RENCANA PELAKSANAAN PEMBELAJARAN

Satuan Pendidikan   : SMA Elyon Surabaya
Kelas/ Semester   : XI/ 1 (Ganjil)
Topic   : Elastisitas
Sub Topik   : Modulus Young
Pembelajaran ke   : 1
Alokasi Waktu   : 10 menit

A. TUJUAN PEMBELAJARAN

Setelah mengikuti kegiatan pembelajaran menggunakan model pembelajaran Problem Based Learning (PBL) dan eksperimen yang menunjukkan sikap gotong royong, jujur, dan berani mengemukakan pendapat, siswa dapat menganalisis sifat elastisitas bahan (benda dengan dua bahan yang berbeda) dalam kehidupan sehari-hari

B. KEGIATAN PEMBELAJARAN

Kegiatan Pendahuluan (3 menit)

1. Guru memberikan salam pembuka dan mencatat presensi siswa
2. Guru bertanya kira-kira apa yang menyebabkan suatu jembatan layang bisa bertahan meskipun banyak kendaraan yang melewatinya? Dan apakah jembatan layang itu dapat roboh?

Kegiatan Inti (5 menit)

Menanya

1. Siswa di tunjukkan dua benda yang memiliki bahan yang berbeda dengan dimensi/ luasan yang sama. Benda pertama adalah plastic dan benda kedua adalah karet.
2. Diawal pembelajaran guru bertanya kepada siswa diantara dua benda tersebut manakah yang lebih elastis? Dan mengapa?

Mengamati

3. Lalu guru meminta siswa memperhatikan guru melakukan demostrasi. Bahan pertama dijepit pada white board dan ditarik kebawah lalu diberi tanda sampai batas maksimum benda tersebut dapat ditarik. Lalu benda ke dua diberi perlakuan yang sama dengan benda pertama dan diberi tanda batas maksimum penarikannya. Dari kedua benda tersebut manakah yang akan berubah bentuk, saat gaya tariknya dihilangkan?

Mengasosiasi/ Menalar

4. Benda yang tidak berubah bentuk terlalu banyak itulah yang dinamakan elastis.
5. Guru bertanya Kembali pada siswa kira-kira apa saja besaran fisika yang mempengaruhi elastisitasnya? (jenis bahan (bila ukuran bahan sama = volume sama maka massanya pasti beda, maka gaya beratnya beda), luasan, pertambahan panjang dan panjang semula)
6. Maka dirumuskan penentun elastisitas suatu bahan adalah modulus young

Mengkomunikasikan

7. Diberikan rumus modulus young dan siswa ditanya kira-kira dimana kita bisa menjumpai benda yang menggunakan modulus young dalam kehidupan sehari-hari (bahan pembuatan balon/ balon udara)

Penutup (2 menit)

8. Lalu siswa dibagi berdasarkan kelompok untuk membuat rancangan percobaan yang bertujuan menentukan antara karet pentil dan karet dove, mana yang lebih elastis dan mengapa?
9. Siswa diberikan rubrik penilaiannya.

C. PENILAIAN PEMBELAJARAN

Rancangan Eksperimen yang bertujuan menentukan mana yang lebih elastis antara karet pentil dengan karet dove.

Rubrik penilaian sebagai berikut :

CW : Desain Eksperimen Elastisitas

/60

Data Collection /12
Attachment/ Picture/ Table

4 — 12 pts	3 — 9 pts	2 — 6 pts	1 — 3 pts
Well organized content, clear and easily understood message, all graphics/image and table support the theme/content of the presentation.	Content is organized, message is sufficiently understood, a few graphics/ imange and table are not support the theme/content of the presentation.	Content lacks organization, format is difficult to follow and poorly organized, message not clearly understood, a few graphics/ table/image are not seem to support the	Unorganized content, hard to follow, message difficult to understand, tendency to wander or ramble, several graphics/ table/image are detract from the content of the presentation.

Preparedness /8
timeliness and readiness

4 — 8 pts	3 — 6 pts	2 — 4 pts	1 — 2 pts
Student is completely prepared and submit it on time.	Students seem quite prepared but may need a few more revisions, and send them on time.	Students are somewhat prepared, but it is clear that it is very necessary to make revisions, and send them on time.	Student does not seem at all prepared to present.

Content of Design Experiment /12
Problem Statement

4 — 12 pts	3 — 9 pts	2 — 6 pts	1 — 3 pts
Can determine problem statements containing two physical quantities clearly	Can determine problem statements containing one physical quantities clearly	Can determine problem statements without containing physical quantities clearly	Can not determine problem statements.

Content of Design Experiment /4
Hypothesis

4 — 4 pts	3 — 3 pts	2 — 2 pts	1 — 1 pt
Can determine hypotheses that answer problem statements containing at least two physical quantities clearly	Can determine hypotheses that answer problem statements containing at least one physical quantities clearly	Can determine hypotheses that answer problem statements.	Can not determine hypotheses that answer problem statements.

Content of Design Experiment /8
Variable

4 — 8 pts	3 — 6 pts	2 — 4 pts	1 — 2 pts
Can determine the independent variable, the dependent variable and the control variable along with its symbol precisely.	Can determine two variables from: Independent variables, dependent variables and control variables and their	Can determine only one variables from: Independent variables, dependent variables and control variables and their	Can not determine Independent variables, dependent variables and control variables and their symbols precisely.

Content Design Experiment /8 ⌃

Material

4	8 pts	3	6 pts	2	4 pts	1	2 pts
Can determine a minimum of four tools and materials along with the amount needed for the experiment precisely.		Can determine a minimum of three tools and materials along with the amount needed for the experiment precisely.		Can determine a minimum of two tools and materials along with the amount needed for the experiment precisely.		Can not determine tools and materials along with the amount needed for the experiment precisely.	

Content of Design Experiment /8 ⌃

Procedure

4	8 pts	3	6 pts	2	4 pts	1	2 pts
Can determine at least four steps of the experimental procedure appropriately and attach pictures.		Can determine at least three steps of the experimental procedure appropriately and attach pictures.		Can determine at least three steps of the experimental procedure appropriately.		Can determine at least two steps of the experimental procedure appropriately.	