the results of natural science module validation assessment by media expert is good with validity percentage 88% so can be said feasible and does not need to be revised. The following is an analysis of each items of assessment to media expert validation for natural science module.

- a) Number 1 show that the according to media expert, the design of overall in module with validation percentage is 100%.
- b) Number 2 show that the according to media expert, suitability pictures with title on cover with validation percentage is 100%.
- c) Number 3 show that the according to media expert, mind mapping on mudule with validation percentage is 75%.
- d) Number 4 show that the according to media expert, the use of letters on cover, chapters, sub-chapters, and material content with validation percentage is 100%.
- e) Number 5 show that the according to media expert, consistency use of spacing between title with the first line, between title with the first teks with validation percentage is 100%.
- f) Number 6 show that the according to media expert, clarity of writing or typing with validation percentage is 100%.
- g) Number 7 show that the according to media expert, consistency of use of numbering with validation percentage is 100%.



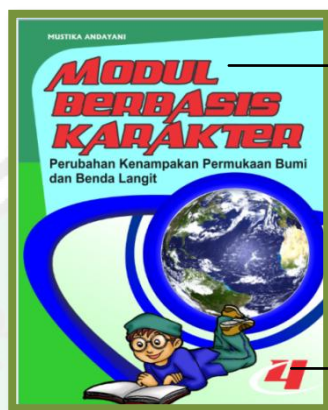
- h) Number 8 show that the according to media expert, the use of column format appropriate with the shape and size of paper with validation percentage is 75%.
- i) Number 9 show that the according to media expert, the writing words to emphasizing marks use the attract color and clear with validation percentage is 75%.
- j) Number 10 show that the according to media expert, consistency of use of letters with validation percentage is 100%.
- k) Number 11 show that the according to media expert, the accuracy of type letters to each component of module with validation percentage is 100%.
- l) Number 12 show that the according to media expert, the accuracy of component module placement with validation percentage is 75%.
- m) Number 13 show that the according to media expert, the shape and size of font is easy to read with validation percentage is 100%.
- n) Number 14 show that the according to media expert, the accuracy use capital letters with validation percentage is 100%.
- o) Number 15 show that the according to media expert, comparison the letters appropriate with chapter, sub-chapters, and content of material with validation percentage is 75%.
- p) Number 16 show that the according to media expert, the accuracy of structuring presentation of paragraphs of material with validation percentage is 100%.

- q) Number 17 show that the according to media expert, the accuracy of learning activity compotsition placement with validation percentage is 75%.
- r) Number 18 show that the according to media expert, the use language is easy in teaching material with validation percentage is 75%.
- s) Number 19 show that the according to media expert, suitability language with the correct spelling with validation percentage is 75%.
- t) Number 20 show that the according to media expert, suitability the size of pictures needs in material and tasks presented with validation percentage is 100%.
- u) Number 21 show that the according to media expert, the pictures to shows message of material presented clear and attractive with validation percentage is 75%.
- v) Number 22 show that the according to media expert, suitability between content of exercise with purpose of learning with validation percentage is 75%.
- w) Number 23 show that the according to media expert, suitability of types and forms of assessment with validation percentage is 75%.

## 2) Qualitative Data

When conducting validation product for media expert validation, researcher given criticism and suggestions, are follows:

- a) The presented design to front and back cover is good and appropriate to students of 4<sup>th</sup> grade elementary school, but front cover on part the title still incomplete as below.

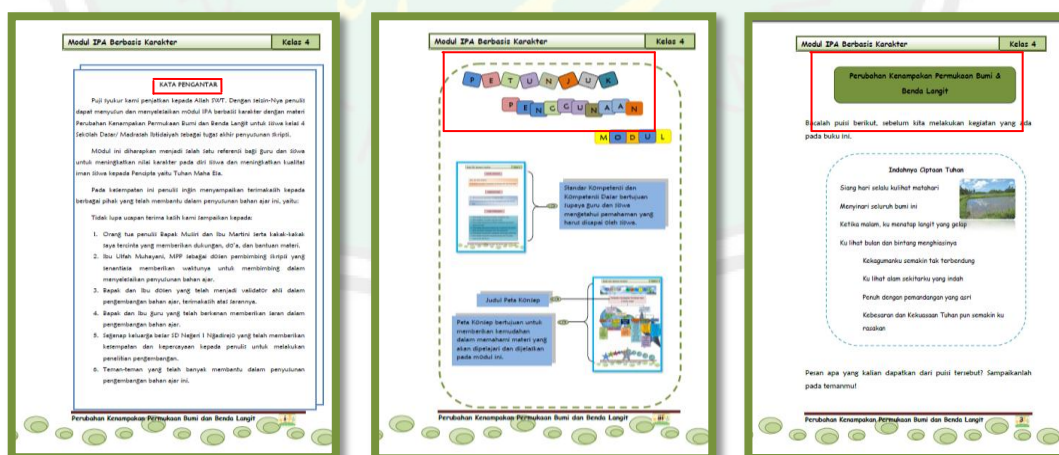


Name Of  
Subject Have  
Not Clear

The Level Of Class  
Only Written "4"  
Have Not Been  
Written With  
Complete And Clear

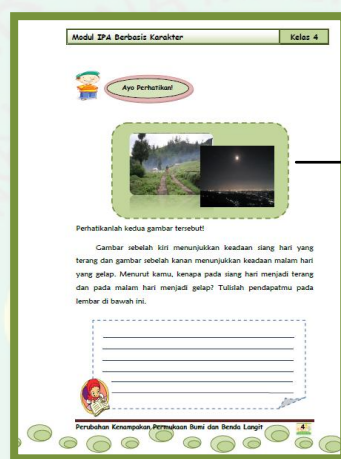
On the front cover of module, the name of subject lesson have not been written and the level of class still incomplete is just written "4" is not clear and complete. So needs revisions on the front cover of module.

- b) The writing each title have to same or consistent, not different as below.



From the pictures above and was marked red indicate the each title of module have not consistent the form of each titles.

- c) The pictures to help the comprehension of students as example of pictures too small and have not been given name and source of pictures. Then the pictures have to add the size of pictures and given the name and source of pictures. The lack of the module in the part of picture as examples as below.



The Size Of Picture Still Small And Have Not There Are Name And Source Of Picture

From the pictures above that the presentation of pictures in module is the size of picture too small and the name and source of picture not clear so needs revision on parts it.

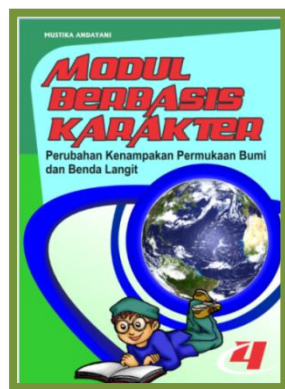
### 3) Revision of Product

Based on the analysis that has been done, then the revised module as follows:

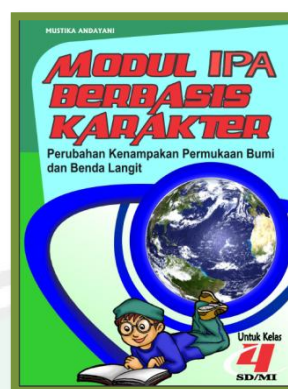
#### a) Revision of Front Cover

The front cover have not complete and not clear. Still raises question for user.





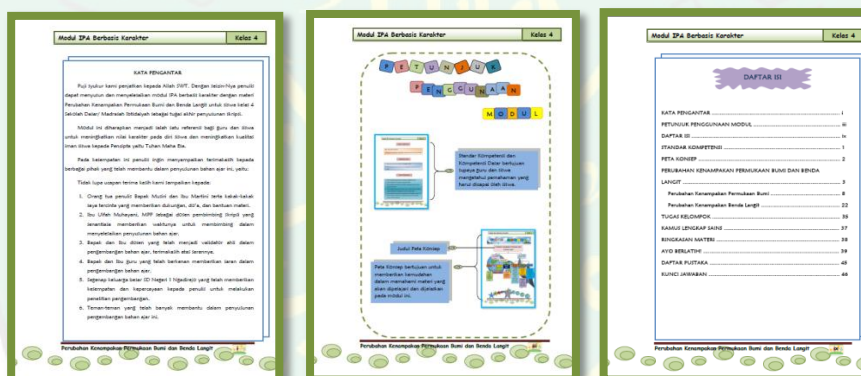
Before Revision



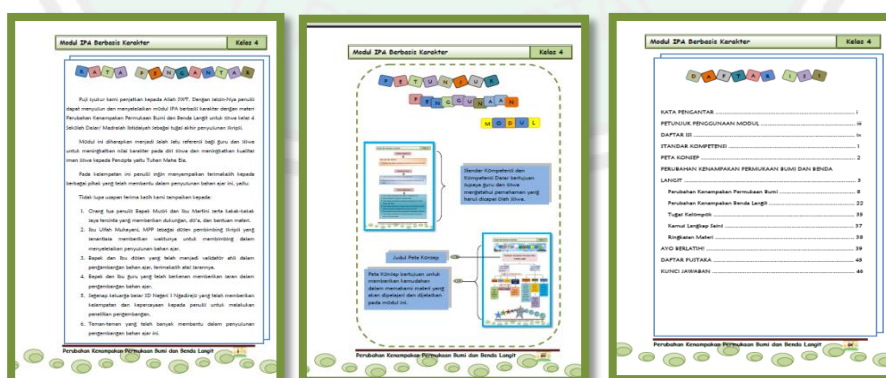
After Revision

## b) Revision of Consistency The Design of Title

The writing of each titles have to consistent.



Before Revision



After Revision

### c) Revision of Pictures

There are the size of some pictures still less great and the source unclear.



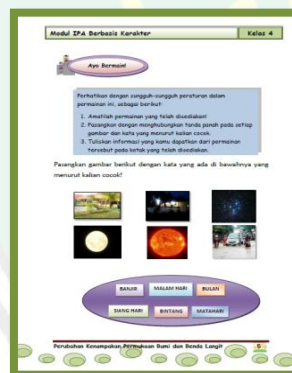
Before Revision



After Revision

### d) Revision Composition of Module

There is a composition of modul has not been effective and efficient if used in learning is on the *Ayo Bermain* activity, as follow.



Before Revision



After Revision



d. The Assessment of Natural Science Teacher 4<sup>th</sup> Grade

1) Quantitative Data

Quantitative data obtained from results of questionnaire assessment given after researcher tested the development of product. The result of quantitative data from natural science teacher, as follow.



**Table 4.6 Assessment Data of Nataural Science Subject Module Based Character On Material *Perubahan Kenampakan Permukaan Bumi Dan Benda Langit* In 4<sup>th</sup> Grade of Elementary School By Natural Science Teacher 4<sup>th</sup> Grade**

No.	Statements	$\sum X$	$\sum Xi$	Percent (%)	Validity Criteria	Explanation
1.	Suitability the material with base competency	4	4	100	Valid	Not Revision
2.	Suitability the material with the aims and indicators of learning	4	4	100	Valid	Not Revision
3.	Mind mapping appropriate with material and easy to understand	4	4	100	Valid	Not Revision
4.	The first activity to help students to knowing will be learned	3	4	75	Valid	Not Revision
5.	The first activity can give motivation for students to read and understand the material	3	4	75	Valid	Not Revision
6.	The first activity give religious value for students	4	4	100	Valid	Not Revision
7.	The examples appropriate with the presentation of concept	3	4	75	Valid	Not Revision
8.	The presented of pictures can help the students understand the material	4	4	100	Valid	Not Revision

9.	The summary presenting the key points on the material	4	4	100	Valid	Not Revision
10.	The glossary presented appropriate with material	4	4	100	Valid	Not Revision
11.	Suitability in integration some character values with material	3	4	75	Valid	Not Revision
12.	The character values give comprehension behavior of students related with the presented material	4	4	100	Valid	Not Revision
13.	The material presented systematically	3	4	75	Valid	Not Revision
14.	The material of modul easy to understand students	4	4	100	Valid	Not Revision
15.	Clarity of material explanation in each sub-titles of module	4	4	100	Valid	Not Revision
16.	Clarity of tasks and exercises	4	4	100	Valid	Not Revision
17.	Suitability between the content evaluation/exercise with indicators and learning objectives	4	4	100	Valid	Not Revision
18.	Suitability the types and forms of assessment	4	4	100	Valid	Not Revision
19.	Using the easy language to understand students	4	4	100	Valid	Not Revision
20.	Using language appropriate with stage of students developpent	4	4	100	Valid	Not Revision
21.	There are not the multiple meaning words	4	4	100	Valid	Not Revision

22.	Breadth and depth of material content	4	4	100	Valid	Not Revision
23.	Arranging between sub-titles have related with the titles so become a unity	3	4	75	Valid	Not Revision
24.	The pictures presented give comprehension to material	4	4	100	Valid	Not Revision
25.	The pictures convey the material message presented attractively and clearly	4	4	100	Valid	Not Revision
26.	The layout of sentences and paragraphs make easy the students to learn the module	3	4	75	Valid	Not Revision
27.	Module make the students have responsibility sense	4	4	100	Valid	Not Revision
28.	Module make the students have care for environment sense	3	4	75	Valid	Not Revision
29.	Module make students to love reading	4	4	100	Valid	Not Revision
30.	Module make students have curiosity sense	3	4	75	Valid	Not Revision
31.	The module make students to toil (doing exercise with seriously)	4	4	100	Valid	Not Revision
32.	The module easy to shows material in natural science learning process	3	4	75	Valid	Not Revision

33.	The module make students more active	4	4	100	Valid	Not Revision
34.	The module give media of role in natural science learning	3	4	75	Valid	Not Revision
<b>Total</b>		<b>125</b>	<b>136</b>	<b>91,9</b>	<b>Valid</b>	<b>Not Revision</b>

**Information:**

$\sum X$  : The total of answers assessment

$\sum Xi$  : The total of highest answers

Persen (P) : Percentage of level validity

$$P = \frac{\sum X}{\sum Xi} \times 100\%$$

In the table 4.6, the results of assessment of natural science module by the natural science teacher of 4<sup>th</sup> grade is better with validity percentage 91,9%, the mean is very feasible and does not need to be revised. The analysis of each item of assessment questionnaire by natural science teacher of 4<sup>th</sup> grade for natural science module, as follow.

- a) Number 1 show that the according to the teacher of 4<sup>th</sup> grade, suitability the material with base competency with validation percentage is 100%.
- b) Number 2 show that the according to the teacher of 4<sup>th</sup> grade, suitability the material with the aims and indicators of learning with validation percentage is 100%.
- c) Number 3 show that the according to the teacher of 4<sup>th</sup> grade, mind mapping appropriate with material and easy to understand with validation percentage is 100%.
- d) Number 4 show that the according to the teacher of 4<sup>th</sup> grade, the first activity to help students to knowing will be learned with validation percentage is 75%.
- e) Number 5 show that the according to the teacher of 4<sup>th</sup> grade, the first activity can give motivation for students to read and understand the material with validation percentage is 75%.
- f) Number 6 show that the according to the teacher of 4<sup>th</sup> grade, the first activity give religious value for students with validation percentage is 100%.



- g) Number 7 show that the according to the teacher of 4<sup>th</sup> grade, the examples appropriate with the presentation of concept with validation percentage is 75%.
- h) Number 8 show that the according to the teacher of 4<sup>th</sup> grade, the presented of pictures can help the students understand the material with validation percentage is 100%.
- i) Number 9 show that the according to the teacher of 4<sup>th</sup> grade, the summary presenting the key points on the material with validation percentage is 100%.
- j) Number 10 show that the according to the teacher of 4<sup>th</sup> grade, the glossary presented appropriate with material with validation percentage is 100%.
- k) Number 11 show that the according to the teacher of 4<sup>th</sup> grade, suitability in integration some character values with material with validation percentage is 75%.
- l) Number 12 show that the according to the teacher of 4<sup>th</sup> grade, the character values give comprehension behavior of students related with the presented material with validation percentage is 100%.
- m) Number 13 show that the according to the teacher of 4<sup>th</sup> grade, the material presented systematically with validation percentage is 75%.
- n) Number 14 show that the according to the teacher of 4<sup>th</sup> grade, the material of modul easy to understand students with validation percentage is 100%.

- o) Number 15 show that the according to the teacher of 4<sup>th</sup> grade, clarity of material explanation in each sub-titles of module with validation percentage is 100%.
- p) Number 16 show that the according to the teacher of 4<sup>th</sup> grade, clarity of tasks and exercises with validation percentage is 100%.
- q) Number 17 show that the according to the teacher of 4<sup>th</sup> grade, suitability between the content evaluation/exercise with indicators and learning objectives with validation percentage is 100%.
- r) Number 18 show that the according to the teacher of 4<sup>th</sup> grade, suitability the types and forms of assessment with validation percentage is 100%.
- s) Number 19 show that the according to the teacher of 4<sup>th</sup> grade, using the easy language to understand students with validation percentage is 100%.
- t) Number 20 show that the according to the teacher of 4<sup>th</sup> grade, using language appropriate with stage of students development with validation percentage is 100%.
- u) Number 21 show that the according to the teacher of 4<sup>th</sup> grade, there are not the multiple meaning words with validation percentage is 100%.
- v) Number 22 show that the according to the teacher of 4<sup>th</sup> grade, breadth and depth of material content with validation percentage is 100%.

- w) Number 23 show that the according to the teacher of 4<sup>th</sup> grade, arranging between sub-titles have related with the titles so become a unity with validation percentage is 75%.
- x) Number 24 show that the according to the teacher of 4<sup>th</sup> grade, the pictures presented give comprehension to material with validation percentage is 100%.
- y) Number 25 show that the according to the teacher of 4<sup>th</sup> grade, the pictures convey the material message presented attractively and clearly with validation percentage is 100%.
- z) Number 26 show that the according to the teacher of 4<sup>th</sup> grade, the layout of sentences and paragraphs make easy the students to learn the module with validation percentage is 75%.
- aa) Number 27 show that the according to the teacher of 4<sup>th</sup> grade, module make the students have responsibility sense with validation percentage is 100%.
- bb) Number 28 show that the according to the teacher of 4<sup>th</sup> grade, module make the students have care for environment sense with validation percentage is 75%.
- cc) Number 29 show that the according to the teacher of 4<sup>th</sup> grade, module make students to love reading with validation percentage is 100%.
- dd) Number 30 show that the according to the teacher of 4<sup>th</sup> grade, module make students have curiosity sense with validation percentage is 75%.

- ee) Number 31 show that the according to the teacher of 4<sup>th</sup> grade, the module make students to toil (doing exercise with seriously) with validation percentage is 100%.
- ff) Number 32 show that the according to the teacher of 4<sup>th</sup> grade, the module easy to shows material in natural science learning process with validation percentage is 75%.
- gg) Number 33 show that the according to the teacher of 4<sup>th</sup> grade, the module make students more active with validation percentage is 100%.
- hh) Number 34 show that the according to the teacher of 4<sup>th</sup> grade, the module give media of role in natural science learning with validation percentage is 75%.

## 2) Qualitative Data

Qualitative data obtained by natural science teacher of 4<sup>th</sup> grade with interview are:

- a) Module developed has been good and can building the character of students.
- b) Overall the appearance of module developed very attractive the interest of students. It is seen from enthusiastic high of students when the learning process using module based character the developed of researcher.
- c) The module can increase the active students in learning activity.

Beside from the results of interview, qualitative data obtained from assessment questionnaire of modul to natural science teacher of 4<sup>th</sup> grade,

the module have been good because the *imtaq* can include in material of module. With this module the students can do experiment with media surrounding nature.



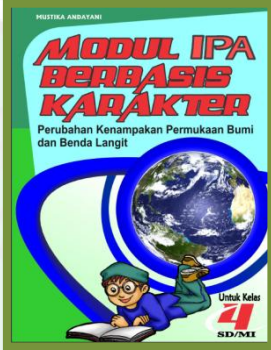

From the results of collected data by researcher from natural science teacher of 4<sup>th</sup> grade, there is not revision because according to natural science teacher of 4<sup>th</sup> grade the module development have been very good.

#### **4. Revision Of The Development Result**

Revision of the natural science module based character only do little revised especially from design aspect, as follows:


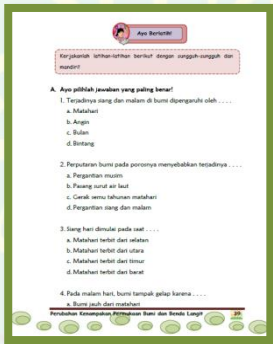
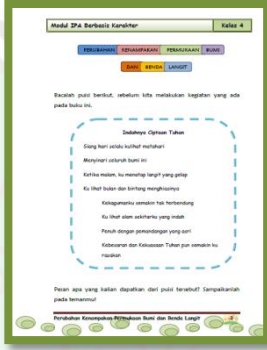





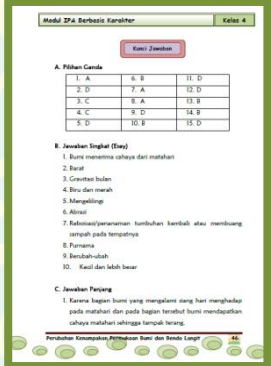
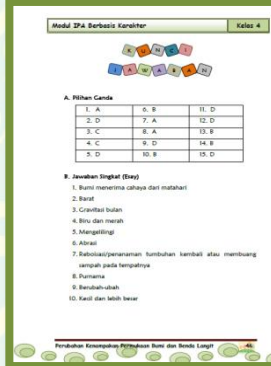
**Table 4.7 Revision of Overall Natural Science Module Based Character in 4<sup>th</sup> Grade of Elementary School**

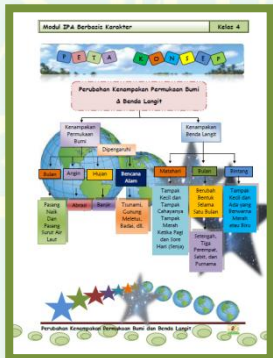
No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
1.	Cover of Module Based Character	<p>- Front Cover</p>  <p>- Back Cover</p> 	<p>- Front Cover</p>  <p>- Back Cover</p> 	Before revision the cover have not give complete title so will make the user confused.	-



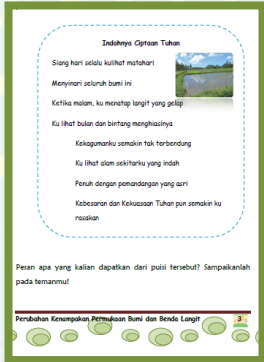
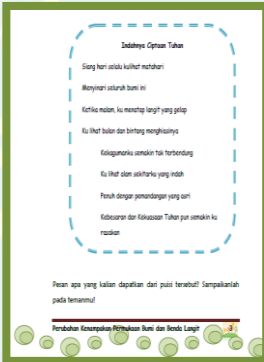



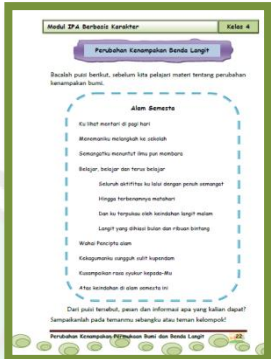
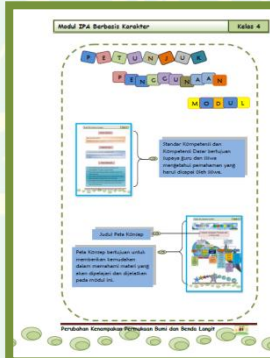
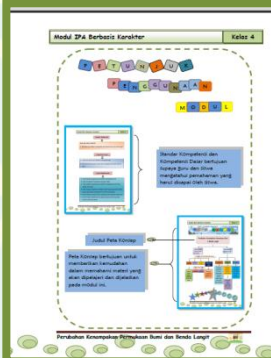


No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
		<p>- Title of Material in Module</p>  <p>- The Exercise of Module</p> 	<p>- Title of Material in Module</p>  <p>- The Exercise of Module</p> 		<p>3</p> <p>39</p>


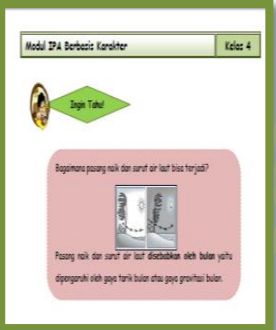


No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
		<p>- The list of libraries</p> 	<p>- The list of libraries</p> 		45
		<p>- Kunci Jawaban</p> 	<p>- Kunci Jawaban</p> 		46





No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
3.	Design of Module	<p>- Competency Standard</p>  <p>- Mind Mapping</p> 	<p>- Competency Standard</p>  <p>- Mind Mapping</p> 	<p>- The competency standard before revised look no relation between the contents of competency standard, base competence, and learning objectives. So revised with give hyphen in competency standard with contents of competency standar, base competence with content of base competence, and learning objectives with contents of learning objectives.</p> <p>- Design of mind mapping excessive so not attract to learn.</p>	<p>1</p> <p>2</p>

No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
		<p>- Design Not Effective And Efficient</p> 	<p>- The Effective Design To Students</p> 		5
		<p>- Picture Only To Attract Students</p> 	<p>- Picture Removed</p> 	Picture removed because according to media expert if the picture have not role or not related with content of poetry better removed.	3

No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
					22
4.	Size and Sources of Pictures	<p>- Size of each pictures in instruction to use module</p> 	<p>- Size of each pictures in instruction to use module</p> 	Size pictures in instruction to use module have to largish.	iii



No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
		<p>- Size of picture is small and there is not source of picture</p>  <p>- There is not source of picture</p> 	<p>- Size and source of picture is clear</p>  <p>- Source of picture is clear</p> 	<p>The size of pictures have to largish and each picture like examples or each picture to help explain the material give source get it.</p>	<p>4</p> <p>12</p>

No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
		<p>- Size of picture is small</p> 	<p>- Size was largish</p> 	<p>The size of pictures have to largish and each picture like examples or each picture to help explain the material give source get it.</p>	14
		<p>- There is not source of picture</p> 	<p>- Source of picture is clear</p> 		19

No.	The Points of Revisions	Before Revision	After Revision	Explanation	Page Revised
5.	Material	<p>- The statement of material</p>	<p>- The statement of material</p>	<p>The statement of material make confuse for students and give ambiguous meaning.</p>	23

## 5. Field Test of Product Development

### a. Quantitative Data

The quantitative data obtained from field tests conducted by students in 4th grade with do the learning use the development of module then after the research finished, the students given assessment module with questionnaire of assessment have been prepared by the researcher. The identity of field test subject can be seen in the appendix, as well as the statements of questionnaire for students can be seen in the appendix. Researcher conducted field test with 15 students or subjects. Field test there are field test at small group and field test at large group.

#### 1) The Field Test at Small Group

Field test at small group conducted for 5 students of 4<sup>th</sup> grade in SDN 1 Ngadirejo Pogalan Trenggalek. The field test at small group conducted outside of school hours is after the all students go home from school. In this field test conducted 2 meeting because some matrial in the chapter developed by researcher has been explained by their teacher in previous meeting so the first sub-chapter of module only repeated glance with combine the character in module. The results of assessment from field test at small group can be seen as follow.

**Table 4.8 Assessment Data of Nataural Science Subject Module Based Character On Material *Perubahan Kenampakan Permukaan Bumi Dan Benda Langit* In 4<sup>th</sup> Grade of Elementary School By Students in 4<sup>th</sup> Grade of Field Test at Small Group**

No.	Statements of Questionnaire	Subjects of Research and Development					$\sum X$	$\sum Xi$	Percent (%)	Validity Criteria	Explanation
		X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>					
1.	1	4	4	5	5	5	23	25	92	Valid	Not Revision
2.	2	4	4	4	4	4	20	25	80	Valid	Not Revision
3.	3	4	4	4	4	4	20	25	80	Valid	Not Revision
4.	4	3	3	3	3	3	15	25	60	Quite Valid	Revision
5.	5	3	4	4	4	4	19	25	76	Valid	Not Revision
6.	6	4	4	4	5	4	21	25	84	Valid	Not Revision
7.	7	4	4	4	5	4	21	25	84	Valid	Not Revision
8.	8	3	3	4	4	4	18	25	72	Valid	Not Revision
9.	9	4	4	4	5	4	21	25	84	Valid	Not Revision
10.	10	4	3	4	4	4	19	25	76	Valid	Not Revision
11.	11	4	4	4	5	4	21	25	84	Valid	Not Revision



12.	12	3	3	3	3	4	16	25	64	Quite Valid	Revision
13.	13	3	4	4	5	4	20	25	80	Valid	Not Revision
14.	14	4	3	4	4	4	19	25	76	Valid	Not Revision
15.	15	4	3	4	5	4	20	25	80	Valid	Not Revision
<b>Total</b>		<b>55</b>	<b>54</b>	<b>59</b>	<b>66</b>	<b>60</b>	<b>293</b>	<b>375</b>	<b>78</b>	<b>Valid</b>	<b>Not Revision</b>

**Information:**

- X<sub>1</sub>** : Subjects of research and development is Bhea Dela Rhosa as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>2</sub>** : Subjects of research and development is Mohammad Rafi Ariansyah as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>3</sub>** : Subjects of research and development is Selvi Kurnia Reni as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>4</sub>** : Subjects of research and development is Tri Rahmat Ridwan as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>5</sub>** : Subjects of research and development is Zeti Nuzula as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- Σ X** : The total of answers assessment

$\sum Xi$  : The total of highest answers

**Persen (P)** : Percentage of level validity

$$P = \frac{\sum x}{\sum Xi} \times 100\%$$



In table 4.7, based on the assessment data from field test of small group conducted 5 students of 4<sup>th</sup> grade in SDN 1 Ngadirejo, the development module has been good to used in learning process and can interest the students learning. From the assessment data, obtained validation percentage is 78% so the module have good and feasible used in natural science learning and does not need to be revised. However, on the analysis of the questionnaire items show there are 2 items quite valid are number 4 and 12. The subjects of field test at small group disagree that the material of module can easy to understand it and the sentences of modul easy to understand to explanation the material of module. The analysis of the each statements average on questionnaire from field test at small group as follows.

- a) Number 1 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, clarity of the learning objectives in module with validation percentage is 92%.
- b) Number 2 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, clarity of the material presented in the module with validation percentage is 80%.
- c) Number 3 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the mind mapping can give information about the material will be learned with validation percentage is 80%.
- d) Number 4 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, explanation of material in module can easy to understood with validation percentage is 60%.

- e) Number 5 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the examples of picture can help in understand the material with validation percentage is 76%.
- f) Number 6 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the summary of material can help in learning with validation percentage is 84%.
- g) Number 7 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, clarity of tasks and exercises with validation percentage is 84%.
- h) Number 8 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, tasks and exercises in module can help to improving the comprehension of material with validation percentage is 72%.
- i) Number 9 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the high belief of students for their God, that God have tremendous power with validation percentage is 84%.
- j) Number 10 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, after learning using module, students have sense of love to read, curiosity, care for environment, and responsibility with validation percentage is 76%.
- k) Number 11 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the students in learning and doing the assignment and exercise with seriously with validation percentage is 84%.

- l) Number 12 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, easy to understand the sentences used to explained the material of module with validation percentage is 64%.
- m) Number 13 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, overall of module content with validation percentage is 80%.
- n) Number 14 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, size and types of word used in module easy to read with validation percentage is 76%.
- o) Number 15 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the presented picture in module with validation percentage is 80%.

## 2) Field Test at Large Group

The field test at large gorup conducted for 10 students of 4<sup>th</sup> grade in SDN 1 Ngadirejo Pogalan Trenggalek. In this field test also conducted 2 meeting as in field test at small group with the cause is same with the field test at small group. But in the field test at large group that all items of questionnaire assessment are valid. The results of field test at large group assessment can be seen as follows.



**Table 4.9 Assessment Data of Nataural Science Subject Module Based Character On Material *Perubahan Kenampakan Permukaan Bumi Dan Benda Langit* In 4<sup>th</sup> Grade of Elementary School By Students in 4<sup>th</sup> Grade of Field Test at Large Group**

No.	Statements of Questionnaire	Subjects of Research and Development										$\sum X$	$\sum Xi$	Percent (%)	Validity Criteria	Explanation
		X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>	X <sub>9</sub>	X <sub>10</sub>					
1.	1	4	4	4	5	5	4	4	4	4	5	43	50	86	Valid	Not Revision
2.	2	5	5	4	4	4	4	4	4	5	4	43	50	86	Valid	Not Revision
3.	3	4	4	4	3	3	4	4	4	4	4	38	50	76	Valid	Not Revision
4.	4	5	5	3	3	3	4	3	5	4	4	39	50	78	Valid	Not Revision
5.	5	4	3	4	4	5	3	4	3	3	4	37	50	74	Valid	Not Revision
6.	6	3	3	4	3	3	3	4	4	4	4	35	50	70	Valid	Not Revision
7.	7	5	4	4	4	4	4	4	4	4	4	41	50	82	Valid	Not Revision
8.	8	4	3	4	3	4	3	4	3	4	3	35	50	70	Valid	Not Revision
9.	9	4	5	5	4	5	4	5	5	5	4	46	50	92	Valid	Not Revision
10.	10	3	5	4	3	5	5	4	4	5	4	42	50	84	Valid	Not Revision
11.	11	4	4	4	4	5	4	4	4	4	3	40	50	80	Valid	Not Revision

12.	12	4	3	4	4	3	4	4	5	4	3	38	50	76	Valid	Not Revision
13.	13	4	3	4	4	5	5	4	4	4	4	41	50	82	Valid	Not Revision
14.	14	3	4	4	4	3	4	4	5	4	4	39	50	78	Valid	Not Revision
15.	15	5	3	4	4	5	5	4	4	4	4	42	50	84	Valid	Not Revision
<b>Total</b>		<b>61</b>	<b>58</b>	<b>60</b>	<b>56</b>	<b>62</b>	<b>60</b>	<b>60</b>	<b>62</b>	<b>62</b>	<b>58</b>	<b>599</b>	<b>750</b>	<b>79,9</b>	<b>Valid</b>	<b>Not Revision</b>

### Information:

- X<sub>1</sub>** : Subjects of research and development is Arya Fahmi Aprilian as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>2</sub>** : Subjects of research and development is M. Aditya as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>3</sub>** : Subjects of research and development is Herena Cantya Danastri as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>4</sub>** : Subjects of research and development is Claudea Flowerensia as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>5</sub>** : Subjects of research and development is Kameliatul Fitriah as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo
- X<sub>6</sub>** : Subjects of research and development is Khoirul Ulum as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo

**X<sub>7</sub>** : Subjects of research and development is Mohammad Rizki Mardiana as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo

**X<sub>8</sub>** : Subjects of research and development is Riski Rio Ardisaputra as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo

**X<sub>9</sub>** : Subjects of research and development is Putri Atmanuriya as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo

**X<sub>10</sub>** : Subjects of research and development is F.D. Serliana P. as a student of 4<sup>th</sup> grade in SDN 1 Ngadirejo

**$\Sigma X$**  : The total of answers assessment

**$\Sigma Xi$**  : The total of highest answers

**Persen (P)** : Percentage of level validity

$$P = \frac{\Sigma X}{\Sigma Xi} \times 100\%$$

In table 4.8, based on the assessment data from field test at large group conducted for 10 students 4<sup>th</sup> grade in SDN 1 Ngadirejo, the development module have been good to use in learning. From assessment data it, obtained validation percentage is 79,9% then module is good and feasible used in natural science learning and does not been to be revised. The following is analysis avarage of each statements on questionnaire obtained from subyek of field test at large group as follow.

- a) Number 1 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, clarity of the learning objectives in module with validation percentage is 86%.
- b) Number 2 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, clarity of the material presented in the module with validation percentage is 86%.
- c) Number 3 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the mind mapping can give information about the material will be learned with validation percentage is 76%.
- d) Number 4 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, explanation of material in module can easy to understood with validation percentage is 78%.
- e) Number 5 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the examples of picture can help in understand the material with validation percentage is 74%.

- f) Number 6 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the summary of material can help in learning with validation percentage is 70%.
- g) Number 7 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, clarity of tasks and exercises with validation percentage is 82%.
- h) Number 8 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, tasks and exercises in module can help to improving the comprehension of material with validation percentage is 70%.
- i) Number 9 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the high belief of students for their God, that God have tremendous power with validation percentage is 92%.
- j) Number 10 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, after learning using module, students have sense of love to read, curiosity, care for environment, and responsibility with validation percentage is 84%.
- k) Number 11 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the students in learning and doing the assignment and exercise with seriously with validation percentage is 80%.
- l) Number 12 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, easy to understand the sentences used to explained the material of module with validation percentage is 76%.
- m) Number 13 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, overall of module content with validation percentage is 82%.

- n) Number 14 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, size and types of word used in module easy to read with validation percentage is 78%.
- o) Number 15 show that the according to the students in 4<sup>th</sup> grade SDN 1 Ngadirejo, the presented picture in module with validation percentage is 84%.

#### b. Qualitative Data

The qualitative data conducted product test in field both in field test at small group and field test at large group are with observation and assessment of description in questionnaire. The observation obtained when implement the module, as follow:

- 1) The students have high enthusiastic when given the result of development modul.
- 2) When in learning activity using module, students very interested for overall of module. It can be seen, when the students pay attention to explanation of teacher, there are some students who see the modul until the last page, and repeated again from first page until last page. So the teacher give reprimand to give attention for explanation of teacher.
- 3) When there is a poetry section in module, the students have desirability to read the poetry in front of their friends.
- 4) Students very pay attention for explanation of their teacher and doing activities in module with well.



- 5) In the activities to make the creativities as trash bins to improving the creative character and care for environment, the students are scrambling to get the materials to be used. Beside it, in team work to make trash bins, the students help each other and ask their work in team work.
- 6) When get the group task, students have high cooperative between students and seriously in doing it.
- 7) The participation of students can be seen in the learning process using this module, with give some question, answering question given by the teacher, and give explanation for their friends who do not understand. Because the students have different ability.
- 8) When the students get the task, they are seriously to do it and they work independently, but if there are their friends who do not understand, they give explanation to her or give suggestion to ask question for teacher.

While from the results of description assessment with questionnaire from field test at small group and large group, the data obtained as follow:

#### 1) Field Test at Small Group

The description assessment with questionnaire from field test at small group as follow:

- (a) According to Bhea Dela Rhossa as a subject field test at small group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Buku ini bagus ada, ada rangkumannya, ada puisi, ada lagu, dan sebagainya. Mudah dipahami, tetapi materinya cuman satu. Dan banyak ceritanya, kreatif, dan ada latihan soalnya dan buku ini pun sangat menarik*”. The statement of

subject can interpreted that the subject of field test very interest with the development of module because there are an interesting composition of module and she feels less with the material developed. She want the other chapters also developed as this module.

- (b) According to Mohammad Rafi Ariansyah as a subject field test at small group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Buku ini menarik dan ada cerita dan nyanyian, buku ini ada kenampakan alam*”. The statement of subject can interpreted that the development of module explain about appearance of nature are very interesting because there are not only material in module but there are stories and a song in module and make the students interested.
- (c) According to Selvi Kusnia Reni as a subject field test at small group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Bukunya menarik, bukunya sangat jelas, warnanya cukup menarik, bukunya ada tulisannya.*” The statement of subject can interpreted that the module developed very attractive and clear so easy to understand the material.
- (d) According to Tri Rahmat Ridwan as a subject field test at small group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is siswa kelas IV SDN 1 Ngadirejo adalah “ *Buku itu sangat jelas dan isinya bagus, warnanya menarik, ada puisinya, ada ceritanya, dan ada lagunya.*” The statement of subject can interpreted that the students like with this module because the color is attractive, there are stories can give knowledge to

them, poem make them inspired to read and make a poem, and they can sing a song together.

- (e) According to Zeti Nuzula as a subject field test at small group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Buku ini bagus dan sangat mudah dipahami dan juga ada puisi, rangkuman, dan ada lagunya dan buku ini menarik untuk belajar dan tulisannya sangat jelas.*” The statement of subject can interpreted that students like with this module because there are poems, a song, the writing clear and attractive, and summary of module can be make students easy to understand the material in module.

## 2) Field Test at Large Group

The description assessment with questionnaire from field test at large group as follow:

- (a) According to Arya Fahri Aprilian as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Saya senang membaca buku itu karena puisinya, bagus, dan mudah.*” The statement of subject can interpreted that module given to the students very different with the other sources of learning in their school. They were delighted with the poetry in source of learning, so they not only receive the direct knowledge but with poetry in module, they can receive indirect knowledge so makes them happy to learn.

- (b) According to M. Aditya as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Buku ini sangat bagus dan juga menarik. Penyajian gambarnya sangat menarik, ukurannya agak panjang. Gambar dan isinya cukup menarik dan uraian modul mudah dipahami.*” The statement of subject can interpreted that module is very intersting and different with the other books and books in their school. The pictures and contents of this module are attractive and easy to understand.
- (c) According to Herena Cantya Danastri as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Bukunya bagus dan jelas, mempunyai puisi, cerita, dan sangat senang membaca.*” The statement of subject can interpreted that students like with this development module because there are poems and stories so interest them to read.
- (d) According to Claudea Flowerensia as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Bukunya ringkas dan mudah dipahami ada puisi dan ada nyanyian.*” The statement of subject can interpreted that students learn use this module, because the content of module easy to understand, there are poems and a song can be sung with their friends.
- (e) According to Kameliatul Fitriah as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Saya senang membaca buku itu karena ada puisi, nyanyian, dll.*” The statement of subject can

interpreted that with there are poems and a song in module or learning source, make the students interested and like to learn. This module make the students very interest because design of module, material easy to understand, poems, and a song in module.

- (f) According to Khoirotul Ulum as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Bukunya lengkap, mudah dipahami, sangat menarik sekali, dan tulisannya mudah dibaca.*” The statement of subject can interpreted that makes them interested to learning and using module in natural science learning process are the design very attractive, the letters used in module interesting to read, and the most importantly material of module easy to understand.
- (g) According to Mohammad Rizki Mardiana as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Buku ini sangat bagus dan sangat jelas dan isinya menarik. Penyajian buku ini sangat jelas dan menarik.*” like the others students, this subject o field test interested with module because the presentation of module clear and attractive.
- (h) According to Riski Rio Adisaputra as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Buku ini sangat bagus dan sangat jelas dan isinya menarik. Penyajian buku ini sangat jelas dan menarik juga isinya bagus dan dibaca lebih jelas.*” The statement of subject can interpreted that students happy with the module developed. This is because the module very good from content and



design aspects. The material presented easy to understand and clear. Beside it, the design of overall compositions from module is very interesting.

- (i) According to Putri Armanuriya as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Buku ini bagus dan menarik, penulisannya pun jelas dan mudah dibaca. Tetapi hanya memiliki satu lagu, tetapi penyajiannya juga menarik dan contoh-contoh gambarnya cukup membantu untuk memahami materi.*” The statement of subject can interpreted that module is very interesting, easy to read so easy to understand though not with explanation of teacher. The examples as pictures presented can help the understanding of students and she very interested with module, it can be seen from his opinion about the song in module, she feel less with one song. This is indicate that the students very interested with this module.
- (j) According to F. D. Serliana P. as a subject field test at large group is students of 4<sup>th</sup> grade in SDN 1 Ngadirejo is “ *Isi modul ada lagu, ada cerita dan saya senang membaca modul karena isi modul sangat menarik.*” The statement of subject can interpreted that she pleased with this development module because material of module very interesting, there are a song and stories so happy to read and learn.

Generally, students give good respons for this natural science module base character. They very interested with the development of module. They very interest for module because the presented of module material is good, there are



stories, poems, songs, and activities of students. Beside it, generally from description assessment it, the students interested for module because the design of modul very attractive and different with the other book or sources of learning has been their used. From the results of field test is from the data obtained with quantitative data and qualitative data, can concluded that the development of modul does not need revision and feasible to used as material of teaching.

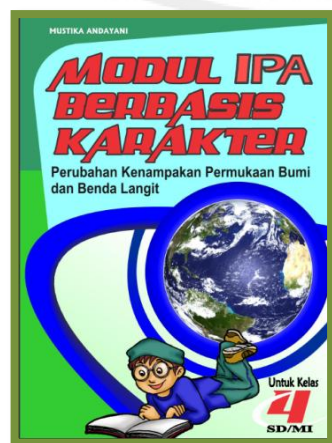
### B. Description of Module Integrate Character

The module developed by researchers is based on the character with take matter of natural science subject is *Perubahan Kenampakan Permukaan Bumi dan Benda Langit*. This module consists of cover, preface, instructions for use the module, table of contents, competency standards, a mind map, student activities (matter), *Ayo Berlatih*, list of references, and the answer key. Each part of the module will be described below:

#### 1. Cover

The cover in this module consists of two covers are the front cover and back cover.

##### a. The Front Cover



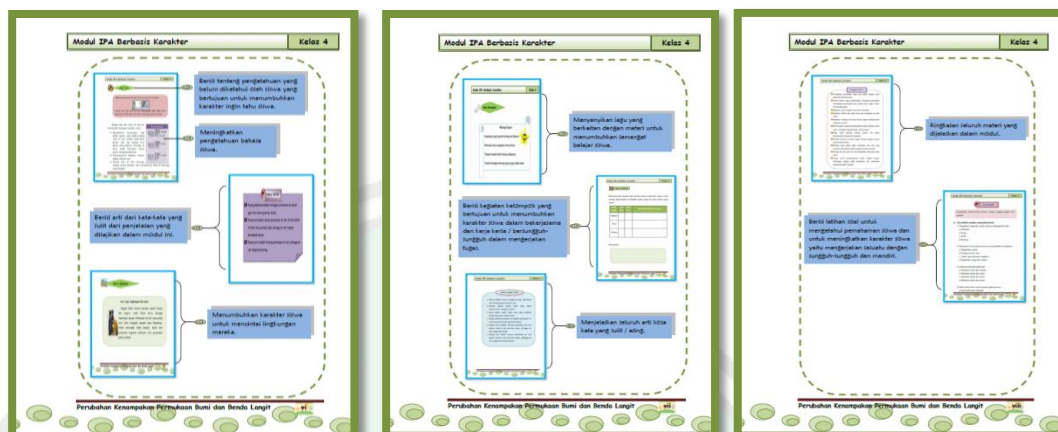
Front cover modules are designed as attractive as possible with mix and match colors, pictures, and letters so interesting to be studied by students. The front cover consists name of developer (Mustika Andayani), title of module with developed subject lesson (*MODUL IPA BERBASIS KARAKTER Perubahan Kenampakan Permukaan Bumi dan Benda Langit*), earth picture that show the subject lesson and picture of student being read a book that shows the integration of character on development module, and grade levels is 4<sup>th</sup> grade SD/MI is this modul can use to students in 4<sup>th</sup> grade elementary school or islamic elementary school.

b. Back Cover



On the back cover is designed more simply with a blend of the same color as the front cover and given an attractive picture the suitable with students of 4<sup>th</sup> grade. The back cover consists of an interesting picture, title of module, and summary about the contents of module based character.





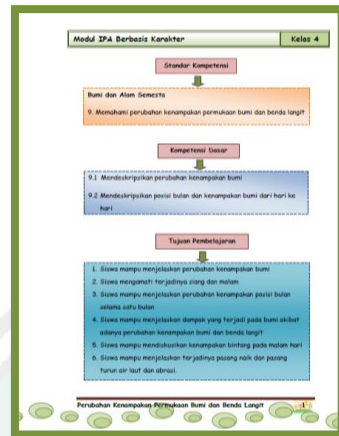
The instruction for use module, consists explanation every activity on the module and the aims of every activity on the development module.

#### 4. Table of Contents

Modul IPA Berbasis Karakter Kelas 4	
KATA PENGANTAR	
PETUNJUK PENGGUNAAN MODUL	1
DAFTAR ISI	16
STANDAR KOMPETENSI	1
PETA KONSEP	2
PERUBAHAN KEMAMPUAN PEMAHAMAN BANI DAN BENDA LANGIT	
LANGKAH	3
Perubahan Kemampuan Pemahaman Bani	8
Perubahan Kemampuan Benda Langit	22
Tugas Kelompok	33
Kamus Lingkap Falsafah	37
Rangkai Materi	39
AYAT BERKAITAN	39
DAFTAR PUSTAKA	46
KUNCI JAWABAN	46

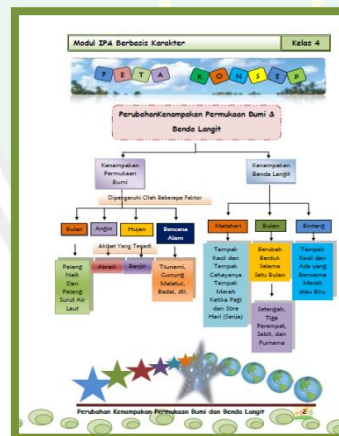
Table of contents consists pages of module content to facilitate the users of module to finding content module that will be studied. Table of contents designed simple but still interesting.

## 5. Competency Standards



Competency standards contains standard of competence to be achieved by students accordance with KTSP, base competence, and learning objectives to knowing the aims of learn this development module based competency standards selected by researcher.

## 6. Mind Map



Mind map designed as attractive as possible with adjust the color and type of letter and picture. In this mind map contains title, subject matter of module, subtitles, and pictures.



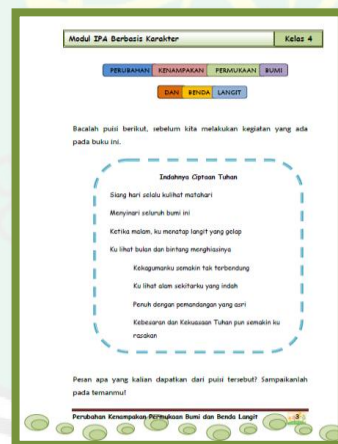
## 7. Activities of Students

Activities of student on this module based character contains of variety activity are pre-activity, materials of module (main activity), and post activity. Explanation of each activities as follows.

### a. Pre Activity

The aims of this pre-activity to introduction of material that will be explained in the module and to attract of students interest in learn it. This activity contains of poetry, *Ayo Perhatikan*, *Ayo Bermain*, *Ingat*, and *Karakter Religius*. the parts of the pre-activities are described as follows:

#### 1) Poetry



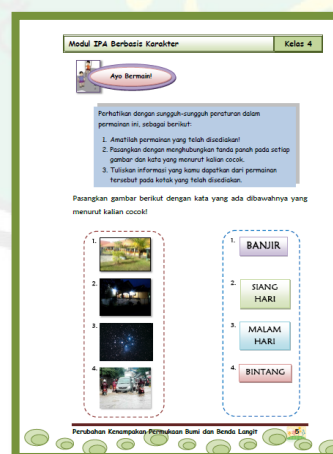
The aims of this poetry to attract students in learning. This section contains the title of subject, poetry about the beauty of nature, and students given activity to give their opinion and take a message from the poetry it.

## 2) Ayo Perhatikan



On the *Ayo Perhatikan*, students doing observation on the images and give their opinion. This section contains two images are situation of daylight and night, pieces of write students opinion and then convey to their friend and expected the opinion of their friends.

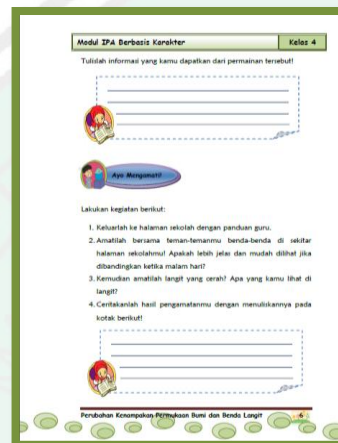
## 3) Ayo Bermain



On the parts *Ayo Bermain*, students are asked to match some pictures with words, the aims to stimulate students to learn material of module and so that students know what will learned.

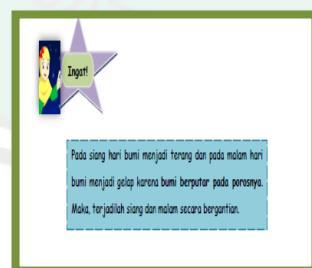
This part consists of the ways to do the game, some pictures and words were randomized sequence, place of information writing of obtained students from game.

#### 4) *Ayo Mengamati*



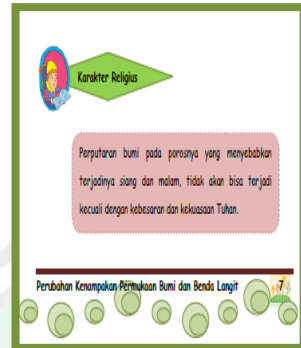
On the activity of *Ayo Mengamati* consists of the ways of activity and place of writing the result of observation and write their opinion.

#### 5) *Ingat*



On the *Ingat* consists of the important knowledge so that needs to be emphasized to students to always remember at the knowledge it.

## 6) Karakter Religius

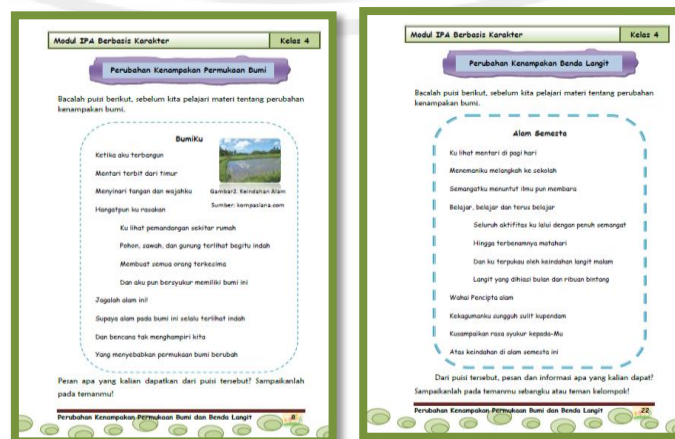


In the *Karakter Religius* contains of integration of character with material of module, have aims to cultivate the belief of students to God Almighty.

### b. Materi (Main Activity)

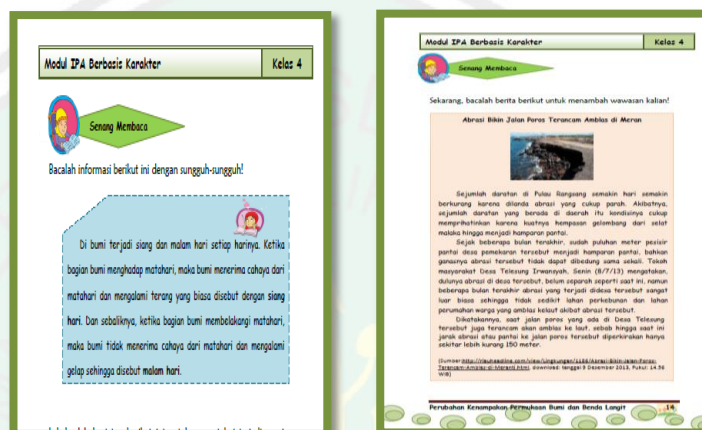
In the materials (main activity) consists of poetry, Senang Membaca, Kegiatan 1 and 2, Ingin Tahu, Kamus Bahasa, Ingat, Kamus SAINS, Story, Karakter Religius, Cinta Lingkungan, Kreatif, and Mari Bernyanyi. The parts of material (main activity) are described as follows:

#### 1) Poetry



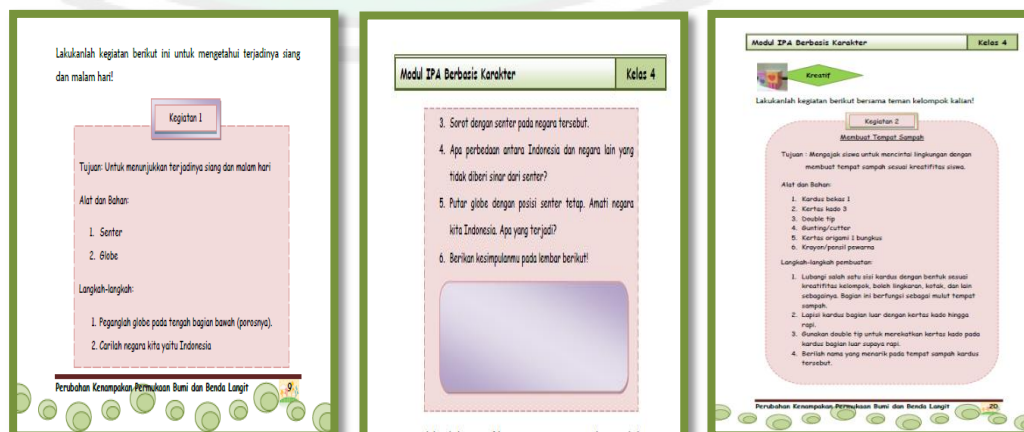
Poetry consists of poetries about nature and images to support the contents of poem. The poetry on on this part be located in every subtitle are on page 8 and 22.

### 2) *Senang Membaca*



At the *Senang Membaca* consists of knowledges related with material to increase the knowledge and comprehension of students and designed as attractive as possible so that students not feel bored and students accustomed to reading so that grow the character of students is love to read. *Senang Membaca* at module be located on pages 9, 14, 18, 23, 27, and 33.

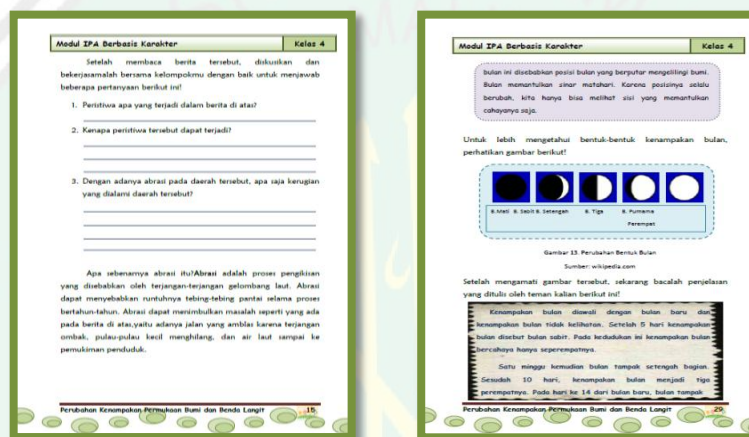
### 3) *Kegiatan 1 dan 2*





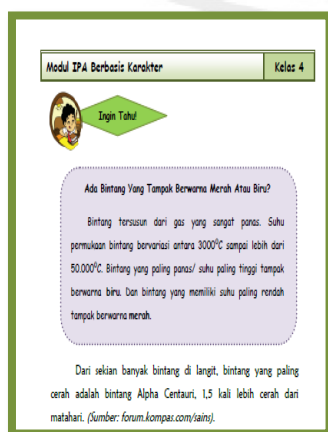
*Kegiatan 1* and 2 consists of experiment appropriate with the aims of every this activity. Every activity consists of materials of activity/experiment, tools needed to perform the experiment, the ways/steps of activity, and the place to write the result of activities. *Kegiatan 1* be located on page 9 to 10 and *Kegiatan 2* be located on page 20.

#### 4) Material of Module



The material of this module designed with a variety shapes, there is only lettering and there are combined with some shape so that the students more interest to learning module.

#### 5) *Ingin Tahu*



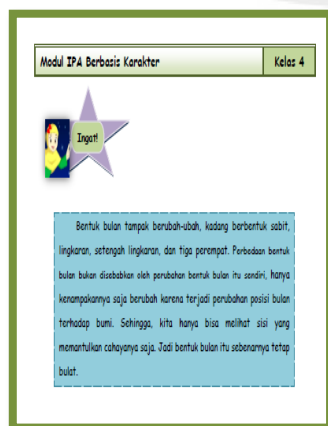
*Ingin Tahu* consists of wider information than *Senang Membaca* and information it related with the material of module. This part have aims to growing the curiosity character for something was their see. *Ingin Tahu* be located on page 12, 16, 24, 26, 28, and 34.

#### 6) Kamus Bahasa



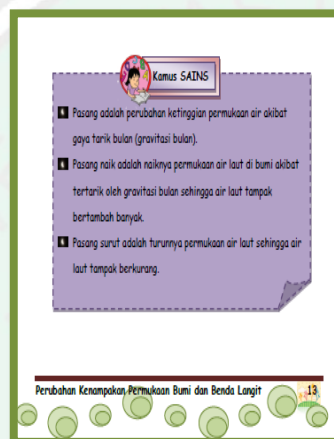
*Kamus Bahasa* consists of words are related with material of module use two langages are English and Arabic. The aims of *Kamus Bahasa* to give knowledge of language students and to improving vocabulary of students with 2 languages it. *Kamus Bahasa* be located on page 12, 24, and 26.

#### 7) Ingat



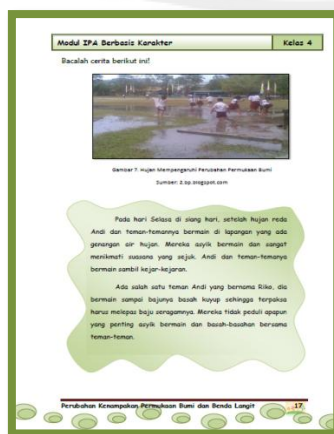
In the *Ingat* consists of material that has been explained on the previous pages or important material have to keep in mind of students. This part give function emphasize the materials of module. *Ingat* be located on page 13, 27, and 31.

#### 8) Kamus SAINS



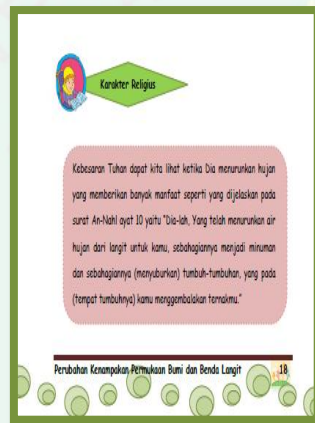
*Kamus SAINS* consists of new vocabularies of natural science and the meaning of the word it has been explains on the previous pages. This *Kamus SAINS* designed very attractive and give located on different form with the other parts of module. *Kamus SAINS* be located on page 13 and 27.

#### 9) Story



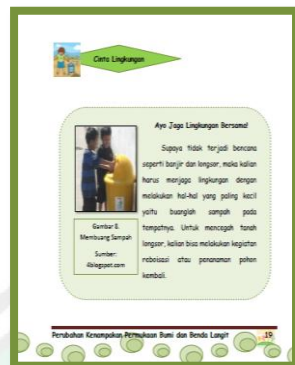
The story consists of picture and story appropriate with the age of students and in story there are informations that can be learned by the students. In this story convey knowledge related with materials of module and designed in the form of story to convey the information it to students, so that attract students to learn the information it. This part be located on page 17.

#### 10) *Karakter Religius*



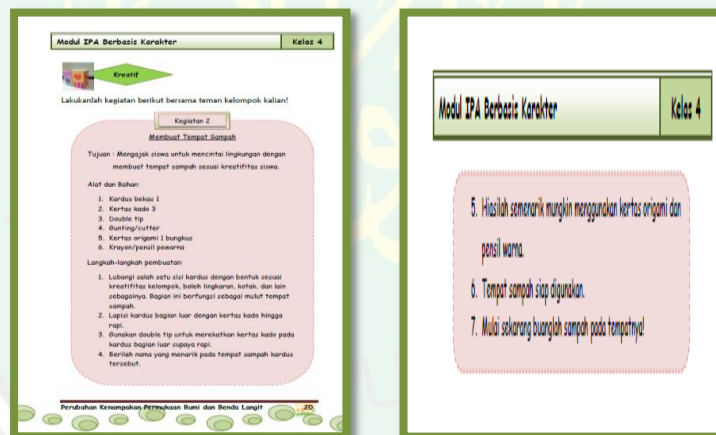
*Karakter Religius* consists of meaning of Verses Al-Qura'an relating with materials and the explanation between the meaning of Verses Al-Qur'an with material of module to strengthen and make students more believe with the power of God. *Karakter Religius* be located on page 18, 25, 31, and 34.

### 11) *Cinta Lingkungan*



*Cinta Lingkungan* consists of material which integrated with care of environment character and also given picture to illustrate the contents of *Cinta Lingkungan*. This part be located on page 19.

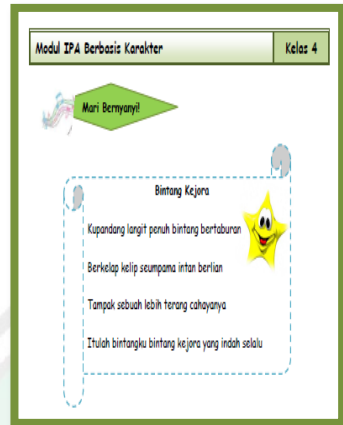
### 12) *Kreatif*



*Kreatif* consist of Kegiatan 2 and produce work from students appropriate their creativity. *Kreatif* be located on pages 20 to 21.



### 13) *Mari Bernyanyi*



*Mari Bernyanyi* consists of a song appropriate with material of module so that students are not surfeited and more enthusiastic when learn this module base character. In the part consists of a star picture to attract the attention of students so that when they see this part interested to read and sing. *Mari Bernyanyi* be located on page 32

### c. Post Activity

The post activity consists of *Tugas Kelompok*, *Kamus Lengkap Sains*, and *Ringkasan Materi*. The parts of this final activity are describe as follows:

#### 1) *Tugas Kelompok*

Modul IPA Berbasis Karakter Kelas 4

**Tugas Kelompok**

Bekerjasamalah dengan baik bersama teman kelompok kalian untuk mengisi tabel berikut ini! Berilah tanda silang (X) pada kolom yang sesuai!

Benda Langit	Gaya	Materi	Perubahan Akibat Dari Bumi
Meteorit			
Bulan			
Bintang			

Kesimpulan:

Modul IPA Berbasis Karakter Kelas 4

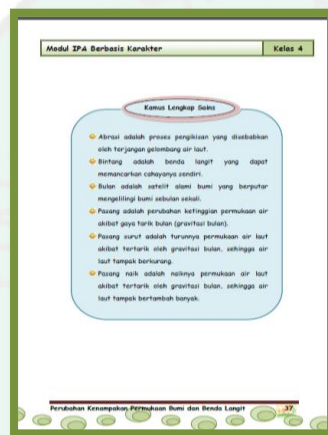
**Tugas Kelompok**

Isilah tabel berikut ini bersama teman kelompokmu! Jangan lupa untuk bekerjasama dengan baik!

Faktor-Faktor Penyebab Perubahan Kecepatan Bumi	Perubahan Kecepatan Bumi
Bulan	
Angin	
Hujan	
Bencana Alam	

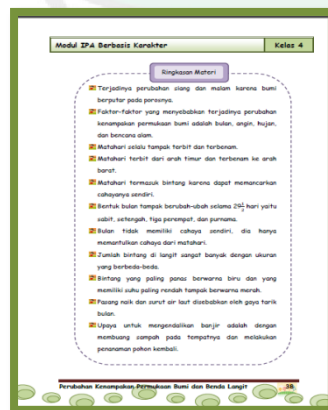
*Tugas Kelompok* to be activity in each final subtitles. *Tugas Kelompok* consists give assignment group for students in groups, so students have to collaboration with their friends and have a high sense of responsibility to the tasks they receive. *Tugas Kelompok* be located on page 21 and 35 to 36.

## 2) Kamus Lengkap Sains



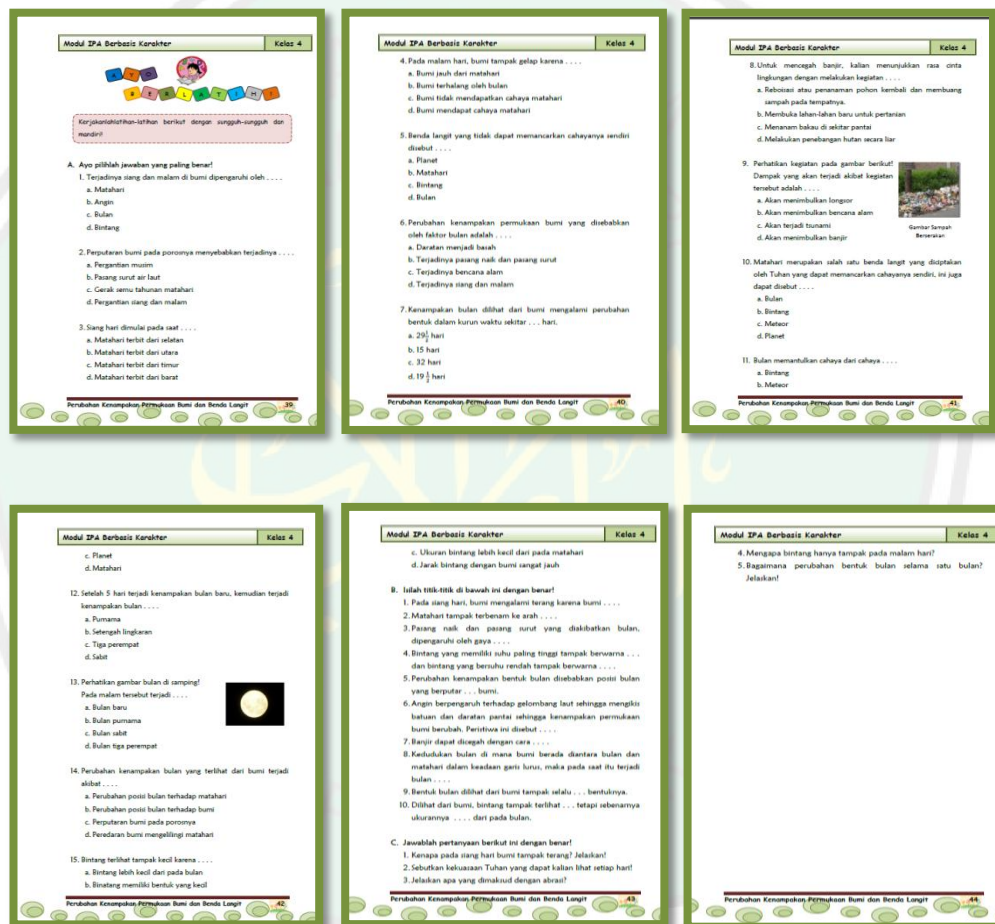
Kamus Lengkap Sains consists of new some words on this material of module and the collection of words from Kamus SAINS in material module.

## 3) Ringkasan Materi



Ringkasan Materi consists of core important of material on the module so that more easier for students to learn

### 8. Ayo Berlatih



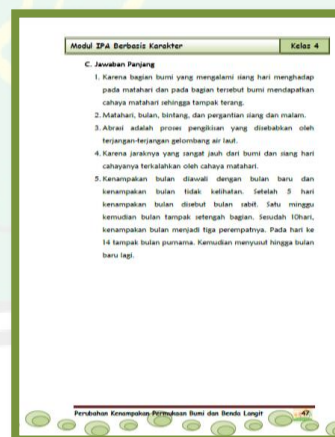
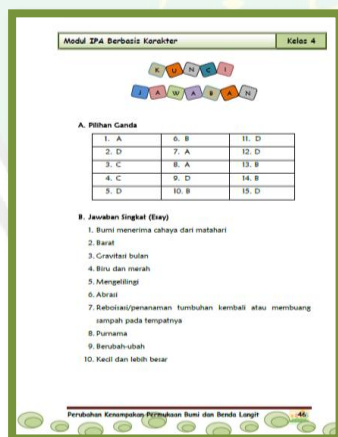
*Ayo Berlatih* consists of exercises aimed to knowing the capability of students in achieve base competence. Exercises also based character consists of 15 multiple choice questions, 10 essay questions, and 5 about the description questions.

## 9. Daftar Pustaka



The aims of *Daftar Pustaka* to give information about the books can support the learning activities of natural science subject with material as on this module. In the *Daftar Pustaka* consists of list of book references that supports or as a reference in the manufacture of this natural science subject module based character.

## 10. Kunci Jawaban



*Kunci Jawaban* consists of answer key of exercises of *Ayo Berlatih*. The aim of this part is to help the teachers and students to.





## CHAPTER V

### CLOSING

In the last chapter include A) Conclusion of development result and B) Suggestions of development especially for teaching material.

#### A. Conclusion of Development Result

The objectives of KTSP curriculum and national education is teacher not only give knowledge but have to formed students character to believe for God Almighty, students have good personality, good moral, and have behavior based religious values. To create the objectives it, so researcher develop a teaching material is module based character to growing and formed character of students with learning activities in class or when they learn in home.

Feasibility of development this module for natural science subject based character obtained from some experts, teacher of natural science subject, and students in 4<sup>th</sup> grade of elementary school. Some experts give assessment for this module are a material expert, an integration of character expert, and media expert. Each experts given a produk developed and give assessment with questionnaire. Data of field test obtained from observation and questionnaire. The results of research and development of module based character for natural science subject in 4<sup>th</sup> grade of elementary school, as follows:

1. The result of assessment from material expert is good, the mean development of product valid and not need revision with percentage 88.5%.

2. The result of assessment from integration of character expert is better with percentage 90,6% the mean is development product very valid and not need revision from integration of character side.
3. The result of assessment from media expert is good with percentage 88% it is mean the product valid and not need to revision.
4. The result of assessment from teacher of natural science subject is better, the meaning is module very valid with percentage 91,9%.
5. The results of assessment from field test in small group is good with percentage 78% and field test in large group get percentage is 79,9%.
6. From qualitative data get conclusion that in field test, students very interesting for this module based character and the character in module can applied in learning activities. The students have high enthusiastic when learning activities use module based character. They will in the other material made as this module.

From overall of data obtained with quantitative and qualitative data, module developed have been feasibility to used in learning process of natural science subject. But in this module based character just limited on one material of all competency standard material.

#### **B. Sugestions of Development Especially For Teaching Material**

Sugestions for developing of teaching material based on this research as follows:

1. Developing teaching material needed to give new knowledge and information for students.
2. Develop teaching material have to suitable with the characteristic of students and design very attractive to make the students interest and enjoy and happy to learn.
3. For the next developer, expected to develop the other material and base character so can growing and building the character in self of students with developed teaching material.
4. For the next developer of teaching material, expected to develop teaching material give many activities and experiments agree with developed material so that students more active in teaching and learning process.
5. In developing teaching material, advisable give many individual or group exercises to increase the comprehension and ability of students for material.

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## Penjabaran Indikator Kriteria Penilaian Untuk Siswa

### Modul Ipa Berbasis Karakter Pada Kelas 4 Sekolah Dasar

Kriteria Penilaian		Deskriptor	
Aspek	Indikator		
A. Isi/Materi	1. Kejelasan tujuan pembelajaran	5	Jika tujuan pembelajaran sangat jelas
		4	Jika tujuan pembelajaran jelas
		3	Jika tujuan pembelajaran kurang jelas
		2	Jika tujuan pembelajaran tidakjelas
		1	Jika tujuan pembelajaran sangat tidak jelas
	2. Kejelasan materi yang disajikan dalam modul	5	Jika materi yang disajikan sangat jelas
		4	Jika materi yang disajikan jelas
		3	Jika materi yang disajikan kurang jelas
		2	Jika materi yang disajikan tidakjelas
		1	Jika materi yang disajikan sangat tidakjelas

	3. Peta konsep dapat memberikan informasi mengenai materi yang akan dipelajari	5	Jika peta konsep sangat memberikan informasi tentang materi yang akan dipelajari
		4	Jika peta konsep memberikan informasi tentang materi yang akan dipelajari
		3	Jika peta konsep cukup memberikan informasi tentang materi yang akan dipelajari
		2	Jika peta konsep kurang memberikan informasi tentang materi yang akan dipelajari
		1	Jika peta konsep sangat tidak memberikan informasi tentang materi yang akan dipelajari
	4. Uraian materi dalam modul ini dapat dipahami dengan mudah	5	Jika uraian materi dalam modul sangat mudah dipahami
		4	Jika uraian materi dalam modul mudah dipahami
		3	Jika uraian materi dalam modul cukup mudah dipahami
		2	Jika uraian materi dalam modul kurang mudah dipahami
		1	Jika uraian materi dalam modul sangat tidak mudah

			dipahami
	5. Contoh-contoh gambar yang disajikan membantu siswa dalam memahami materi	5	Jika contoh-contoh yang disajikan sangat membantu dalam memahami materi
		4	Jika contoh-contoh yang disajikan membantu dalam memahami materi
		3	Jika contoh-contoh yang disajikan cukup membantu dalam memahami materi
		2	Jika contoh-contoh yang disajikan kurang membantu dalam memahami materi
		1	Jika contoh-contoh yang disajikan sangat tidak membantu dalam memahami materi
	6. Rangkuman yang disajikan membantu siswa dalam belajar	5	Jika rangkuman yang disajikan sangat membantu siswa dalam belajar
		4	Jika rangkuman yang disajikan membantu siswa dalam belajar

		3	Jika rangkuman yang disajikan cukup membantu siswa dalam belajar
		2	Jika rangkuman yang disajikan kurang membantu siswa dalam belajar
		1	Jika rangkuman yang disajikan sangat tidak membantu siswa dalam belajar
B. Evaluasi	7. Kejelasan tugas dan soal-soal latihan	5	Jika tugas dan soal-soal latihan yang diberikan sangat jelas
		4	Jika tugas dan soal-soal latihan yang diberikan jelas
		3	Jika tugas dan soal-soal latihan yang diberikan kurang jelas
		2	Jika tugas dan soal-soal latihan yang diberikan tidak jelas
		1	Jika tugas dan soal-soal latihan yang diberikan sangat tidak jelas
	8. Tugas dan soal-soal latihan dalam	5	Jika tugas dan soal-soal latihan sangat membantu



	modul membantu meningkatkan pemahaman terhadap materi		meningkatkan pemahaman terhadap materi
		4	Jika tugas dan soal-soal latihan membantu meningkatkan pemahaman terhadap materi
		3	Jika tugas dan soal-soal latihan cukup membantu meningkatkan pemahaman terhadap materi
		2	Jika tugas dan soal-soal latihan kurang membantu meningkatkan pemahaman terhadap materi
		1	Jika tugas dan soal-soal latihan sangat tidak membantu meningkatkan pemahaman terhadap materi
C. Integrasi  Nilai  Karakter	9. Keyakinan/kepercayaan terhadap kekuasaan Tuhan	5	Jika sangat yakin/percaya terhadap kekuasaan Tuhan
		4	Jika yakin/percaya terhadap kekuasaan Tuhan
		3	Jika cukup yakin/percaya terhadap kekuasaan Tuhan
		2	Jika kurang yakin/percaya terhadap kekuasaan Tuhan
		1	Jika sangat tidak yakin/percaya terhadap kekuasaan Tuhan

	10. Mempunyai rasa senang membaca, ingin tahu, peduli terhadap lingkungan, dan tanggung jawab	5	Jika setelah mempelajari modul, sangat mempunyai rasa senang membaca, ingin tahu, peduli terhadap lingkungan, dan tanggung jawab
		4	Jika setelah mempelajari modul, mempunyai rasa senang membaca, ingin tahu, peduli terhadap lingkungan, dan tanggung jawab
		3	Jika setelah mempelajari modul, cukup mempunyai rasa senang membaca, ingin tahu, peduli terhadap lingkungan, dan tanggung jawab
		2	Jika setelah mempelajari modul, kurang mempunyai rasa senang membaca, ingin tahu, peduli terhadap lingkungan, dan tanggung jawab
		1	Jika setelah mempelajari modul, sangat tidak mempunyai rasa senang membaca, ingin tahu, peduli terhadap lingkungan, dan tanggung jawab

	11. Memiliki rasa bersungguh-sungguh untuk menunjukkan nilai karakter kerja keras	5	Jika dalam belajar dan mengerjakan tugas dan soal-soal latihan memiliki rasa sangat bersungguh-sungguh
		4	Jika dalam belajar dan mengerjakan tugas dan soal-soal latihan memiliki rasa bersungguh-sungguh
		3	Jika dalam belajar dan mengerjakan tugas dan soal-soal latihan memiliki rasa cukup bersungguh-sungguh
		2	Jika dalam belajar dan mengerjakan tugas dan soal-soal latihan memiliki rasa kurang bersungguh-sungguh
		1	Jika dalam belajar dan mengerjakan tugas dan soal-soal latihan memiliki rasa sangat tidak bersungguh-sungguh
D. Kebahasaan	12. Kalimat yang digunakan untuk menjelaskan materi dalam modul mudah dipahami	5	Jika kalimat yang digunakan untuk menjelaskan materi dalam modul sangat mudah dipahami
		4	Jika kalimat yang digunakan untuk menjelaskan materi dalam modul mudah dipahami
		3	Jika kalimat yang digunakan untuk menjelaskan materi

			dalam modul cukup mudah dipahami
		2	Jika kalimat yang digunakan untuk menjelaskan materi dalam modul kurang mudah dipahami
		1	Jika kalimat yang digunakan untuk menjelaskan materi dalam modul sangat tidak mudah dipahami
E. Daya Tarik	13. Tampilan keseluruhan isi modul	5	Jika tampilan keseluruhan modul sangat menarik
		4	Jika tampilan keseluruhan modul menarik
		3	Jika tampilan keseluruhan modul cukup menarik
		2	Jika tampilan keseluruhan modul kurang menarik
		1	Jika tampilan keseluruhan modul sangat tidak menarik
	14. Ukuran dan jenis huruf yang digunakan dalam modul mudah dibaca	5	Jika ukuran dan jenis huruf yang digunakan dalam modul sangat mudah dibaca
		4	Jika ukuran dan jenis huruf yang digunakan dalam modul mudah dibaca
		3	Jika ukuran dan jenis huruf yang digunakan dalam modul

15. Penyajian gambar di dalam modul			cukup mudah dibaca
		2	Jika ukuran dan jenis huruf yang digunakan dalam modul kurang mudah dibaca
		1	Jika ukuran dan jenis huruf yang digunakan dalam modul sangat tidak mudah dibaca
		5	Jika penyajian gambar di dalam modul sangat menarik
		4	Jika penyajian gambar di dalam modul menarik
		3	Jika penyajian gambar di dalam modul cukup menarik
		2	Jika penyajian gambar di dalam modul kurang menarik
		1	Jika penyajian gambar di dalam modul sangat tidak menarik



## GUIDE OF OBSERVATION TO TRIAL PRODUCT

### IN SDN 1 NGADIREJO TRENGGALEK

No.	Aspects of Observation	Explanation
1.	Condition of school	
2.	Condition of class	
3.	Condition of students	
4.	Learning and teaching process use module based character	
5.	Interesting student to learn with module based character	
6.	Interesting student for module	
7.	Respect students for learning and teaching process with activities in module	
8.	The understand of student for material with integration character	
9.	Student show character value with material	
10.	Value character in self of students after learning process	

**Identity Of Trial Field Subjects Module For Student Of 4<sup>Th</sup> Grade In SDN 1  
Ngadirejo Trenggalek**

<b>No.</b>	<b>Name</b>	<b>Gender</b>	<b>NISN</b>	<b>Address</b>
1.	M. Aditya	Male	0043993119	Dsn. Ngepoh, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
2.	Arya Fahri Aprilian	Male	0043993068	Dsn. Gombang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
3.	Herena Cantya Danastri	Female	0043993099	Dsn. Gombang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
4.	Claudea Flowerensia	Female	0037657436	Dsn. Gombang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
5.	Kameliatul Fitriah	Female	0037657466	Dsn. Gombang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
6.	Tri Rahmat Ridwan	Male	0037657489	Dsn. Gombang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
7.	Zeti Nuzula	Female	0043993140	Dsn. Gombang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
8.	Khoirul Ulum	Male	0037657467	Dsn. Gombang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
9.	Mohammad Rizki Mardianda	Male	0037155920	Dsn. Gombang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
10.	Riski Rio Adisaputra	Male	0020344103	Dsn. Sindon Tengah, Ds. Sindon Tengah, Kec. Pogalan, Kab. Trenggalek
11.	Selvi Kusnia Reni	Female	0043993121	Dsn. Ngepoh, Ds.

				Ngadirejo, Kec. Pogalan, Kab. Trenggalek
12.	Putri Atmanuriya	Female	0037657476	Dsn. Gambang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
13.	Firliana Dinurisma Sherliana Pramesti	Female	0037657465	Dsn. Gambang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
14.	Bhea Dela Rhossa	Female	0037647438	Dsn. Gambang, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek
15.	Mohammad Rafi Ariansyah	Male	0043993092	Dsn. Ngepoh, Ds. Ngadirejo, Kec. Pogalan, Kab. Trenggalek

## KRITERIA PENILAIAN UNTUK SISWA

### Modul IPA Berbasis Karakter Pada Kelas 4 Sekolah Dasar

KRITERIA PENILAIAN		NILAI				
ASPEK YANG DINILAI	INDIKATOR	1	2	3	4	5
A. Isi/Materi	1. Kejelasan tujuan pembelajaran 2. Kejelasan materi yang disajikan dalam modul 3. Peta konsep dapat memberikan informasi mengenai materi yang akan dipelajari 4. Uraian materi dalam modul ini dapat dipahami dengan mudah 5. Contoh-contoh gambar yang disajikan membantu siswa dalam memahami materi 6. Rangkuman yang disajikan membantu siswa dalam belajar					
B. Evaluasi	7. Kejelasan tugas dan soal-soal latihan					

KRITERIA PENILAIAN		NILAI				
ASPEK YANG DINILAI	INDIKATOR	1	2	3	4	5
	8. Tugas dan soal-soal latihan dalam modul membantu meningkatkan pemahaman terhadap materi					
C. Integrasi Nilai Karakter	9. Keyakinan/kepercayaan terhadap kekuasaan Tuhan 10. Mempunyai rasa senang membaca, ingin tahu, peduli terhadap lingkungan, dan tanggung jawab 11. Memiliki rasa bersungguh-sungguh untuk menunjukkan nilai karakter kerja keras					
D. Kebahasaan	12. Kalimat yang digunakan untuk menjelaskan materi dalam modul mudah dipahami					



KRITERIA PENILAIAN		NILAI				
ASPEK YANG DINILAI	INDIKATOR	1	2	3	4	5
E. Daya Tarik	13. Tampilan keseluruhan isi modul					
	14. Ukuran dan jenis huruf yang digunakan dalam modul mudah dibaca					
	15. Penyajian gambar di dalam modul					

## PICTURES OF RESEARCH DOCUMENTATION



### A. Trial Product For Small Group



(Students read and learn the material)



(Students comprehend the material of module and the integration character in module)



(Students work individual assignment)



## B. Trial Product For Large Group



(The one of all activities in school before learn is brush teeth together with their friends)

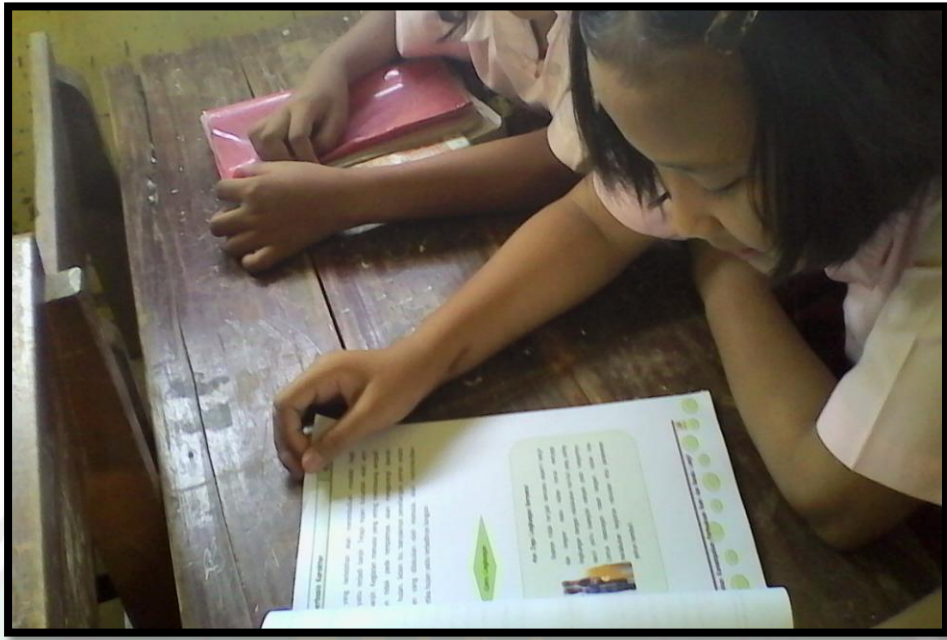


(Teacher give introduction module based character for students)



(The teacher explain material of module and integrated material with character)





(Student learn material with the character in module)



(Students with their group learn the material of module)



(Students practice the second activity of module, they make waste-paper basket to build and formed the responsibility to their rubbish as care for environment and can increase creativity of students self)



(Students works individual exercise/assignment in module)

Nama :

Kelas :

### ANGKET TANGGAPAN/PENILAIAN UJI COBA KELOMPOK BESAR MODUL IPA

**A. Berilah tanda silang (x) pada alternatif jawaban yang dianggap paling sesuai!**

1. Menurut pendapat Anda, bagaimana kejelasan tujuan pembelajaran?

1	2	3	4	5
Sangat tidak jelas	Tidak jelas	Kurang Jelas	Jelas	Sangat jelas

2. Bagaimana kejelasan materi yang disajikan dalam modul?

1	2	3	4	5
Sangat tidak jelas	Tidak jelas	Kurang Jelas	Jelas	Sangat jelas

3. Apakah peta konsep dapat memberikan informasi mengenai materi yang akan dipelajari?

1	2	3	4	5
Sangat tidak memberikan informasi	Kurang memberikan informasi	Cukup memberikan informasi	Memberikan informasi	Sangat memberikan informasi

4. Apakah uraian materi dalam modul ini dapat dipahami dengan mudah?

1	2	3	4	5
Sangat tidak mudah	Kurang mudah	Cukup mudah	Mudah	Sangat mudah

5. Apakah contoh-contoh gambar yang disajikan membantu anda dalam memahami materi?

1	2	3	4	5
Sangat tidak membantu	Kurang membantu	Cukup membantu	Membantu	Sangat membantu

6. Apakah rangkuman yang disajikan membantu anda dalam belajar?

1	2	3	4	5
Sangat tidak membantu	Kurang membantu	Cukup membantu	Membantu	Sangat membantu



7. Bagaimana kejelasan tugas dan soal-soal latihan?

1	2	3	4	5
Sangat tidak jelas	Tidak jelas	Kurang Jelas	Jelas	Sangat jelas

8. Apakah tugas dan soal-soal latihan dalam modul membantu meningkatkan pemahaman anda terhadap materi?

1	2	3	4	5
Sangat tidak membantu	Kurang membantu	Cukup membantu	Membantu	Sangat membantu

9. Seberapa besar keyakinan/kepercayaan anda bahwa Tuhan memiliki kekuasaan yang luar biasa?

1	2	3	4	5
Sangat tidak yakin	Kurang yakin	Cukup yakin	Yakin/ percaya	Sangat yakin/percaya

10. Setelah mempelajari modul, apakah anda mempunyai rasa senang membaca, ingin tahu, peduli terhadap lingkungan, dan tanggung jawab?

1	2	3	4	5
Sangat tidak mempunyai	Kurang mempunyai	Cukup mempunyai	Mempunyai	Sangat mempunyai

11. Apakah anda dalam belajar dan mengerjakan tugas dan soal-soal latihan bersungguh-sungguh?

1	2	3	4	5
Sangat tidak bersungguh-sungguh	Kurang bersungguh-sungguh	Cukup bersungguh-sungguh	Bersungguh-sungguh	Sangat Bersungguh-sungguh

12. Apakah anda mudah dalam memahami kalimat yang digunakan untuk menjelaskan materi dalam modul?

1	2	3	4	5
Sangat tidak mudah	Kurang mudah	Cukup mudah	Mudah	Sangat mudah

13. Bagaimana tampilan keseluruhan isi modul?

1	2	3	4	5
Sangat tidak menarik	Kurang menarik	Cukup menarik	Menarik	Sangat menarik

14. Apakah ukuran dan jenis huruf yang digunakan dalam modul mudah dibaca?

1	2	3	4	5
Sangat tidak mudah	Kurang mudah	Cukup mudah	Mudah	Sangat mudah

15. Bagaimana penyajian gambar di dalam modul?

1	2	3	4	5
Sangat tidak menarik	Kurang menarik	Cukup menarik	Menarik	Sangat menarik

**B. Berilah komentar dan saran lainnya berkenaan dengan modul!**

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**Terima Kasih**



### ASPECTS OF MODULE ASSESSMENT

No.	Rated aspect	Rated by
1.	The suitability of competency standards, learning objectives, the concept of material accuracy, content modules, and suitability exercise with the expected competencies.	Content Expert
2.	Assess aspects of the product on display and placement of every composition of product suitability with the material.	Media Expert
3.	The integration aspects of character values on modules developed.	Integration Character Expert
4.	Legibility module	Trial Subjects and Teacher of Natural Science Subject

## CURRICULUM VITAE



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EVIDENCE OF CONSULTATION

TEACHING EDUCATION ISLAMIC ELEMENTARY SCHOOL DEPARTMENT

Name : Mustika Andayani

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Grade Of Elementary School

Advisor :Ulfah Muhayani, MPP

No	Date of Consultation	Consultation Material	Signature of Advisor
1.	August 28, 2013	Proposal Consultation	
2.	September 6, 2013	Consultation of Proposal Revision	
3.	October 2, 2013	Product Consultation	
4.	November 20, 2013	Product Revision	
5.	December 23, 2013	Product Consultation	
6.	March 30, 2014	Chapter I	
7.	April 9,2014	Revision of Chapter I	
8.	April 14, 2014	Chapter II and III	
9.	April 22, 2014	Chapter IV	
10.	May 19 2014	All Chapter	

Malang, May 19, 2014

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