Lesson Plan Template

Content standards that are the target of student learning: (TPE 1)

7. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:

a. Develop a hypothesis.

b. Select and use appropriate tools and technology (including calculators, computers, balances, spring scales, microscopes, and binoculars) to perform tests, collect data, and display data.

c. Construct appropriate graphs from data and develop qualitative statements about the relationships between variables.

d. Communicate the steps and results from an investigation in written reports and oral presentations.

e. Recognize whether evidence is consistent with a proposed explanation.

Learning objectives:

Conceptual understanding (Use Bloom's taxonomy *to* write specific Objectives)

Competence	**Skills Demonstrated**
Knowledge	▪ Identify parts of a parachute ▪ List materials and tools needed ▪ Define speed and velocity ▪ Collect data
Comprehension	▪ Describe the graph ▪ Interpret the data ▪ Ordering of information ▪ Predict outcome based on pass trials ▪ Develop a hypothesis
Application	▪ Modify prototype

	▪ Illustrate data in pictorial form ▪ Examine the outcome of experiment vs. prototype
Analysis	▪ Explain Data ▪ Compare prototype vs. experiment ▪ Infer the reason of the outcome of the two trials
Synthesis	▪ Create prototype and experiment ▪ Design an experiment ▪ Make a prediction on how to make a better parachute ▪ Use ideas learned from the prototype to make a more inefficient experiment trial.
Evaluation	▪ Decide if the experiment worked more inefficiently base on the data from the prototype vs. the experiment ▪ Test the different between the prototype and the experiment ▪ summarize all information into an oral and written presentation

Science process skills (could be taken from CA content standards, investigation & experimentation)

• Students will observe the difference between the two different parachutes

• Student will communicate with group members while learning the steps of scientific investigation

• Students will be able to classify and collect data with the goal of improving and competing to make the best parachute

• Students will know how to measure and convert measurements to determine which parachute can perform the best in both categories

• Student will conclude by using the data acquired to determine if there experiment was able to improve the productivity of the parachute.

• Students will use prior knowledge to predict what best change should be made to a parachute to improve its duration and accuracy

Formal and Informal Assessments: (TPE 2, 3)

We will not have a formal assessment on day one. An informal assessment will take place during our group conversation about what happen while flying the parachute. Here we will take about what we saw and how that relates to scientific method.

Instructional Procedures

Provide detailed information of the instructional strategies and learning tasks to support student learning. Make sure the instructional procedures will answer the following questions:

Warm up:
Name tags:
Introduction: "Gilberto and the wind" by Marie Hall Ets visual by picture in the book an images on felt board to elaborate' emphases.
Leading question: into parachutes

"Science is a way of understanding the world around us. The work scientist asks questions about something they observe. Asking and answering questions is the basis of inquiry. In this section, you will see how scientists use inquiry skills. Visual literacy, reading skills, technology and information literacy, math skills and writing skills as they study " (age 2 of CA Earth science teacher's Ed. McGraw-Hill

To help with this we have designed a lesson in which "your group is an R&D team at the local parachute factory. Your task will be to work with your team to design and test a parachute that will stay in the air for as ling as possible while falling straight enough to fall in a designated landing zone.

The CEO of you company will show up on the second day of your work on the project and lean the testing of you parachutes. The performance test will take place outside (weather permitting). The team that has the parachute that stay in the air the longest after being dropped from a height specified by CEO will win
Understand key Part.
What are we going to build
How long do we have to build it?
What two things does the parachute have to be able to do?
It is a windy day outside and you get to go outside for 20 minutes. Your instruction is that you must do something by yourself using the wind, what would you do?

Day1
Into to story leading into the movement of air

Name our company

Build prototype (worksheet #1 will be instructions on how to build prototype) and reviewing the parts of the parachute.

Ask questions:

What do you think the parachute will do when we drop it from (x) position?
Let's see…What did you see?
Group discussion putting ideas on the board

What can we change to make the parachute better? (we will lead the class in the direction we want them to go)

1. How do key learning tasks in your plans build on each other to support student learning and the development of related academic language? Describe specific strategies that help build student learning across the learning segment. (TPEs 1, 4, 9)

2. How do your choices of instructional strategies, materials, and the sequence of learning tasks reflect your students' backgrounds, interests, and needs? Be specific about how your knowledge of your students informed the lesson plans, such as the choice of text or materials used in lessons, how groups were formed or structured, using student learning or experiences (in or out of school) as a resource, or structuring new learning to take advantage of specific student strengths. (TPEs 4,6,7,8,9)

Differentiated instruction/ Accommodation strategies
Describe any teaching strategies you have planned for your students who have identified educational needs (e.g., English learners, GATE students, students with IEPs). (TPEs 9,12)

All instruction will be accompany by picture explanation so that English learners have a better opportunity to learn. Also worksheet will also include a word bank for easy access to vocabulary. For GATE students, upper level question will be added to the question to inage their minds. Student with LEP will be address depending on what their IEP states, but we shall try to keep these students towards the front of the group.

Resources and Materials: (TPEs 4,9)

Worksheet one, Book "Gilberto and the wind" by Marie Hall Ets, Physics manual,