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EXPERIENTIAL LEARNING: DESIGNING SCIENCE TOY FOR JOYFUL LEARNING IN CLASSROOM

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ABSTRACT:

All students do not learn in the way. Learning takes place as a result of experience. To enhance the quality of education. Learning environment appropriate to address Individual I differences of learners. Experiential Learning is the one effective way of educational approach. The hands on experiments and interactive student engagement are a proven way to improve student learning and concept retention. The present paper is the initiative of the of Experiential Learning activity in engaging the students undesigning and development of toy .The experience in engaging and fun learning environment that promoted higher level, divergent, and creative thought processes—an effort that is needed in

today's climate of increased attention on Science education.

KEYWORDS: *Scientific Toy, Anemometer, Scientific Process , Conceptualization and Opportunities.*

INTRODUCTION :

Experiential Learning address the Individual differences of the students in the classrooms. Experiential Learning theory defines the learning take place through four phases of learning cycle. Experiential Learning cycle may be structured from concrete experiencing to observation and than abstract conceptualization to active learning. Concrete experience are turned into abstract concepts within this process and these concepts are sued in attaining new experience . Experiential Learning as effective way of educational approach

because Experiential Learning has impacted on the development of metacognition skills, enhancing skills, through the implementation of the knowledge to real life situation and give ability for self - learning . Experiential Learning Activity must be planed most appropriate ways . To gain concrete experience active participation of the students is most essential. Reflective observation requires to develop various prospective . To have effective learning effective implementation of learning cycle in the classroom is required. At concrete experience stage, learners required special occasion , example , event, to involved. Learning is a life long process and individual need to learn , interpret , analyzed , judge situation students experience under various condition , specific process skills are very important for significant

learning .There are three groups of the scientific process skills such as basic skills, experimental skills, and causative process skills. These skills not appropriate in the scientific students but also individual, personal , social , global live. Hence by using scientific process skills within experimental cycle would .Ensure development of basic skills, experimental skills, and causative process skills.

One of the best learning method of 21st century is to facilitate the achievement of students in science is attitude of students and able to develop the attitude towards science ability of students is experiential learning model. The contentious use of experiential science -based learning

Model on simple aircraft materials can improve the understanding of concept and skill of science

Process. The use of experiential science -based learning model on the material of light refraction can improve conceptual understanding and generate generic skills . The experiential learning is a philosophy and methodology where educators engage directly in motivating learners and reflection is focused on improving knowledge, developing skills. The learning process, students are not only expected to acquire scientific concepts and skills, but also develop a positive attitude towards science.

Science is the natural part of the students life and students are curious to learn about the nature. As students interacted with object, people in their environment they raise question , experiments, investigate findings and safe answers. .Every new experience is based on old ones. Young students are having thirst to learn. To gain new learning experience provide students opportunities for carrying adults . The quality of science education at early stages of schooling nurturing positive attitude and developed interest in the science thinking and academic achievement .The students are surrounded by the stimulating environment rich recourses , choices, material and activities that catalyzes their construction both logical mathematical information and physical with social. Students should actively participated in learning. Role of teacher should be facilitators , provides educational environment and continuously monitored students' progress and provide Experiential Learning based individual difference .

EXPERIENTIAL LEARNING ACTIVITY :

My commitment as a teacher is conceptualization of the students as a young scientist , let us to look real life opportunities that would investigated much curiosity among students. The strong wind is common in our school playground .The wind was the topic of the discussion among the students of grade five. It was perfect opportunities and I have decided to design Experiential Learning activity .The students was discuss about direction of the wind and the speed of the wind. The students were discussing how speed of the wind can be measure .Then idea click to my mind let design Experiential Learning activity to make our own anemometers . Students working in the small-groups .Students more in groups than individual. Students working in the group get chance to improve their social skills and also actively engage in scientific process such as hypothesis, making observation, data collection, measuring and evaluation.



Fig -1 First Anemometer



Fig-2 Students Made Anemometer



Fig-3 Fig-2 Students Made Anemometer

Material required : Per team

- ❖ Four used plastic cups
- ❖ Pencil and eraser
- ❖ Card board
- ❖ Play dough
- ❖ Staple and glue
- ❖ Push pin
- ❖ Scissor
- ❖ Ruler
- ❖ Balloon
- ❖ A-4 size paper

Strength of the class was forty students. We divided class into eight team. Each team consisting five students. We have provide each team material and place for work. Students was were curious after seeing material and discussed what the material are, what we can make by using the material. Students responses after seeing mater was as follows

- ❖ We will make science toy .
- ❖ We can make phone
- ❖ It can be wall clock .
- ❖ We can make a propeller
- ❖ It can be fan.
- ❖ I think it can be castle .

Step Two :

We have prepared written instructions manual to help the students. Steps of construction of anemometer by following steps wise instructions.

- ❖ They started to cut two same size cardboard strips.
- ❖ Then cross the cardboard strips to make plus sign.
- ❖ By using the ruler they measured the cardboard strips and found marked the middle of each strip.
- ❖ Staple them together in the middle, when two strips are cross make sure that anemometer blades are of equal length.
- ❖ Students used the ruler to measure the blades and locate the exact center.
- ❖ Students marked one direction of strip.
- ❖ Students cut the mouth of plastic used cups to make them lighter.
- ❖ All materials are used material (Consumables)
- ❖ All safety precautions taken during the making of anemometer.

Step Three :

- ❖ Students stapled the used plastic cups on the edge of strips facing same direction.
- ❖ Students after attaching the used plastic cups, they pushed the pushpin through the center of the cardboard cross and attached it to the eraser point of pencil.
- ❖ Then students blow on the cups to make sure the cross board spins freely on the point.
- ❖ The students after finishing the steps of this step they play to put on the table then they fasten other side of pencil with play dough.
- ❖ We have provided balloons to make wind and will ask them to blow in different sizes than release the air into the plastic cup.
- ❖ We have provided the students A-4 size paper to note measurement of the result of experiment. To count and note how many times wind gauge turns in size of the balloon.
- ❖ Lastly students used a portable fan and repeat the experiment.

Step Four: Findings

Teacher after the experiment discussed with students about the wind gauge. Teacher asked the following questions and students responded as follows

Teacher: What is the power that allows to rotate cup?

Students: Wind

Teacher: What happens if you close the mouth of the cups?

Students (i) It will rotate/turn (ii) Wind gauge will not move.

Teacher: Have you ever seen something like this?

Students: (i) I have seen on the street (ii) Yes, we saw it on TV

Teacher: What is the benefit to know blowing speed of the wind?

Students; (i) It helps to dry clothes faster (ii) It helps to produce electricity.

REFLECTION:

Students enjoy the activity throughout. Raw material kit when given to students they were curious and excited too. We planned outdoor activity but day of experiment there was no wind. Hence we decided to conduct the activity in the classroom and used balloon to generate wind power. We also used the portable fan and repeated the experiment t .During the experiment students faces some challenges such as staling, cups .One grips staples cup wrong side and wrong direction. teacher guide them quickly .

Future scope of the study :

- ❖ Students can measure he wind speed at different locations such as in narrow hallways or on open play field.
- ❖ Students can take their anemometer outside windy days, over multiple days to measure wind speed.
- ❖ Students taking measurement at different times ,days ,students may prepared chart displaying speed at different times .

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