

THE USE OF INTERACTIVE MULTIMEDIA TO ENHANCE STUDENTS' GENERIC SCIENCE SKILLS

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INTRODUCTION

- GLOBAL CHALLENGES → INCREASE COMPETITIVENESS
- DEVELOPMENT OF THINKING SKILL → WIN THE COMPETITIVENESS
- LEARN SCIENCE → DEVELOPED THINKING SKILLS
- THINKING SCIENCE → GENERIC SCIENCE SKILLS

SCIENCE AS THINKING VECHICLE

SCIENTIFIC PRINCIPLES:

- CONSISTENCY & UNIVERSAL FRAMEWORK
- PROSES TO GET KNOWLEDGE FROM PHENOMENA
- ALWAYS CHANGE
- ONLY AN APPROACH TO “ABSOLUTE”
- NOT VALUE FREE
- CANNOT DECIDED “TRUE” OR “FALSE”

SCIENTIFIC THINKING (GENERIC SCIENCE SKILLS)

- DIRECT AND INDIRECT OBSERVATION
- SENSE OF SCALE
- SYMBOLIC LANGUAGE
- LOGICAL SELF CONSISTENCY
- LOGICAL INFERENCE
- CAUSALITY
- MATHEMATICAL MODELLING
- CONCEPT FORMATION
- SPATIAL

METHOD

- R & D TO DEVELOP ICT BASED INSTRUCTION (INTERACTIVE MULTIMEDIA)
- JUNIOR HIGH SCHOOL: BIOLOGY (ANIMAL REPRODUCTION)
- SENIOR HIGH SCHOOL : CHEMISTRY (MOLECULAR INTERACTION)
- INSTITUTE OF TEACHER TRAINING: PHYSICS (ELASTICITY)

TOPICS, CONCEPTS, AND GENERIC SCIENCE SKILLS RELATIONSHIP

TOPICS

CONCEPTS

GENERIC SCIENCE
SKILLS

Animal reproduction

Logical inference, causality,
modelling, concepts formation,
INDIRECT OBSERVATION

SUBJECT

- 44 THIRD GRADE STUDENTS OF JHS AT CIMAHI WEST JAVA
- 33 SECOND GRADE STUDENTS OF SHS AT LEMBANG WEST JAVA
- 35 FIRST GRADE STUDENTS OF INSTITUTE OF TEACHER TRAINING AT MATARAM WEST NUSATENGARA

