

**METHODS OF  
TEACHING PRIMARY SCHOOL  
SCIENCE**

# LESSON PLAN

# Outline

- Reasons for planning
- Reasons why we plan in the teaching process
- Principles of Teacher Planning
- Factors that influence Teacher Planning
- Scheme of Work/Learning
- Daily Lesson Plan

# Reasons for Planning

- Planning helps us to deliberate in advance
- Plan to coordinate our activities with those of other people
- Plan so that we can coordinate our role in society

# Reasons why we plan in the teaching process

- To ensure desirable learning by students
- To give guidance to effective teaching (effective teacher & teacher competencies)
- To be able to access and monitor the learning that is taking place
- To be able to institute measures to overcome both ineffective teaching and learning

# Principles of Teacher Planning

- Principle

- A principle is the Idea that forms the basis of something
- A principle is the belief that helps you know what is right and wrong and that influences your action

## Activity

- Students to give examples of personal principles

# Principles of Teacher Planning

- The principle underlying teacher planning is the foundational belief structure of teaching/developing curriculum
- First, we need to ask what it is that we want students to know and be able to do as a result of the learning
- Second, we must examine how we will know that our students are learning and that they can perform tasks as a result of the learning
- Third, we must identify which instructional practices will assure us that students learn and that they can use the information provided.

# Principles Guiding Teaching and Learning

- An atmosphere of intellectual excitement
- An intensive research and knowledge transfer culture permeating all teaching and learning activities
- A vibrant and embracing social context
- An international and culturally diverse learning environment
- Explicit concern and support for individual development
- Clear academic expectations and standards
- Learning cycles of experimentation, feedback and assessment
- Premium quality learning spaces, resources and technologies
- An adaptive curriculum



# Factors the influence Teacher Planning

- Teacher's beliefs/attitudes/philosophy
- Teacher's knowledge, skills and understanding
- Availability of teaching and learning materials
- Students' cognitive and affective entry behaviors
- Students' cognitive levels
- Attention span of your students, age group, and diversity of learners
- Complexity of material and time requirements for each instructional component.
- Decisions concerning whether whole-class presentation, small groups, or partners are best for teaching and learning a particular concept.

# Factors the influence Teacher Planning

- The best configuration of student groups for optimal learning, for example, homogeneous or heterogeneous ability groups, complementary interests, or personalities that work well together.
- Activities that best facilitate the learning of each student.
- Pre-assessment strategies of skills and background knowledge to determine what students already know, what they need to know, and what their misconceptions are.

# Factors the influence Teacher Planning

- Selection of regular and supplemental materials to augment learning.
- Strategies for frequently monitoring and adjusting the lesson.
- Students who miss instruction (students returning from an absence may have gaps in learning that need to be filled)

# Scheme of Work/Learning

- A scheme of work/learning is a weekly plan prepared by a teacher for the strands/sub-strands that are to be covered in a term. The strands/sub-strands in a scheme of work/learning are systematically presented each week
- Scheme of learning can also be prepared termly and annually.

# Importance of scheme of work/learning

- Helps to plan the topics that are to be covered in the term, and can determine the amount of work to do in the term
- Determines whether the teacher is lagging behind or moving forward in her/his teaching programme
- It enables any new teacher who takes over from the class teacher in the middle of the term to determine where to begin or continue the lessons from
- If properly planned and executed, it serves as record of work for the period
- Reminds the teacher of the what to do in advance before the lesson/ serves as a guide for advanced preparation

# Features of scheme of work

- Week
- Strand
- Sub- strand
- Content standard

# Features of scheme of work

- Strands are the broad areas/sections of the science content to be studied.
- Sub-strands are the topics within each strand under which the content is organised.
- Content standard refers to the pre-determined level of knowledge, skill and/or attitude that a learner will have at the end of the learning activity or course

# Annual Scheme of Work/Learning

WEEK	TERM 1 (SUB-STRAND)	TERM 2 (SUB-STRAND)	TERM 3 (SUB-STRAND)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			



# Termly Scheme of Work/Learning

WEEK	STRAND 1		STRAND 2	
	SUB STRAND	CONTENT STANDARD	SUB STRAND	CONTENT STANDARD
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

# Guidelines for the preparation of scheme of work/learning

- Examine the entire science curriculum
  - List all the strands in the syllabus for the class
  - List all the sub-strands and assess the content to be covered in the strand in relation to the content standards to be covered on each sub-strand
  - Determine the number of periods or time allocated for science each week

# Guidelines for the preparation of scheme of work/learning

- Group the strands you have stated into three for the three terms of the academic year. Consider the following
  - total number of weeks for each term
  - seasons and suitable periods
  - need for coordination of subjects
  - systematic sequence of the topics
- Prepare a draft and revise it
- Prepare the scheme of work/learning using the appropriate format

# Daily Lesson Plan

- A written scheme prepared by the teacher before an instructional session that includes the content standards and methods for a particular functional strand or period of instruction
- Programme of activities that guide the teacher to teach
- Gives an indication of the subject/strand/sub-strand and the method and teaching techniques that would be followed
- Instructional layout that shows how the teaching content, facilities, and time will be organized so that a class of students will acquire or develop the highest knowledge, skills or attitudes

# Advantages

- Confidence to teacher
- Provides teachers with a sense of security
- It's an organizational tool
- Makes work regular, organized and more systematic
- Serves as a guide for interaction with the students
- Saves time
- Guide for another teacher
- Helps in lesson evaluation and appraisal.

# Format/Structure of Daily Lesson Plan

SUBJECT: SCIENCE

CLASS: FOUR

Week Ending :	Class Size:
Day:	Date:
Period:	Lesson Time:                      Duration:
Strand:	Sub-strand:
Indicator (code)	
Content Standard (code)	
Performance Indicator	
Core Competencies	
Keywords	
Teaching and Learning Resource(s)	
Reference:	Science Curriculum Page:

# Format/Structure of Daily Lesson Plan

DAY	Phase 1: Starter (preparing the brain for learning)	Phase 2: Main (new learning including assessment)	Phase 3: Plenary/ Reflections
Wednesday			
Friday			

Remarks:

# Indicator

- This is a clear outcome or milestone that learners have to exhibit in each year to meet the content standard expectation.
- The indicators represent the minimum expected standard in a year.



# Phase 1: Starter

- First activity in the classroom
- Refers to actions and statements by the teacher that are designed to relate the previous knowledge and experiences of the student to the objective of the lesson.
- This is an activity that prepares the learner to be ready to learn the new knowledge, skill or attitude.
- The activity draws from the previous knowledge and experiences of the learner.
- It is used to put students in a receptive frame of mind.
- It links the pupils previous knowledge and experiences with the lesson topic.

# Purpose of Starter

- To focus students' attention on the lesson
- To create an organizing frame work for the ideas, principles or information that is to follow
- To stimulate the students interest and involvement in the lesson
- Secure the interest and attention of the students
- To extend the understanding and the application of abstract ideas through the use of examples or analogies.

# Examples of when to Starter

- To initiate a discussion
- To introduce a new concept or principle
- To prepare for a field trip
- Begin a lab exercise

# Content Standard

- What the teacher hopes to achieve at the end of the lesson
- Describes the skill, knowledge or new attitudes a learner will have at the end of the learning activity or course
- The content standard describes what the learner will learn, the conditions of learning and the degree of mastery

# Teaching and Learning Resources

- Concrete objects to be provided for pupil to interact with in the course of the lesson.
- Teaching devices that help in the teaching and learning process

# Phase 2: Main

- Stage where students interact with the materials either in groups or as individuals.
- Must contribute significantly to the achievement of the stated objectives
- Last activity should be a general class discussion led by the teacher.
- The students should be given the opportunity to give an account of the results of the activities they performed.
- Students accounts should lead to the building up of marker board summary.

# New Learning

- Main ideas derived from activities and discussions.
- Are summary of concepts, ideas, or knowledge that were covered during the lesson and which students are expected to grasp.

# Application (core competency)

- Deals with the importance of the concept taught
- Helps in relating the concept that has been taught to things that are familiar to the students
- Ability to use learnt material in new and concrete situation. This may include the application of such things as rules, methods, concepts, principles, laws and theories
- Usefulness of the concept to the learner
- How the concept can be used to solve everyday problems



# Phase 3: Plenary/Reflections

- These are the actions or statements by the teacher that are designed to bring a lesson presentation to an appropriate conclusion.
- Ask questions to review the lesson and provide their reflections
- Verbal summary by students.

# Purpose of Plenary

- To draw attention to the end of the lesson
- To help organize students learning
- To consolidate or reinforce major points to be learnt

# Assessment

## ***Evaluation in the Classroom***

- During the closure time

## ***Evaluation outside the classroom***

- Requires the teacher to reflect on the suitability of choosing the objectives.
- Were teaching strategies appropriate?
- Teacher should sit down and evaluate his performance in the classroom after a class