

ENGLISH WORKSHEET

Program Keahlian: Desain Pemodelan dan Informasi Bangunan (DPIB) — Grade XI

Topic: Building Information Modeling (BIM) in Construction

Name / Nama:	Class / Kelas: XI DPIB
No. Absen:	Date / Tanggal:

Part A — Reading Passage

Building Information Modeling (BIM): The Future of Construction

Building Information Modeling, or BIM, has changed the way architects, engineers, and construction workers design and build structures. Instead of using only two-dimensional drawings, BIM allows designers to create a three-dimensional digital model of a building before construction begins. This model contains detailed information about walls, doors, windows, foundations, and even electrical systems.

One of the biggest advantages of BIM is that it helps different teams work together more easily. Architects, structural engineers, and mechanical engineers can all access the same digital model and see how their work affects other parts of the building. This reduces mistakes and saves both time and money during construction.

BIM software, such as Autodesk Revit and ArchiCAD, is now widely used in the construction industry. Students who study Desain Pemodelan dan Informasi Bangunan (DPIB) learn how to use this kind of software to create accurate blueprints and building models. These skills are very important because most modern construction companies expect employees to understand digital design tools, not just traditional drafting methods.

In addition to design, BIM is also used for planning the foundation, checking structural safety, and estimating the cost of materials. Before a single brick is laid, engineers can already predict problems and fix them on a computer screen. This is much cheaper than fixing mistakes after construction has already started.

As technology continues to develop, BIM is expected to become even more important in the construction industry. Students who master BIM software today will have a strong advantage when they enter the workforce, because more and more companies are looking for employees who can combine design creativity with technical software skills.

Part B — Word Search (8 Words)

Find and circle the 8 words related to Building Information Modeling (BIM) and architecture hidden in the grid below. Words may be written horizontally, vertically, or diagonally.

O	B	L	U	E	P	R	I	N	T	D	H	H	C
K	A	S	R	H	S	H	A	C	W	U	B	H	C
B	K	C	Q	H	M	I	V	P	G	R	E	X	S
B	S	S	F	P	H	O	Z	P	Z	N	G	D	D
V	U	S	O	O	N	L	D	N	N	O	X	B	V
U	U	I	T	F	U	D	B	E	M	X	K	Z	D
H	G	G	L	R	T	N	R	O	L	E	N	F	I
O	H	C	O	D	U	W	D	D	Z	I	R	D	B
U	R	A	C	Y	I	C	A	A	E	H	N	F	N
P	P	G	M	B	F	N	T	R	T	S	M	G	A
M	I	Z	Z	O	J	N	G	U	E	I	I	W	X
Z	R	V	W	P	E	G	J	G	R	B	O	G	S
X	R	B	X	K	B	B	S	P	Q	E	Q	N	N
F	B	Q	A	R	C	H	I	T	E	C	T	C	F

Word List:

BLUEPRINT • STRUCTURE • ARCHITECT • MODELING • FOUNDATION • SOFTWARE • DESIGN • BUILDING

Part C — True or False (5 Items)

Read the passage again. Write TRUE or FALSE for each statement below.

1. BIM only allows designers to make two-dimensional drawings of a building. *TRUE / FALSE*
2. Architects, structural engineers, and mechanical engineers can access the same BIM model. *TRUE / FALSE*
3. Autodesk Revit and ArchiCAD are examples of BIM software mentioned in the text. *TRUE / FALSE*
4. According to the text, BIM cannot be used to estimate the cost of materials. *TRUE / FALSE*
5. Fixing mistakes on a computer screen before construction is more expensive than fixing them after construction starts. *TRUE / FALSE*

Part D — Fill in the Gap (5 Items)

Complete each sentence with the correct word from the box. Use each word only once.

three-dimensional | software | foundation | blueprints | workforce

1. BIM allows designers to create a _____ digital model of a building.
2. Students learn how to use BIM _____, such as Revit and ArchiCAD.
3. DPIB students learn to create accurate _____ and building models.
4. BIM can be used for planning the _____ and checking structural safety.
5. Students who master BIM will have a strong advantage when they enter the _____.

Part E — Reading Comprehension: Multiple Choice (10 Items)

Read the passage in Part A again and choose the best answer (a, b, c, or d).

1. What does BIM stand for?
 - a. Building Information Modeling
 - b. Basic Interior Model
 - c. Building Industry Method
 - d. Basic Information Management
2. What did architects mainly use before BIM became common?
 - a. Three-dimensional models
 - b. Two-dimensional drawings
 - c. Digital cameras
 - d. Cost estimation software
3. According to the text, what kind of information does a BIM model contain?
 - a. Only the roof design
 - b. Walls, doors, windows, foundations, and electrical systems
 - c. Only paint colors
 - d. The architect's personal notes
4. Why is BIM helpful for different teams working on a project?
 - a. It lets each team use a different model
 - b. It allows them to access the same digital model
 - c. It removes the need for engineers
 - d. It is only useful for architects
5. Which of the following is mentioned in the text as an example of BIM software?
 - a. Microsoft Word
 - b. Autodesk Revit
 - c. Adobe Photoshop
 - d. Google Chrome
6. What do DPIB students learn to create using BIM software?
 - a. Music videos
 - b. Accurate blueprints and building models
 - c. Mobile applications
 - d. Marketing plans
7. Besides design, what is BIM also used for according to the passage?
 - a. Estimating the cost of materials
 - b. Writing job applications
 - c. Painting walls
 - d. Selling furniture
8. According to the passage, when can engineers predict and fix problems?
 - a. After the building is finished
 - b. Before a single brick is laid
 - c. During the final inspection
 - d. After the client complains
9. Why is it important for students to master BIM software, according to the text?
 - a. It has no real use in the industry

- b. Companies want employees who combine design creativity with technical skills
- c. It replaces the need for creativity
- d. It is only used in interior design

10. What is the main idea of the passage?

- a. Traditional drafting is better than BIM
- b. BIM is changing the construction industry and is an important skill for DPIB students
- c. BIM software is too expensive for schools
- d. Architects no longer need engineers

