# BASIC 9

# WEEKLY LESSON PLAN – WEEK 3

| Strand: | Socio-Economics Development | | Sub-Strand: | | Science and Technology | |
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| **Content Standard:** | B9.5.4.1.Analyse the contribution of science and technology to national development | | | | | |
| **Indicator (s)** | B9.5.4.1.1. Examine how science and technology can be used to promote development | | **Performance Indicator:** Learners can differentiate between science, technology and innovation. | | | |
| **Week Ending** | 26-01-2024 | | | | | |
| **Class** | B.S.9 | **Class Size:** | | | **Duration:** | |
| **Subject** | Social Studies | | | | | |
| **Reference** | Social Studies Curriculum, Teachers Resource Pack, Learners Resource Pack, Textbook. | | | | | |
| **Teaching / Learning Resources** | Poster, Word Chart, Pictures, Video. | | **Core Competencies:** | | • Critical Thinking and Problem Solving<br><br>Communication and Collaboration. | |
| **DAY/DATE** | **PHASE 1 : STARTER** | **PHASE 2:    MAIN** | | | **PHASE 3: REFLECTION** | |

| **DAY/DATE** | **PHASE 1 : STARTER** | **PHASE 2:    MAIN** | **PHASE 3: REFLECTION** |
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| **MONNDAY** | Discuss with the Learners about the role of science and technology in the education sector of the Ghanaian. | 1. Learners brainstorm to identify examples of technology tools used to enhance teaching and Learners.<br>2. Assist Learners to explain the importance of using technology tools in teaching and Learning.<br>3. Learners in small groups to discuss and report to the class about the role of science and technology in the mining sector of Ghana.<br><br>**Benefits of Technology in Education**<br><br>The advantages of using technology in education are multifaceted. It is a blessing for everyone in the sector, from education providers and schools to students.<br><br>**1. Faster access to information**<br><br>One of the most substantial advantages of technology in education is that it provides students with an ocean of information at their fingertips. They can access the information in the quickest possible time.<br><br>If you are a student, then gone are the days when you have to go to libraries and search through piles of books to do an assignment/project/homework. Thanks to benefit of the internet for a student! You can now access valid information anytime from a vast number of | Learners brainstorm to identify challenges associated with the use of technology in the education sector and other identified sector.<br><br>**Exercise;**<br><br>State 5 technology tools used for teaching and learning. |

sources, i.e., websites, tutorial sites, YouTube videos, eBooks, PDFs, and so on.

This is the first ever effect of technology on education that students experience with the advent of the World Wide Web. You can get unlimited information and data in just a few clicks on your laptops, tablets, or mobiles. This enables you to prepare a lesson or write a paper without anyone's help. Thus, technology enriches your knowledge base and makes you a self-sufficient learner.

## 2. Wider variety of learning materials

Students can access a huge variety of learning materials on the internet. They include scientific articles, journals, research papers, educational videos, tutorials/guidebooks, informational websites, online databases, and blogs of educators/authors.

These are extremely useful if you are a high school student. You can write academic papers better providing all concrete information, facts, and statistics. You can support an argument, establish a hypothesis, or derive a proper conclusion for your paper by accessing the available information.

Technology helps you to enhance your academic grades without doing too much hard work. You do not have to spend hours in the school library, borrow books/resources from ex-students, or repeatedly bother the teachers. You can write well a paper by yourself while putting all the authentic information and assure a good score.

## 3. Increases the scope for distance learning

A great benefit of the internet for students is the opportunity for distance learning. Online classes became a reality with the power of the internet! Students can learn in the same effective way through a virtual screen or chat room.

You can share documents, important resource links, and media files during the online session with others students.

Schools and educators are complementing virtual learning sessions with traditional classes, which are enhancing the learning capabilities and skills of students. They take online classes outside the schools to provide additional tutoring to students, especially the weaker

ones. Moreover, if you are interested in a subject or field that is outside your school curriculum like Data Analytics, you can take an online course to pursue your interest.

Also, many new educational institutes are coming up with only offering virtual courses for a spectrum of academic and professional subjects. Coursera, edX, and Udemy are some of the prominent providers of comprehensive virtual courses.

**4. Eases teaching methods**

The benefits of EdTech also include an easy teaching experience. The teachers can tutor the students from distance or communicate easily outside the classroom. This enhances their ability to give instructions, improve the learning of students, and help them get better academic scores.

Moreover, technology integration in education resulted in mobile/desktop applications that are helpful as digital attention coaches for students! They helped teachers to organize the homework or tasks of students. They can simultaneously check the progress of tasks and remind or warn the students if they are late for a task.

Many schools or educators are using online tools today to keep an eye on their students and assist them in progressing academically. They can easily know whose grades are lower or who is slow in completing lessons. They can provide the necessary guidelines to them and help to gradually improve their academic performance.

**5. Improves learners' communication skills in schools**

This is one of the noteworthy benefits of technology in higher education. Learners in higher grades develop better abilities to communicate with various technological tools and virtual courses.

Many students are reluctant to speak with the teachers in class or front of others. However, their inhibition or introversion goes away during online sessions or classes. They can interact freely through chat, audio, or video call, during their independent screen time.

Communication skills are crucial for students to do well in academics and the professional field in the future. If you have better communication abilities, you can clearly express your opinions and take part in constructive

discussions.

You can share your understanding with educators and know what's on their minds. Hence, you can garner more knowledge and use them effectively to improve your academic performance.

**6. Makes studying enjoyable**

It is difficult to make young children sit in one place and learn. They easily get distracted. Similarly, elder students find it tough to keep up their focus and complete large papers or assignments. All in all, education is not a pleasant experience for all students. But, with technology, it is now an enjoyable experience for all.

The use of tablets, laptops, VR/AR devices, and touchscreen boards makes classes exciting for students. Teachers could easily keep up the attention of kids. Similarly, these advanced technologies help students of higher classes to understand complex concepts and science through immersive sessions.

Thus, one of the notable benefits of using technology in education is that it makes learning fun for students. Teachers could see the interest of students grow, which is reflected in their better academic marks.

**Educational Technology Challenges**

Teachers and students are facing a few challenges to thrive amidst the force of educational technology. Here is a summary of the challenges that they mostly face while adopting educational technology.

**1. Resistance to change**

There are many EdTech challenges but this is the most crucial one. Many teachers, parents, and educational institutes do not accept technology wholeheartedly. They consider only real-time learning in classrooms or through one-to-one interactions with parents to be effective.

**2. Continuous upgrades**

Technology needs consistent upgrades. Educational institutions, students, and teachers need to update regularly, whatever learning tools and applications they use. This puts an additional burden on them as they must

|  |  | continuously check software updates, upgrade their devices, buy new devices, etc. to keep pace with the current EdTech trends. 3. | |
|  |  | **3. Resources or infrastructure support**

Any EdTech applications or devices need internet support for functions like video streaming, online chat, video calling, and so on. Internet connectivity with higher bandwidth and reliable devices are necessary for operating any EdTech apps or tools. Thus, schools, teachers, and students need to have these resources support.

**4. Insufficient technical skills**

The education sector demands that teachers and students should have basic technical skills and know-how. They are the primary users of EdTech tools and devices. So, they must have the necessary skills or gain them to leverage the benefits of education technology.

**5. Higher costs**

Adoption of technology in any field is cost-crunching. The constant technological breakthroughs in the education sector compel educators and learners to invest in new devices and EdTech solutions. The eLearning or technology in education is making teaching and learning a costly experience in many ways. | |
| **FRIDAY** | Review Learners knowledge on the previous lesson. | 1. Show Learners a YouTube video that explains knowledge, technology and complexity in economic growth.
2. Discuss with the Learners about the meaning of innovation.
3. Assist Learners to describe how innovation is related to science and technology.
4. Learners brainstorm to explain how technology and innovation can be used to promote sustainable development and peace.

**The Definition of Technology**

Use of science to build new tools, products, and processes to ease human life. | Through questions and answers, conclude the lesson.

**Exercise;**

Explain the differences between Science, technology and innovation. |

**The Definition of Innovation**

Transformation of an idea into reality.

**Key Differences Between Technology and Innovation**

**Use of Theories**

Scientists and tech experts introduce new technologies to the world. They apply theories to facilitate the technical needs of the world.

Tech and innovation both have similar use of theories. However, the point of using theory is at a different stage. Techies use theories to build a whole new concept but innovators use theories on a product or process to gain easy outcomes.

**Applications**

Tech is the root of creating something new. It is a new exposure to the world. People use tech to be innovative.

Innovation is the use of tech on a specific thing to add value. After an innovation user experience of a product or process gets much more comfortable. Tech is the base of innovation.

**Moral Principles**

Tech is the output of morals and theories.

On the other hand, innovation uses moral principles to ease a product or process that is commonly used by people.

**Application of Science**

To build a tech good scientific skills are a must. The developer should be able to catch the theory, grab the core and occupy it productively.

For innovation, the use of technical, marketing, and strategic skills are a must. At the innovation stage, the use of science is almost at its best.

Technology and innovation can be used to promote sustainable development and peace in a number of ways. For example, new technologies can be used to improve access to education, health care, and other critical services, while also helping to reduce poverty and

| | | inequality. Innovation can also be used to improve access to clean water, energy, and other resources, helping to reduce the environmental impact of development. Additionally, technology can be used to improve communication and collaboration between different groups, allowing for more effective conflict resolution and the promotion of peaceful coexistence. Finally, technology can be used to monitor and track activities that may be linked to conflict and instability, allowing for more effective prevention and response. | |
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**Name of Teacher:**          **School:**          **District:**