



DIFFERENT COLOR MARKING! -1
CHECKS -1

-ADDED UP WRONG -1
OUT BY 1 =

$\frac{6}{10}$ PR

CT \$ 11.5 + 1.5

$\frac{13}{14}$

$\frac{10}{14}$

Technological Design

Western Technical-Commercial School

Name:

Date: MAR, 20, 2019 Section: 02

SPICE Applied to the Key Ring Accessory Review

Using the SPICE model definition, fill in the SPICE steps for the key ring accessory project. Use the related web resources to support your answers. Half a mark for short points and one mark for each explanation.

Mark
Breakdown
Column

Q#	A
1	2 ✓
2	4 ✓
3	4 ✓
4	2
5	2
T=	14

2
13
2

3
4
4
4

4
4

0
2

1.5
2

1. Situation (What is the big picture?)

a. A class of students interested in the field of Engineering have taken a course to find out what technology is all about. One of the major principles of this course/field is the "Design Process" coming up with solutions to what engineers do on a daily basis.

2. Problem/Challenge (What you have to solve, build, and/or accomplish?)

a. Understanding the design process and identifying the steps on different tasks/challenges like thinking of key ring ideas using the process.

b. Practice your sketching ability for creating thumbnail ideas and also an orthographic with dimensions and an isometric of your idea.

c. The Key ring accessory itself has specific requirements which include:

i. A design that is unique to you, custom, practical/decorative and related to technology.

ii. Equivalently sized to about the size of a chop stick or a standard white eraser.

iii. A minimum 5mm diameter for the key ring with at least 5mm sufficient support material.

iv. A minimum 5mm general thickness.

3. Investigation/Ideas (Lots of related ideas - how?)

a. Use your own experiences, knowledge and interests.

b. Talk to your peers, friends and/or professionals.

c. Research using internet, related magazines/books and/or similar items.

d. Actual ideas already completed that you could use to make your own.

4. Create/Construct (Your best idea selected and implemented)

a. My initials on a Ford Mustang (Car)

5. Evaluation (Does it solve/resolve the problem/challenge?)

a. SPICE - SPICE design process steps based on the Keyring.

b. Thumbnails - Layout Per 5 Iso Thumbnails, Full page with holes, notations and labels.

c. Orthographic - Sketch showing final design with 8 views, dimensions and ISO.

d. Always make sure to double check that you have completed all components for full marks.

Corrections: @ 50%

~~1.~~

~~1.~~

~~1.~~ * ONLY PUT THE PART OF THE ANSWER YOU MISSED
I.E. NOT NECESSARY TO COPY WHOLE ANSWER

1.

a) Class of Students interested in the field of Engineering have taken a grade 10 Robotics Technological Design course to learn and build their knowledge and skills about this area.

2.

a) Design process - understand, ~~analyze~~ and apply the SPICE Process to the key ring accessory project.

b) For the key ring accessory, apply sketching to 5 thumbnail ideas, then sketch an orthographic with dimensions and isometric of final idea.

c) Key ring accessory requirements include:

- i. A unique, custom, practical/decorative design and relate to tech.
- ii. A size equivalent to a chap stick container / student white eraser
- iii. A minimum 5mm key ring hole with 5mm material support around
- iv. A minimum 5mm general thickness

4.

+2 a) For this activity, your final idea will be used to create a detailed orthographic with dimensioning and an isometric, to later draw in another activity, a 3D CAD of your key ring accessory, then to be 3D printed

5.

- +0.5
- a) Does your key ring accessory meet all requirements?
 - b) Explain the SPICE design process in relation to the key ring accessory
 - c) Were you successful with your ~~key ring accessory~~ sketches and drawing standards?
 - d) What could be done better

$$2.5 / 2 = \frac{1.25}{1.25} = (+1.5)$$



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1. Situation (What is the big picture?)

a. one of the significant principals of this course/field is the "plan process". conceiving arrangement is the thing that Engineer do on a day by day bases.

2. Problem/Challenge (What you have to solve, build, and/or accomplish?)

a. begin by clarifying filling in the means of spice

b. 0.5 Make Five distinctive isometric thumbnail thoughts dependent on

c. Final full page scaled, showing minimum dim and is a view

i. a unique design, custom, practical/derivative and related to technology

ii. the size of chap stick container or a standard white eraser

iii. 5 mm diameter hole, with 5 mm sufficient support

iv. a minimum 5 mm general thickness

3. Investigation/Ideas (Lots of related ideas - how?)

a. use your own experiences, knowledge, and interests

b. talk to your peers, friends and/or professionals

c. Research using internet, related magazines/books and

d. actual ideas already completed that you could use to

4. Create/Construct (Your best idea selected and implemented)

5. Evaluation (Does it solve/resolve the problem/challenge?)

a.

b.

c.

d.

Mark
Breakdown
Column

Q#	A
1	2
2	4
3	4
4	2
5	2
T=	14

CORRECTIONS @ 50% TITLE - 0.5

4. For this activity, your final idea will be used to create a detailed orthographic with dimensioning and an Isometric to later draw in another activity, a 3D CAD of your key ring accessory, then to be 3D printed

+2

5. a) Does your key ring accessory meet all the requirements

+2 b) Explain the design process in relation to the key ring accessory

c) Were you successful with your sketches and drawing standards

d) What ~~could~~ be done ~~better~~ better

$$4/2 = +2 - 0.5 = \textcircled{1.5}$$

IN THE FUTURE

WHEN IN COMPLETE, YOU CAN DRAW A LINE ACROSS PAGE TO SEPARATE YOUR WORK DONE UP TO, THEN NOTE IT, AND THEN FILL IN ON FRONT.



MARKS IN LEFT - 1
MARK DIFF - 3.5

4.5 PE
10

MB
-1

5.5 + 3 = 8.5
14
Section: 02

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Date: Mar 20

Section: 02

SPICE Applied to the Key Ring Accessory Review

Using the SPICE model definition, fill in the SPICE steps for the key ring accessory project. Use the related web resources to support your answers. Half a mark for short points and one mark for each explanation.

1. Situation (What is the big picture?)

a. design / Build a functional key ring

0.5
2

2. Problem/Challenge (What you have to solve, build, and/or accomplish?)

a. Make a key ring.

b.

c.

- A design that is unique to you, custom, practical/decorative, and related to tech
- Equivalently sized to approximately the size of a chop stick container
- A minimum 5mm diameter hole for the key ring
- A minimum 5mm general thickness

3. Investigation/Ideas (Lots of related ideas - how?)

a. use your own experiences, knowledge, and interests

b. talk to your peers, and friends

c. Research using books, internet, and similar sources

d.

4. Create/Construct (Your best idea selected and implemented)

a. Basketball with initials on it

0.5
2

5. Evaluation (Does it solve/resolve the problem/challenge?)

a.

b.

c.

d.

0.5
2

Mark
Breakdown
Column

Q#	A
1	2
2	4
3	4
4	2
5	2
T=	14

2
4

3
4

Corrections For 50%

2. a) understand and apply the SPICE process to the Key ring accessory
- 2
- b) APPLY sketching to 5 thumbnail ideas then sketch an orthographic with dimensions and isometric of final idea.

5. a) Does it meet all the requirements.
- 2/2
- b) explain SPICE design process in relation to Key ring accessory.
- c) were you successful with your ^{sketches} ~~measurement~~
- d) what can you do to improve.

- 2/2
1. Class of students interested in the field of Engineering have taken a course to learn and build their knowledge and skills about the area.

$$6/2 = (+3)$$



MB-

NO CHECKS - 1

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14

SPICE Applied to the Key Ring Accessory Review

Using the SPICE model definition, fill in the SPICE steps for the key ring accessory project. Use the related web resources to support your answers. Half a mark for short points and one mark for each explanation.

1. Situation (What is the big picture?)

a. ~~X~~ The situation is to build a key ring, and 3D print the design, while meeting requirements

2. Problem/Challenge (What you have to solve, build, and/or accomplish?)

a. ~~X~~ The challenge is to print a usable key ring accessory.

b. The problem is it has to meet requirements and fit in your pocket comfortably ~~X~~

c. The requirements are

i. The design is special to you, custom and related to technology

ii. The print has to be near the size of chapstick or a good eraser

iii. There has to be at least 5mm hole and 5mm for support material

iv. The thickness has to be at least 5mm thick

3. Investigation/Ideas (Lots of related ideas - how?)

a. Since it's all detached, it will have to be a pendant

b. The pendant will solve any hole problems

c. Initials on the back that sink in (maybe)

d. Put it in all white and sharpie the design and spray paint the pendant

4. Create/Construct (Your best idea selected and implemented)

a. The firefly logo pendant is what I'll go with, to solve the detached problem is easy, if all fails I'll do the longboard

5. Evaluation (Does it solve/resolve the problem/challenge?)

a. The pendant solves the hole problem

b. The pendant solve the detached problem

c. it can meet all requirements

d. There's a backup.

Mark
Breakdown
Column

Q#	A
1	2
2	4
3	4
4	2
5	2
T=	14

-1
Put TOP 1
OF PAIR

13
14

4
4

1
2

0.5
2