

# THE REPORT OF SCIENCE AND TECHNOLOGY TEACHING

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Today, the rapid economic, social, scientific and technological developments have significantly changed our way of life. The effects of scientific and technological developments in our lives become clear today perhaps more than ever in the past. Globalization, international economic competition, rapid scientific and technological developments will continue to affect our lives in the future, too. Considering of all these, our school is aware of Science lesson which play a key role in teaching. The vision of Science and Technology programme is to educate Science and Technology literate individuals. Science and Technology literacy includes research and interrogation of individuals, critical thinking, problem solving, developing decision making skills, being life-long learners and having skills, attitudes, values, understanding and knowledge of science to maintain a sense of wonder about the world of science.

In this context of science and technology, seven different learning areas are prescribed.

- The living organism and life
- Material (item) and alteration
- Physical phenomena
- Earth and universe
- Science-technology-society-environment relations (STSER)
- Science process skills (SPS)
- Attitudes and values (AV)

Science and Technology course units are based on the first four of these seven learning areas. The other three learning areas aren't united because they include basic understanding, skill, attitude and value that are already prescribed in the first four of the seven learning areas.

Constructivist learning approach takes precedence in education program of our country. Learning is a process that happens in individuals mind which is usually specific to him/her. In this sense, we include various teaching strategies which activate the students

physically and mentally and are appropriate to the constructivist approach.

*Regarding the teaching strategies;*

- We are trying to create a conducive and supportive environment for learning Science.
- We are considering individual differences such as student's motivation, interests, skills and their learning style.
- We're trying to reveal the students' prior knowledge and understanding about the handled subject and to provide that students are aware of their own thoughts.

We lead our students by identifying the strengths and weaknesses of them and we provide appropriate learning environment, method and activities inside or outside the classroom.

We give an opportunity to find the information themselves by directing them with questions and we plan various activities for the students' involvement in the learning process. Working in groups especially in laboratories is an effective teaching strategy while planning learning environment in Science and Technology lesson. In this teaching program, we use collaborative learning strategies enough because they are appropriate for social factor of structural approach. In collaborative learning, students are divided into groups and these are various heterogeneous groups. After some time we change students in the groups so the students have the opportunity to improve themselves.

Additionally, we use technology and we teach the subject by showing the activities and experiments with animations if there is not enough opportunity in our school. While planning our lessons, we use activities allowing students' active involvement and these activities allow them to learn kinesthetically. We help them to explore the information not to memorize it.

We prepare our students for the project competitions around Turkey. We use learning approach depending on project.

We choose homeworks allowing improvement of our students. We want our students to do homeworks depending on consolidation. At the same

time, we give homeworks depending on researching because we want them to improve their individual working abilities.

*In assessment and evaluation:*

- We use alternative assessment and evaluation techniques and traditional ones. We have reliable assessments by using alternative techniques because we evaluate not only the product but also the process.
- We use these assessment types: (multiple choice tests, performance evaluation, true-false questions, portfolio, matching, concept map, filling in the blanks, structured grid, exams with short answers, diagnostic tree, exams with long answers, word association, question-answer, project-drama, interview, written reports, show, post cards.)
- We use rubric while assessing in alternative techniques such as performance evaluation and portfolio. So, we want to improve our students' creativity and ability of original thinking.
- We prepare rubrics to evaluate with both students and their parents. So the feedback is more useful.