HOW-TO GUIDE

A Guide to Applying Teacher-Led Innovation in Grade Six

ACTIVE LEARNING

JULY 2026

01 Introduction and Basic Ideas of Innovation

1.1. Definition of the Plan

Active learning is a complete teaching model that changes Grade 6 from only listening in class to doing practical work like a workshop.

In this approach, the borders between subjects (Math, Dari, Science) are removed, and students learn through real-life projects.

1.2. Objectives

- **From memorizing to understanding:** Students do not just memorize fractions; they understand them by dividing real objects or items.

- **Improving skills:** Focus on communication, critical thinking, and teamwork, which are often ignored in traditional teaching methods.

- **Making lessons practical:** Use the school's physical environment (garden, laboratory, library) as learning tools.

02 Background and Need for the Plan

2.1. Current Situation Analysis

Based on the assessment by the design team in Baghlan Markazi Girls' High School, it was found that:

- **Learning gap:** Due to challenges in past years, Grade 6 students have serious difficulties in basic concepts (basic math operations and correct sentence writing).
- **Teaching method:** One-way teaching methods have caused students to lose motivation to actively participate in the class.

2.2. Human-Centered Design

This guideline is the result of a human-centered design process. We did not only use textbooks, but also:

- **Students:** We spoke with them to understand their fears and interests.
- **Parents:** We consulted them to align family expectations with the school.
- **Teachers:** We discussed with them to understand time and space limitations.

2.3. Climate Change as a Priority

Because of environmental problems, this plan includes climate awareness not as a separate subject, but as part of classroom activities.

03 Inclusion and Scientific Evidence

3.1. Inclusive Methods

- **Mind maps and word walls:** For students who learn better through pictures and visual tools.
- **Movement activities (human calculator):** For students who need physical movement to learn better.
- **Adjusted activities:** For students with different abilities, different roles are given in group work (for example, one student writes notes and another presents the information).

3.2. Scientific Basis and Evidence

- **Learning pyramid:** Research shows that students remember about 75% of what they learn by doing, but only about 5% when they just listen to a lecture.
- **Constructivism theory:** Students build their own knowledge. For example, when a student studies plants in the school garden, they learn science in a deeper way.
- **Local evidence:** In Baghlan Markazi Girls' High School, using the library showed that access to different resources can improve students' vocabulary by up to 30%.

04 Implementation Details

Details of Learning Activities for Language (Literacy)

These activities are designed to improve all four language skills (listening, speaking, reading, and writing) at the same time:

4.1 Interactive Word Wall

How it works: The teacher gives colored cards to groups. Students write new or difficult words on them and stick them on the classroom wall.

Practice: Every morning, one student is chosen to make a short and funny sentence using three words from the wall.

Goal: To increase vocabulary and help students remember correct spelling.

4.2 Pair Reading Technique

How it works: Students work in pairs. One reads a paragraph, and the other gives a short summary. Then they change roles.

Goal: To improve reading fluency, confidence, and understanding through discussion.

4.3 Chain Storytelling

How it works: The teacher starts a story with one sentence. Each student adds one sentence until the story is complete.

Goal: To improve imagination, sentence building, and active listening.

04 Implementation Details continued

4.4 Wall Newspaper (School Voice)

How it works: Students work in groups. Each group writes a short article on a topic (for example: school cleanliness, climate change, or a scientist). The best work is shown on a large paper on the school wall.

Goal: To practice writing, responsibility, and research skills.

4.5 Grammar and Alphabet Games Workshop

How it works: Students use letter cards to make as many words as possible in a short time. For grammar, they use tense cards (past, present, future) to change verbs correctly.

Goal: To learn grammar in a fun and active way.

4.6 Group Discussion and Debate

How it works: The teacher gives a topic (for example: technology vs books). Groups share their ideas and defend their opinions.

Goal: To improve speaking skills, critical thinking, and respect for others' ideas.

4.7 Creative Writing Practice

How it works: Students write creative texts, such as a letter to their future self or a new ending for a story.

Goal: To improve writing skills and creativity.

04 Implementation Details continued

Details of Learning Activities for Mathematics (Practical Use)

4.8 Human Calculator and Movement Activities

How it works: Students act as numbers or math symbols (+, –, ×, ÷). They stand together to form a correct equation and answer.

Body shapes: Students use their bodies to make shapes (square, triangle) and measure them.

Goal: To understand math through movement and teamwork.

4.9 Engineering and Models (Math Bridge and Mapping)

Math bridge: Students build a paper or wooden bridge. Each piece has a math problem. They can only continue if they solve it correctly.

Mapping: Students measure the classroom or garden and draw a map using scale.

Goal: To learn how math is used in real life (engineering and design).

4.10 Math in Daily Life (Kitchen and Imaginary Travel)

Kitchen math: Students learn fractions and ratios by making simple food or drinks.

Fractions with food: The teacher divides bread or fruit to explain fractions.

Math travel: Students plan a trip and calculate distance, cost, and time.

Goal: To understand how math is used in daily life.

04 Implementation Details continued

4.11 Thinking Games (Surprise Egg and Number Puzzle)

Surprise egg: Math questions are hidden. Students solve them to get rewards.

Number chart game: Students throw a ball to numbers and explain them (before, after, divisible).

Goal: To make math fun and reduce fear.

4.12 Measurement and Estimation

Guess and measure: Students guess the size of objects, then measure and compare.

Time activity: Students use paper clocks to learn time in daily situations.

Goal: To improve estimation skills and accuracy.

> ### Teacher Guide for Mathematics
>
> In this method, making mistakes is part of learning. Instead of correcting students quickly, ask them to check their answers again using beans, cherries, or small stones.
>
> Using real objects helps Grade 6 students who have difficulty with basic concepts to learn faster and better.

04 Implementation Details continued

Details of Learning Activities for Science (Observation and Practice)

4.13 Nature Laboratory (School Garden and Climate Change)

How it works: Each group of students takes care of a small part of the school garden. They observe and write about plant growth, water needs, sunlight, and soil every week.

Water pollution: Two containers of water are used (one clean and one dirty). Students observe how dirty water affects plant growth and discuss environmental problems.

Goal: To understand ecosystems and promote care for the environment and climate awareness.

4.14 Physics in Practice (Energy, Force, and Matter)

Gas expansion (balloon activity): A balloon is placed on a bottle, and the bottle is put in warm water. Students observe how the balloon fills with air.

Weight and volume: Students compare a big bag of cotton with a small stone to understand weight, size, and density.

Force and shape change: Students use rubber bands and soft balls to see how force can change shape or make objects move.

Goal: To understand physics concepts and increase curiosity.

4.15 Biology and Health (Five Senses and First Aid)

Senses activity: The teacher hides objects with different textures, smells, and sounds. Students use their senses (not eyes) to guess the objects.

First aid role-play: The classroom becomes a simple emergency situation. Students practice basic first aid like bandaging, helping burns, or helping someone who fainted.

Goal: To understand the human body and learn useful life skills.

04 Implementation Details continued

4.16 Energy and Vibration (Sound and Light)

Sound energy: Students use rulers or glasses with water to see how vibration makes sound.

Types of energy: Students find examples of energy movement (running), heat (fire), and sound in school.

Goal: To understand different types of energy and how they work.

4.17 Units of Measurement (Physical Measurement)

Kilogram activity: Students use simple scales to compare the weight of objects like sugar, stones, and books.

Science models: Students make simple models of the solar system or day and night using balls and light.

Goal: To improve measurement skills and understand the world.

> ### Teacher Guide for Science
>
> In science learning, “why?” is more important than “what?”. Let students first guess (make a hypothesis), then do the experiment, and finally find the result by themselves.
>
> This helps students become more curious and better at asking questions and doing research.

06 Sustainability, Evaluation, and Monitoring

6.1. Evaluation System (Quantitative and Qualitative)

- **Portfolio:** Collect the best work of each student in a file to see their progress during the year.
- **Performance assessment:** Instead of multiple-choice questions, students solve real-life problems (for example, calculating the cost of a trip).

6.2. Ensuring Sustainability of the Plan

- **Peer learning for teachers:** Experienced teachers hold monthly meetings to share their knowledge with other teachers.
- **Community involvement:** Parents are invited at the end of each term to see students' work. This helps build family support.

6.3. Scalability (Easy to Apply)

This guide is written in a simple way so that even a teacher in a remote village can use it with very basic tools (even without electricity, using materials like stones and wood).

Conclusion

Active learning is not only a teaching method; it is a change in school culture. In this culture, the teacher supports learning, and the student becomes the main learner.