

ชุดกิจกรรมการเรียนรู้ (สำหรับนักเรียน)
กลุ่มสาระการเรียนรู้ภาษาต่างประเทศ ชั้นมัธยมศึกษาปีที่ 2
ภาคเรียนที่ 2 รายวิชาภาษาอังกฤษ
หน่วยที่ 7 - 8



ชื่อ - ชื่อสกุล	เลขที่เลขที่
ชั้นมัธยมศึกษาปีที่	โรงเรียน

สำนักงานโครงการส่วนพระองค์สมเด็จพระกนิษฐาธิราชเจ้า กรมสมเด็จพระเทพรัตนราชสุดา ๆ สยามบรมราชกุมารี สำนักงานคณะกรรมการการศึกษาขั้นพื้นฐาน สถาบันส่งเสริมการสอนวิทยาศาสตร์และเทคโนโลยี



ชุดกิจกรรมการเรียนรู้ (สำหรับนักเรียน) กลุ่มสาระการเรียนรู้ภาษาต่างประเทศ ชั้นมัธยมศึกษาปีที่ 2 ภาคเรียนที่ 2 รายวิชาภาษาอังกฤษ หน่วยที่ 7 - 8

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หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Everyday Problems ใบงานที่ 1 เรื่อง What's the problem?

Part 1: Matching Game Instructions: Match the pictures with the words above. (จับคู่ภาพที่สัมพันธ์กับประโยคด้านบน)

a. spill b. eat c. cut d. fall e. bully f. forget g. get

1		5
2		6
3		7
4	M.s.	

Part 2: Making sentences

Instructions: Fill in the blanks with the given words above. (Don't forget the correct form of present verbs). (เติมคำในช่องว่างให้ถูกต้องโดยใช้คำจากด้านบนให้ถูกต้อง ตามกาลปัจจุบัน)

1. Carol	_ some water on Tim's T-shirt.
2. Anna	her ice-cream on the ground.
3. Mike	healthy food all the time.
4. Frank	_ his umbrella.
5. George	friend's shoes.
6.Thomas	hurt on his knee.
7. Bella	her finger from a broken dish.

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Everyday Problems กิจกรรม Picture Bingo Game

Picture Bingo Game

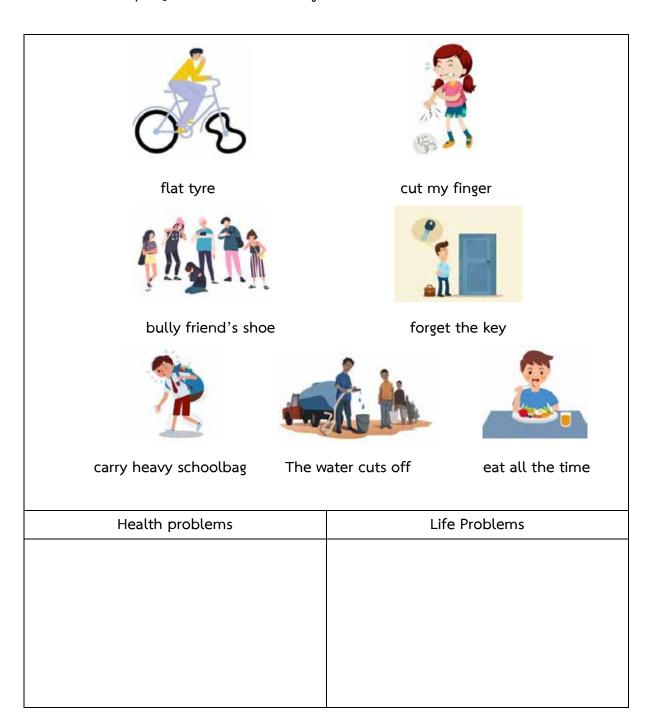
Instructions: Write six words in the Bingo sheet and mark X on the box.
(เขียนคำศัพท์จากคำที่กำหนดให้ลงในตารางบิงโกและทำเครื่องหมาย X ในช่องว่าง)

0.14	/l 4.2 - 4.1- a va va la l'av	- ว	
	hat's the problenne problem		
	Prosterii is iiiiiii		1
			J
	Picture Bingo Ga	ime	
		d mark X on the b	
ยนคำศัพท์จากคำที่กั	าหนดให้ลงในตารางเ	<u>วิงโกและทำเครื่องหมา</u>	เย X ในช่องว่าง)
O· W	hat's the problen	n?	
	ne problem is		
			I

Instructions:

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Everyday Problems ใบงานที่ 2 เรื่อง Everyday problems

Part 1
Instructions: Groups of the following problems in your real life into the table.
(จัดกลุ่มปัญหาต่อไปนี้ลงในตารางให้ถูกต้อง)



Part 2
Instructions: Look at the pictures and write sentences. Explain the problem.
(ดูภาพและเขียนประโยคบรรยายปัญหาในภาพ)

0	I have a problem with <i>my bicycle.</i> It is a <i>flat tyre</i> .
	I have a problem with It is
	I have a problem with
	I have a problem with It is
	I have a problem with It is

Part 3
nstructions: Write a real problem in your daily life and draw its picture
(เขียนปัญหาจริงในชีวิตประจำวันของนักเรียนและวาดภาพประกอบ)

I have	a problem v	vith	It is		 	
	_	_		_	_	

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Giving Advice For Our Friends ใบความรู้ เรื่อง Asking For And Giving Advice

Asking for advice

Suggestion and advice
ถามเพื่อขอคำแนะนำ

การให้คำแนะนำ

Asking for Advice (ถามเพื่อขอคำแนะนำ)

What should I do?

(ฉันควรทำอย่างไร)

Can you give me some advice?

(คุณพอจะมีคำแนะนำให้ฉันไหม)

What would you do in my place?

(ถ้าคุณเป็นฉันคุณจะทำอย่างไร)

What/ Where/ When do you think I

should...?

(คุณคิดว่าฉันควร...อย่างไร/ควรไปที่ไหน/ ควรทำเมื่อไร) What/ Where/ When should I ...?

(ฉันควรทำอย่างไร/ควรไปที่ไหน/ควรทำเมื่อไร)

What's your advice?

(คำแนะนำของคุณคืออะไร)

Do you have any piece of advice for me?

(คุณมีคำแนะนำสำหรับฉันหรือไม่)

What do you advise me?

(คุณจะแนะนำฉันอย่างไร)

Giving advice (การให้คำแนะนำ)

I think you should...

(ฉันคิดว่าคุณควรจะ ...)

Why don't you ...?

(ทำไมคุณไม่.. (ทำ) เช่นนี้ล่ะ)

If I were you, I would.../I'd...

(ถ้าเป็นฉัน ฉันจะ..)

I would/ wouldn't ... if I were you

(ฉันจะ...ฉันจะไม่...ถ้าฉันเป็นคุณ)

Accepting advice (การตอบรับคำแนะนำ)

That's great advice. (เป็นคำแนะนำที่ดี่นะ)

What a fantastic idea. (เป็นความคิดที่น่าทึ่งนะ)

That's good idea. (เป็นความคิดที่ดีนะ)

That sound good/fine. (ฟังดูดีนะ)

All right, I'll do that. (เอาล่ะ ฉันจะทำเช่นนั้น)

Refusing advice (การปฏิเสธคำแนะนำ)

I can't do that because... (ฉันทำไม่ได้ เพราะ...)

That's good idea but ...(เป็นความคิดที่ดีนะแต่...)

That doesn't sound very interesting.

(ฟังดูยังไม่น่าสนใจนะ)

I'm not sure. (ฉันไม่แน่ใจเลย)

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Giving Advice For Our Friends ใบงานที่ 1 เรื่อง If I were you, I would...

Instruction: Choose an advice or write your own for each problem.

(เลือกคำแนะนำที่กำหนดให้หรือเขียนคำแนะนำสำหรับปัญหาในแต่ละข้อ)

1	Lily: What's the problem?	☐ buy lemon tea.
	Susan: Umm, I can't choose a drink. What	☐ buy hot chocolate.
	should I do?	
	Lily: If I were you, I would	
2	John: What's the problem?	☐ run every day.
	Thomas: I want to win the marathon.	\square go to sport club.
	What should I do?	
	John: If I were you, I would	
3	Lorry: What's the problem?	buy a new handbag.
	Dyna: I want to buy a present for my	☐ buy a healthy pillow.
	mother. What should I do?	
	Lorry: If I were you, I would	
4	George: What's the problem?	drink a glass of milk.
	Mike I'm hungry. I eat snack all the time.	at some fruit.
	What should I do?	
	George: If I were you, I would	
5	Benjamin: What's the problem?	ignore him.
	Nathan: Easton bullies my shoes. What	walk away from him.
	should I do?	
	Benjamin: If I were you, I would	

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Giving Advice For Our Friends ใบงานที่ 2 เรื่อง I don't have enough money to buy

Part 1 Instruction: Listen and answer the questions (ฟังและเลือกคำตอบที่ถูกต้อง)

1.	What does the Se	ena want to buy?					
	a. bicycle	b. motorcycle	c. puzzle	d. basketball			
2.	How much mone	y does Sena have in	her wallet?				
	a. three hundred	baht					
	b. seven hundred	d baht					
	c. three thousand	d baht					
	d. seven thousan	d baht					
3.	How much does	the item cost?					
	a. a hundred bah	t					
	b. four hundred k	oaht					
	c. a thousand bal	nt					
	d. four thousand	baht					
4.	What is Mira advice	e? Mira advises Sena	(Choose two	best answers)			
	borrow her pa	arent money.					
	sell secondha	and T-shirts.					
	☐ do a part time	e job.					
	☐ ignore her wis	sh					
5.	Which the final ide	ea does Sena choose	to do?				
	☐ borrow her pa	arent money.					
	sell secondhand T-shirts.						
	☐ do a part time	e job.					
	☐ ignore her wis	sh					

Part 2
Instruction: Listen to the conversation again and fill in the blanks.
(ฟังอีกครั้งและเติมคำลงในบทสนทนาให้ถูกต้อง)

Noun	Verb	Adjective
food dishwasher	lend borrow	enough unhappy nice
bicycle	bother	

M:	Hi Sena! What's the matter? You're so 1?
S:	Hi Mira! I saw a wonderful 2 and I'd like to buy it but
M:	What's the problem?
S:	I don't have 3 money for it. I have about seven hundred
	baht in my wallet. I need three hundred baht more. What should I do?
M:	Why don't you 4 your parents? I think they can
	5 you some money.
S:	I can't do that because they've just bought a food 6 for
	selling fruits. I don't want to 7 them. Should I borrow your
	money or borrow your parent's' money?
M:	I'm not sure. If I were you, I'd do a part-time job. The cafe near our school is
	looking for 8
ς.	Thanks a lot it's a 9 idea

Part 3

Instruction: Complete the dialogue (เติมบทสนทนาให้สมบูรณ์)

1.	A: I want to buy a new school bag. What should I do?
	B: If I were you, I'd save more money.
	A: (Accept/ Refuse) <i>That's good idea.</i>
2.	A: I want to have a pet.
	B: If I were you, I'd
	A: (Accept/Refuse)
3.	A: I want to have a pencil case.
	B: If I were you,
	A: (Accept/Refuse)
4.	A: I want to see a panda
	B:
	A: (Accept/Refuse)

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Giving Advice For Our Friends ใบงานที่ 3 เรื่อง Broken Leg

Part 1

Instruction: Read the dialogue and fill in the chart below (อ่านบทสนทนาต่อไปนี้และเติมข้อมูลลงในตารางให้ถูกต้อง)

Jason, Austin, and Robert: Hi Sam!

Sam: Hi friends!

Robert: How are you today?

Sam: I think I'm not so good.

Austin: What's the problem?

Sam: My leg hurts from running race. What would you do if you were in my place?

Robert: If I were you, I would watch movies on television.

Sam: I am not a big fan of movies. How about you Austin?

Do you have any piece of advice for me?

Austin: I advise you to visit a therapist.

Sam: That sounds great, but I don't have any idea to visit a therapist.

And you Jason? What's your advice?

Jason: I think you should visit a therapist as Austin suggested.

Sam: Thank you my friends! I appreciate it.

Asking for advice	Giving advice

Part 2

Instruction: Work in groups of four, act out as Jason, Austin, Robert, and Sam by changing phrases of advice (จับกลุ่ม 4 คน แสดงบทบาทสมมติเป็น Jason, Austin, Robert. และ Sam โดยเปลี่ยนวลีการให้ถามและให้คำแนะนำจากตารางข้างต้น)



หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง A Magazine Advice Column บทอ่านเรื่อง Dear Readers



My name is Tiana Joe. I have got a big problem with my face. I have bad acne spots on my face. When I look at myself in the mirror, I feel bad. When I go to school, my classmates bully me because of the spots. I also stop going out or meeting people. I think they are so ugly and embarrassed.

Please, tell me what I should do to get rid of these spots on my face. What should I do to look better?

Tiana Joe





Dear Tiana Joe.

My name is Vivian Duclos. I just read your letter and I think I can help you. I would like to give you some advice from my experience.

Firstly, If I were you, I would not worry too much, That's normal in our age. I would advise you to change your facial cleanser such as baby soap, natural cleansing gel.

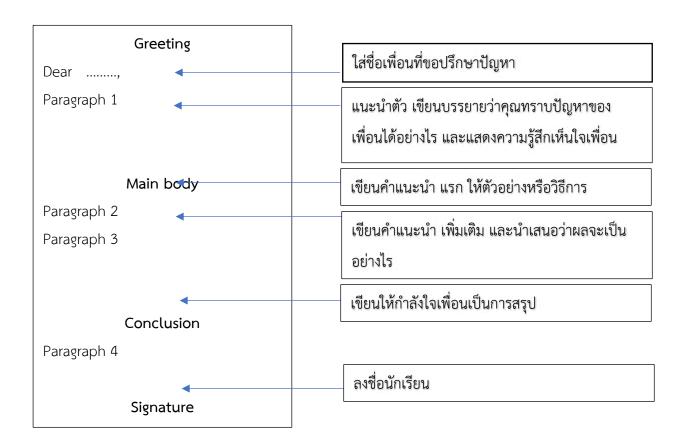
Furthermore, I would advise you to stop eating fatty food such as potato chips, fried chicken, cheese, and crackers

I hope things will get better soon.



หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง A Magazine Advice Column ใบความรู้ เรื่อง Writing Advice

การเขียนการให้คำแนะนำในรูปแบบการโต้ตอบงานเขียนประเภทจดหมายแบบไม่เป็นทางการหรือ บทความในนิยตสาร มีลักษณะการเขียนดังนี้



Useful Language

Paragraph 1 - Starting phrase: I am sorry to hear about your problem.

Paragraph 2+3 – Giving advice: If I were you, I would ...(infinitive)...

I would advise you to ...(infinitive)...

- Give example: such as...

- Listing: Furthermore,

Paragraph 4 – Ending phrase: I hope things will get better soon

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง A Magazine Advice Column แถบข้อความตัดตอนจดหมายตัวอย่าง

% <		
	My name is Vivian Duclos. I just read your	
	letter in School's advice column, and I	
Dear Paul Vogue	think I can help you. I would like to give	
	you some advice from my experience.	
Firstly, If I were you, I would use a	Furthermore, I would also advise you	
heavy conditioner every time you wash	to consult a hair therapist. He may give	
your hair. I would advise you to use	you a treatment suitable to your case	
some hair oils. These are available at	such as hair serum, natural shampoo.	
every pharmacy and at reasonable price		
I hope things will get better soon.	Vicky Frost	
%<	My name is Vivian Duclos. I just read	
	your letter in School's advice column,	
Dear Paul Vogue	and I think I can help you. I would like to	
	give you some advice from my	
	experience.	
Firstly, If I were you, I would use a	Furthermore, I would also advise you	
heavy conditioner every time you wash	to consult a hair therapist. He may give	
your hair. I would advise you to use	you a treatment suitable to your case	
some hair oils. These are available at	such as hair serum, natural shampoo.	
every pharmacy and at reasonable price		
I hope things will get better soon.	Vicky Frost	

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง A Magazine Advice Column ใบงานที่ 1 เรื่อง Dear readers

Part 1 Instructions: Match the word with correct meaning. (จับคู่คำศัพท์กับความหมายให้ ถูกต้อง)

- a. acne b. stress c. treatment d. pharmacy
- 1. It is a skin problem which has got small red spots on fac, neck, or back.
- 2. The doctor gives it for any sick people to help them be better.
- 3. When you study too hard, you have got terrible headache.
- 4. People buy some medicine here.

Part 2 Instructions: Read the letter and answer the following questions. (อ่านจดหมายและ ตอบคำถามต่อไปนี้)



Dear readers,

My name is Tiana Joe. I have got a big problem with my face. I have bad acne spots on my face. When I look at myself in the mirror, I feel really stress. When I go to school, my classmates bully me because of the spots. I also stop going out or meeting people. I think they are so ugly and embarrassed.

Please, tell me what I should do to get rid of these spots on my face. What should I do to look better?

Tiana Joe

Useful word

get rid of = กำจัด

$\overline{}$. •
()ı	uestions:
\sim	*C3C1O113.

Part 3

Instructions: Read the reply letter and answer the following questions. (อ่านจดหมาย โต้ตอบและตอบคำถามต่อไปนี้)



Dear Tiana Joe,

My name is Vivian Duclos. I just read your letter and I think I can help you. I would like to give you some advice from my experience.

Firstly, If I were you, I would not worry too much, That's normal in our age. I would advise you to change your facial cleanser such as baby soap, natural cleansing gel.

Furthermore, I would advise you to stop eating fatty food such as potato chips, fried chicken, cheese, and crackers

I hope things will get better soon.



Useful word

facial = เกี่ยวกับผิวหน้า

Questions:

Who writes this letter?
 How many advice does the writer suggest?
 What advice does the writer give?
 What is the purpose of the letter?

Part 4					
Instructions:	Check three	ways to give Tiar	a advice. (เลือกเ	แนวทาง 3 แนวทางที่เป็นคำแนะนำ	
	ให้กับ Tiana)				
	How can you help her?				
□ 1.	\square 1. If I were you, I would stop eating chocolate.				
□ 2.	If I were you,	I would use baking	power.		
□ 3.	If I were you,	I would stop your	stress.		
□ 4.	If I were you,	I would wash my f	ace with baby so	рар.	
□ 5.	If I were you,	I would stop worry	ring about it.		
Part 5 Instructions:	Read two le เติมข้อมูลลงใน		l in the table. (อ่านจดหมายสองฉบับอีกครั้งและ	
	Probler	 n		Advice	
Part 6 Instructions:		roblem from the I I write your own a		some advice for that	
	Dry skin	Hair problem	Bad breath	Skinny body	
		Your own problem	:		
Your Advice:					
1					
۷					
2					

Dear
Paragraph 1
Paragraph 2
Paragraph 3
Paragraph 4

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Unreal Joke ใบความรู้เรื่อง Conditional Sentence Type 2

ประโยคเงื่อนไขแบบที่ 2 ใช้เพื่อพูดถึงสิ่งที่ตรงข้ามกับ ความเป็นจริงในปัจจุบัน หรือมีโอกาสเป็นไปได้น้อยมากๆ หรือเป็นไปไม่ได้เลย รวมถึง การพูดถึงเหตุการณ์ใน อนาคตที่ไม่อาจจะเกิดขึ้นได้จริง อาจจะเกิดจากการ จินตนาการหรือเพ้อฝัน



โครงสร้างประโยค

ประโยคเงื่อนไขแบบที่ 2 ส่วนของ "If clause" จะใช้ past simple tense และ Main clause จะใช้ would + infinitive

If + past simple, ... would + infinitive

Туре	lf clause (สาเหตุ/เงื่อนไข)	Main clause (ผลที่เกิดขึ้น)
2	If + past simple, ถ้าหากสิ่งนั้นเกิดขึ้นได้	would + infinitive สิ่งนี้จะน่าจะเป็นไปได้
	lf I won lottery, (ถ้าฉันถูกล็อตเตอรี่)	I would buy a new house. (ฉันจะซื้อบ้านหลังใหม่)
ความหมาย ในปัจจุบัน	I do not win the lottery. (ฉันไม่ได้ถูกล็อตเตอรี่)	I have an old house. ฉันอยู่บ้านหลังเดิม)

^{*}could กับ might สามารถใช้แทน would ได้

เป็นไปได้	เป็นไปไม่ได้ / ไม่เป็นจริง	
Conditional Sentence Type 1	Conditional Sentence Type 2	
If I go to London, I'll visit London bridge.	If I went to the moon, I would take a lot of	
	photos.	
If I spend too much time on social media, I	If I spent an hour on the moon, I would build	
will get stressed.	sandcastle there.	
If he travels every month, he'll have less	If he didn't travel so much, he'd have more	
money.	money.	

*would สามารถใช้รูปย่อว่า 'd เช่น I would \rightarrow I'd / He would \rightarrow He'd ** if สามารถวางไว้กลางประโยคได้ และไม่ต้องใส่เครื่องหมายคอมม่า (.)

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Unreal Joke ใบงานที่ 1 เรื่อง Unreal Joke

Part 1	
Instructions: Put in the correct forms of the correct verbs.	(เติมคำกริยาให้ถูกต้องตาม
โครงสร้าง)	

Instructions: Put i	n the correct forms of the correct v	verbs. (เติมคำกริยาให้ถูกต้องตาม
โครงสร้าง)		
	If + past simple, would +	- infinitive
1. If my cat	(can) open the fridge, it	(eat) all my food.
2. If I	(have) enough money, I	(buy) a new car.
3. If Tom	(not talk) so much., he	(finish) his homework on time
4. If I	(speak) perfect English, I	(have) a good job.
5. If she	(study) hard, she	(pass) the exam.
	plete the jokes by putting "would" ould" หรือ "wouldn't" ลงในช่องว่างใ	
1. Joe: Hey, Gale! S	Spell blind lion	
Gale: b-l-i-n-d-l-i	-o-n	S
Joe: Wrong! It's I	b-l-n-d-l-o-n because if it had two i's,	it be blind!
2. Frank: What	happen if I cut off you left	ear?
Ron: I	be able to hear.	
Frank: What	happen if I cut off you right	t ear?
Ron: I	be able to see.	2232
Frank: Why?		1 23
Ron: Because m	ny glasses would have fallen off!	

3. A young boy came home with a pain in his stomach.	
Mommy: Sit down, dear. Your stomach's hurting beca	ause it's empty.
It'll be alright when you've got something ir	n it.
An hour later, the boy's father came home from wor	k, he had a terrible headache.
Son: That's because it's empty. You be a	ll right if you had something in it!
Part 3	
Instructions: Rewrite the sentences and use the seco	nd conditional. Keep the same
meaning. (เขียนประโยคดังต่อไปนี้โดยใช้ประโยคเงื่อนไขแบบ	ที่ 2 โดยให้ความหมายประโยคเหมือนเดิม)
Ex. My parents don't live near here, so I don If my parents lived near here, I would se	
1. We won't play volleyball because Jane and Peter are	en't here.
2. Eddie doesn't answer letters, so I don't write to him.	
3. I haven't got a dog, so I don't go for walks.	
4. I won't take your photos because I can't find my car	nera.
5. We haven't got enough money, so we won't buy a r	new car.

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Unreal Joke ใบงานที่ 2 เรื่อง If I Had a Million Baht

Instructions: Take note and write your journal on the given topic. (ให้นักเรียนเขียนประเด็น สำคัญเป็นข้อมูลในการเขียนบันทึกตามหัวข้อที่กำหนดให้)

Take Note:	
	Topic: If I Had a Million Baht
	A. Result 1: I would
	Reason 1:
	Reason 2:
	B. Result 2: I would
	Reason 1:
	Reason 2:
	Write Journal:
	If I had a million baht, I would



หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง If I Were a Superhero ใบงาน เรื่อง If I Were a Superhero

Exercise 1 Instructions: Match words in column A with their definitions in column B

	Α	В
1 sl	helter	a) คุก
2 so	cheming villain	b) เสียหาย หายนะ วินาศ
3 b	urden	c) ภาระ
4 p	rison	d) เช็ดออก
5 g	uarantee	e) บินอย่างรวดเร็ว
6 w	recked	f) ที่กำบัง
7 fr	ret	g) ทน
8 w	vipe away	h) วายร้าย
9 51	wiftly fly	i) ความทุกข์
10	bear (v)	j) รับประกัน
Exercise 2		
Instructions: Listen to	the poem and tick what the speaker wou	uld do if he were a
superhero.		
lacksquare He would go to all	places that need help.	
☐ He would take bad	people to the prison.	
☐ He wouldn't defend	d his neighborhoods.	
☐ He would make peo	ople feel safe and happy.	
☐ He would rush to sa		
☐ He wouldn't bear a		

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง If I Were a Superhero บทอ่าน เรื่อง If I Were a Superhero

If I Were a Superhero By Scott Ninneman

If I were a superhero

All the helpful places I'd go

I'd rush to the urgent rescue

Be a shelter and the ground crew

I'd capture all scheming villains Lock them in dark, lonely prisons

I'd guarantee safe neighborhoods Defending peace and livelihoods

I'd stop all cars from being wrecked Stand guard and shield, fully protect

I'd end children's dark nighttime frets Remove all stray random bullets

If I were a superhero

All the people I'd gladly show

I'd wipe away distressing tears

Put smiles in place instead of fears

I'd catch you from the crashing fall Speed to answer your anxious call



I'd charge ahead and swiftly fly Streak appearing in clear blue sky

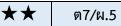
I'd be here, there, and everywhere Heavy burdens I'd freely bear Alas, this dream has not come true No hero yet is in our view

Instead, I'll dream, for dreams are free Imagine, hope, think what could be

If there could be superheroes

Joyful verses would fill all prose

Source: <u>If I Were a Superhero</u>. A poem of hopes and dreams. | by Scott Ninneman | Speaking Bipolar | Medium



หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง If I Were a Superhero ใบกิจกรรม เรื่อง Find Your Partner

If I were a superhero	All the helpful places I'd go						
I'd ruch to the urgent rescue	Be a shelter and the ground						
I'd rush to the urgent rescue	crew						
I'd guarantee safe	Defending peace and						
neighborhoods	livelihoods						
I'd stop all cars from being	Stand guard and shield, fully						
wrecked	protect						
I'd end children's dark	Remove all stray random						
nighttime frets	bullets						
If Lwore a superbore	All the people I'd gladly						
If I were a superhero	show						
I'd wipe away distressing	Put smiles in place instead of						
tears	fears						
I'd catch you from the	Speed to answer your						
crashing fall	anxious call						
I'd charge ahead and swiftly	Streak appearing in clear blue						
fly	sky						
I'd be here, there, and	Howar burdons I'd frook hoor						
everywhere	Heavy burdens I'd freely bear						

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หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง If I Were a Superhero ใบงาน เรื่อง Conditional Sentences Type 2

Second Conditional Sentences Type 2

It is used to express dreams, unreal situations and things that are unlikely to happen. ใช้กับเหตุการณ์ที่เพ้อฝัน ไม่เป็นจริง หรือไม่น่าจะเกิดขึ้น

โครงสร้างประโยค

If + subject + v.2 + , + subject + would (not) + v.1 infinitive

Example: If I were a superhero, I would help many people.

If I won the lottery, I'd travel around the world.

If I were you, I wouldn't leave this place.

Subject + would (not) + v.1 infinitive + if + subject + v.2

Example: I would help many people if I were a superhero.

I'd travel around the world if I won the lottery.

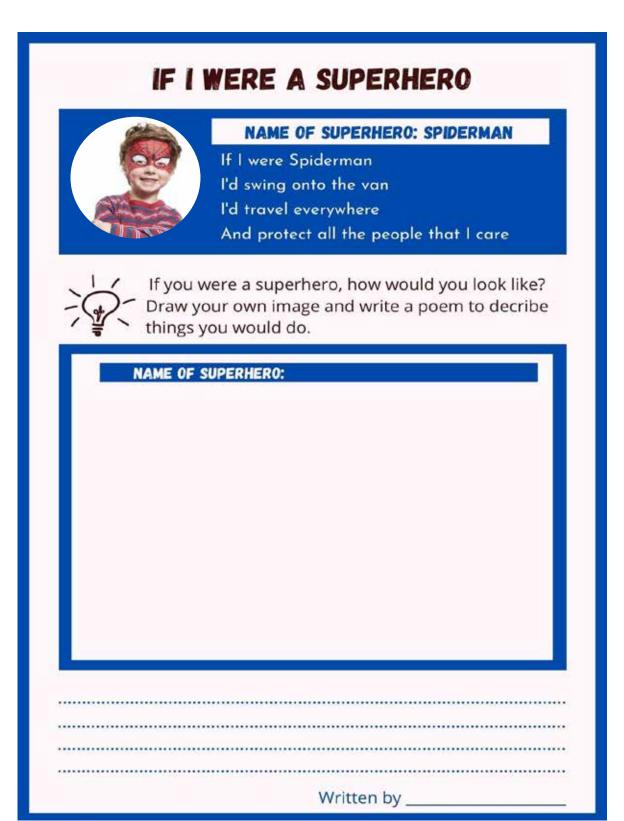
I wouldn't leave this place if I were you.

Instructions: Unscramble sentences. Put the words in the correct order.

					1.5		T							
	frets	were	enc	d ,	If	ľd	childrer	า'ร	a s	upe	erher)		
1														
gı	uarante	ee ne	eighbo	orho	ods	1	I would	we	re	if	ľd	safe	the president	
3			3											l
2														
2														·
lf	woul	.dn't	you	I	give	up	studying	3 1	Er	nglis	sh ,			
<u> </u>	1	I							1		I			
3.														

buy	money	lf	,	a ne	ew con	nputer	had		ľd	m	ore
4											
						T	T				
You	go to be	d	be	if	tired	would	ln't	earl	ier	SO	you
5.											

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง If I Were a Superhero ใบงาน เรื่อง If I Were a Superhero: Writing



หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Goldilocks's story Goldilocks and the three bears

This is a story about a young girl named Goldilocks.

One day, she was walking in the woods when she saw a house. She knocked on the door, but no one answered. In fact, the door wasn't locked, and when it opened, Goldilocks walked straight in. What she didn't know was that in the house lived a family of three bears. They had left the house to go for a walk.

Goldilocks walked into the kitchen and found three bowls of porridge. She was hungry, so she picked up a spoon and tasted the porridge from the first bowl.

"This porridge is too hot!" she cried out.

So, she tasted the porridge from the second bowl.

"This porridge is too cold," she said.

So, she tasted the last bowl of porridge.

"Ah, this porridge is just right" she said happily, and she ate it all up.

After eating the porridge, Goldilocks decided she felt a little tired. So, she walked into the living room, where she saw three chairs. She sat in the first chair to rest her feet.

"This chair is too big!" she exclaimed.

So, she sat in the second chair.

"This chair is too big, too!" she whined.

So, she tried the last and smallest chair.

"Ah, this chair is just right", she sighed. The chair was big enough for Goldilocks to sit in, but as she went to sit down it broke into pieces. There were too many pieces, and it was too much trouble to fix, so she quickly got up and left the room.

Goldilocks was very tired by this time, so she went upstairs to the bedroom. She lay down on the first bed, but it was too hard. Then she lay on the second bed, but it was too soft. So, she lay down on the third bed, and it was just right. She fell straight to sleep. While she was sleeping, the three bears came home.

They walked into the kitchen.

"Someone's been eating my porridge," growled the Papa bear.

"Someone's been eating my porridge," said the Mama bear.

"Someone's been eating my porridge, and they ate it all up!" cried the Baby bear.

Then they walked into the living room.

"Someone's been sitting in my chair," growled the Papa bear.

"Someone's been sitting in my chair," said the Mama bear.

"Someone's been sitting in my chair, and they've broken it all to pieces!" cried the Baby bear.

They decided to look around some more and went up to the bedroom.

"Someone's been sleeping in my bed," growled the Papa bear.

"Someone's been sleeping in my bed, too," said the Mama bear.

"Someone's been sleeping in my bed, and she's still there!" cried the Baby bear.

Just then, Goldilocks woke up. She was terrified! She screamed, "Help!" jumped up and ran out of the room. Then she ran down the stairs, opened the door, and ran away into the woods. And she never returned to the home of the three bears again

Source + Extra Video: BBC Learning English - Course: lower intermediate / Unit 19 / Session 1 / Activity 2

หน่วยการเรียนรู้ที่ 7 Advice and Ideas เรื่อง Goldilocks's story ใบงานที่ 1 เรื่อง Goldilocks and Three Bears Story Map

Part 1

Instruction: Answer the following q	uestions about the story. (ตอบคำถามต่อไปนี้ให้ถูกต้อง)
1. Where does the scene take place?	
2. How many characters are there in	the story?
3. How did Daddy bear know that so	meone had been eating his porridge?
4. How did Mummy bear know that s	someone had been sitting in her chair?
5. How did Baby bear know that som	neone had been sleeping in his bed?
6. What did Baby bear say when he s	saw Goldilocks in his bed?
7. How did Goldilocks get out of the	bears' house?
Part 2	
Instruction: Match the antonyms. (Antonym – a word having the opposite meaning)
(จับคู่คำศัพท์ที่มีความหมายต	ารงกันข้าม)
1) high	a) soft
2) hard	b) cold
3) hot	c) big
4) small	d) low
Instruction: Put the sentences in c	order. (เรียงประโยคให้ถูกต้องตามลำดับ)
	n, down the stairs and out of the house.
b) She opened the door a	
c) The bears went to the b	edroom and saw Goldilocks.
	d her eyes, and went to sleep.
e) She ate all of Baby Bear	r's porridge.

Part 3 Instruction: Read the tale and put the verbs into Past Simple Tense. (อ่านเรื่องและเติมคำกริยาลงในช่องว่างให้ถูกต้อง)

Once upon a time, there was a little girl Goldilocks. She went for a walk ir
the forest. Pretty soon, she upon a house. She knocked and, when no one
, she right in. At the table in the kitchen, there were three bowls o
porridge. Goldilocks was hungry. She the porridge from the first bowl. "This
porridge is too hot!" she So, she the porridge from the second bowl
"This porridge is too cold," she So, she the last bowl of porridge. "Ahhh
this porridge is just right," she happily, and she it all up.
After she'd eaten the three bears' breakfasts, she she was feeling a little
tired. So, she into the living room where she three chairs. Goldilock
in the first chair to rest her feet. "This chair is too big!" she So she
in the second chair. "This chair is too big, too!" she So she
the last and smallest chair. "Ahhh, this chair is just right," she But just as she
down into the chair to rest, it into pieces! Goldilocks was very tired by
this time, so she upstairs to the bedroom. She lay down in the first bed, but it wa
too hard. Then she lay in the second bed, but it was too soft. Then she lay down in the third
bed and it was just right. Goldilocks asleep.
As she was sleeping, the three bears home. "Someone's been eating my
porridge," Papa bear. "Someone's been eating my porridge," Mama bear
"Someone's been eating my porridge and they it all up!" Baby bear
"Someone's been sitting in my chair," Papa bear. "Someone's been sitting in my
chair," Mama bear. "Someone's been sitting in my chair and they've broken it all to
pieces," Baby bear. They to look around some more and when they
upstairs to the bedroom, Papa bear, "Someone's been sleeping in my
bed," "Someone's been sleeping in my bed, too" Mama bear. "Someone's beer
sleeping in my bed and she's still there!" Baby bear.
Just then, Goldilocksand the three bears. She
"Help!" And she up and out of the room. Goldilocks down
the stairs, the door, and away into the forest. And she never
to the home of the three bears.

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Part 4 Instruction: Write the note in each section (เขียนข้อมูลลงในกรอบให้ถูกต้อง)

Setting:		
Where:		
When:		
Main Characters:		
Plot/ Problem:		
•		
Event1:	Event 2:	Event 3:
Event1:		
Event1:		

หน่วยที่ 7 ชื่อหน่วย Advice and Ideas เรื่อง Goldilocks's story ใบงานที่ 2 เรื่อง If You were a Character

Part	1								
Instru	uction: Work	in groups. Ch	noose a ch	aracter (ช	ทำงานเป็นกลุ่	ม-เลือกต์	กัวละคร 1	ตัว)	
		Goldilocks	s/ Daddy B	ear/ Mumr	my Bear/ Ba	by Bear	-		
		Vour ch	aractor:						
		rour cr	iaracter	•••••	••••••••••	•••••			
Part	2								
Instru		e 5 words to d	•						
	(เลือกค	กำ 3 คำที่บรรย <i>า</i>	ายลักษณะตั′	วละครของเ	<u> </u>				
	angry	beautiful	smart	caring	helpful	furry	sleepy	rude	
	ugly	cross	shy	friendly	kind	scary	fierce	pretty	
			grumpy	naught	sad happy				
Instru		ter's photo	-	•		er.			
Part	4								
Instru		the advice t	•						
	(เขียนค	ำแนะนำให้กับเ	ทัวละครในก _ั	ลุ่มของนักเรื	รียนเพื่อแก้ปั	งหาที่ปร	รากฏในเรื่อ	14)	
Q: W	hat would yo	ou do if you w	ere			?			
A: If I	were	, I wo	uld						

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Inventions ใบงานตอบคำถามจากวิดีโอคลิป

1.	Who invented a fax machine?	
2.	When was a fax machine invented?	
3.	Where was a laptop invented?	
4.	Who invented a washing machine?	
5.	Who invented a vacuum cleaner?	
6	When was a microwave invented?	

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Inventions ใบงานแบบฝึกหัดแต่งประโยค Passive Voice

Directions: Write a sentence by using the given information about inventions.

1.	fax machine / 1880 / Shelford Bidwell / English
2.	Laptop / Epson HX-20 (first laptop's name) / 1980 / Yukio Yokozawa / Suwa Seikosha
	(Brand)
3.	washing machine / 1691 (patent) / 1767 / Jacob Christian Schäffer (designer) /
	Germany
4.	mobile phone / 1973 / John F. Mitchell and Martin Cooper / Motorola
5.	vacuum cleaner 1860 / Daniel Hess / Iowa/ USA
6.	Microwave /1946/ Percy Spencer/ UK.

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Inventions ใบงานจับคู่คำศัพท์ (Pre-reading)

Directions: Match the words with the meanings.

1.	 appliance	a.	a machine to cook, to clean etc.
2.	 robotic	b.	like a robot
3.	 launch	C.	to make a product
4.	 direction	d.	position
5.	 detect	e.	to discover
6.	 spot	f.	small amount of liquid
7.	 navigation	g.	the way to move

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หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Inventions ใบงานอ่านประวัติสิ่งประดิษฐ์

Directions: Read this extract then answer the questions.

The first robotic vacuum was invented in 1996. It was made by Electrolux, Swedish household and professional appliances manufacturer. It was called "Trilobite". A year later iRobot, an American advanced technology company, launched the Roomba. This robovac can change direction when it run into something, detect dirty spots on the floor, and can detect steep drops. It became popular vary fast and other companies returned to the idea of a robotic vacuum cleaner. Roomba has over 40 models this day. Neato Robotics made a XV-11 robotic vacuum which uses laser-vision instead of a traditional ultrasound while Dyson Company tries to create a robotic vacuums that use a vision system with cameras for navigation.

http://www.vacuumcleanerhistory.com/vacuum-cleaner-development/history-of-robotic-vacuum-cleaner/

1.	when was the first robotic vacuum invented?
2.	Who invented the robotic vacuum?
3.	Who invented Roomba?
4.	How does the Roomba work?
5.	How many models of robovac are there?
6.	How does the robovac from Dyson Company work?

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Gadgets in the Past แบบฝึกหัดคำศัพท์และคำคุณศัพท์

Direction: Complete the gadget vocabulary and use 3 adjectives in the box to describe gadget.

Adjective						
big	small	long	short	smart		
b	eautiful	expensive	che	eap		

Gadgets	Adjective
erud	
s_ck_t	
s_a_t_a_ch	

Gadgets	Adjective
l_n_li_e	
ypwrier	
ca_s_e_te_ap_	

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Gadgets in the Past ใบความรู้ เรื่อง Comparative Adjective

Structure
is than
is more than









Landline is bigger than smartwatch.

Earbud is more expensive than cassette tape.

Comparison of Adjectives	Adjectives	Comparative Adjectives
1 syllable adjectives add -er	big small cheap	bigger smaller cheaper
2 or more syllable adjectives more + adjective	expensive beautiful	more expensive more beautiful

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Gadgets in the Past แบบฝึกหัดภาพสิ่งของ คำคุณศัพท์และการเปรียบเทียบ

Direction: Use comparative adjective to compare two gadgets.





1. This earbud is _____ than the typewriter. (small)





2. Cassette tape is than floppy disk. (long)





3. Smartphone is ______ than landline. (expensive)





4. The smartwatch is ______ than the regular watch. (smart)





5. Socket is _____ than earbuds. (cheap)

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Important Stuffs in My Life แบบฝึกหัดตอบคำถามจากการฟังบทสนทนา

Direction: Listen and complete the table.

	Kurt	Oli∨ia	Jacob
phone			
camera			
light bulb			
washing machine			
fridge			
fan			
kettle			
stove			

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Important Stuffs in My Life แบบสำรวจความคิดเห็นสิ่งของเครื่องใช้สิ่งประดิษฐ์ที่สำคัญต่อชีวิต

Friends' name			
phone			
camera			
light bulb			
washing machine			
fridge			
fan			
kettle			
stove			

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง My Favorite Gadgets ใบงานหลังจากดูวีดีโอ

7 Coolest Gadgets For Kids

Direction: Fill in the blank with T (True) or F (False) after you finish watching the video.

1	The Robo Master S1 is made to train skills and have users an in- depth
	understanding of science and math.
2	The Robo Master S1 is a game-changing educational robot built to unlock the
	potential in every learner.
3	Kano's goals have always been to make computing more approachable and
	interesting for adults
4	The Kano PC delivers a software experience that should cover all that kids need
	in school, at home, and everywhere in between.
5	Winky is not educational and customizable.
6	Winky teaches children to code and understand a robot.
7	Chicco GoFit lets big kids come along for the ride with comfort, convenience,
	and ease of use.
8	Zumi is not a curious little self-driving car that's all about learning AI. You can't
	teach Zumi to recognize colors, learn gestures, recognize faces, and more!
	She's programmable in Blockly or Python.
9	Fitbit Ace2 is made for kids and they who own smartphone can see call
	notifications right on their wrists.
10	Artie 3000 the Coding Robot for kids programming is not the award-winning
	coding robot that introduces children to real programming languages.

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง My Favorite Gadgets ใบงานแบบฝึกหัดคำศัพท์

Gadgets Technology

Digital camera

Game Boy Nintendo

A. Direction: Read and fill the word in the blank in each sentence correctly.

3-D television

Webcam	Smartphone	GPS
1	signals are broadcast by Global Positioning	System satellites to
enable satellite navigat	cion. Receivers on or near the Earth's surfac	e can determine location,
time, and velocity using	g this information.	
2. A	is a video camera that feeds or streams an	image or video in real time
to or through a compu	ter network, such as the Internet. Webcam	s are typically small
cameras that sit on a d	lesk, attach to a user's monitor, or are built	into the hardware.
3. A	_ is a portable device that combines mobi	le telephone and
computing functions in	to one unit. They are distinguished from fe	ature phones by their
stronger hardware capa	abilities and extensive mobile operating sys	tems, which facilitate wider
software, internet (inclu	uding web browsing over mobile broadban	d), and multimedia
functionality (including	music, video, cameras, and gaming), along	side core phone functions
such as voice calls and	text messaging.	
4	is television that conveys depth perception	n to the viewer by
employing techniques	such as stereoscopic display, multi-view di	splay, 2D-plus-depth, or any
other form of 3D displa	ay.	
5 is	an 8-bit handheld game console develop	ed and manufactured by
Nintendo.		

is a camera that captures photographs in digital memory.

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง My Favorite Gadgets ใบงานอ่านบทวิจารณ์

"The Gadgets That Changed Our Lives"

3-D television

The first film in 3D was shown in the cinema in 1922. No, this is not a typo. It was really in 1922. And in the year 1928 the first 3D television was made. It was made by the inventor of the normal television John Logie Baird. But no one was interested in the 3D technology for a long time because it was extremely



expensive. In the 1950s several 3D films were made but they were considered as something unusual. The real breakthrough came with the invention of the format IMAX 3D which was introduced in 1986. Nowadays all the TV producers make 3D televisions. However, for some people 3D doesn't exist because their eyes are bad and they cannot see it.



Digital camara

Nowadays hardly anyone has an analogue camera. Most people have digital cameras because you can take hundreds and thousands of snaps at no cost. The memory cards are small, and you can save more photographs there than it was possible on a normal film. While

the films were expensive, digital photos are really cheap. You can upload the pictures to your computer and then choose the best ones. Moreover, digital photography doesn't change, and you can edit it on your computer. The disadvantage of digital cameras is the fact that they develop really quickly and there are so many machines now that it is difficult to know which one is good for you. The first digital camera was introduced in 1988 and it was made by Fuji.

Game Boy Nintendo

Game Boy was the first digital game which was commercially successful. The first game which was played on Game Boy was Tetris. The first Game Boy was introduced in 1989. Recently the company Nintendo introduced its Wi U machine which can play video and the internet content. There are many other gadgets



like this for example PlayStation or Xbox. but Game Boy was the first.

Webcam



The first Webcam was used on the premises of Cambridge University. This happened in 1991 and the same camera was used till 2001. Nowadays, Webcam is a common part of computers. You can see nearly all interesting places online. Moreover, they are used to monitor the traffic on highways

and streets and all the drivers can see which places they should avoid. The skiers can see whether there is enough snow in the place where they would like to go skiing.

Smartphone

Do you remember? In 1990s the businessmen boasted with mobile phones which were big and heavy, Nowadays the smart phones are thin, and light and they can do a lot of things. Besides telephoning you can listen to music, connect to the internet, and you can play games there too. The first smart home was introduced by IBM at the beginning



of 1990s. This phone had a calendar, address book, clock, calculator, notebook, email and a few games. It had a touch display, but it was only black and white. But at the beginning everyone thought that phones like this where unnecessarily expensive and useless. It was only 10 years later when Steve Jobs introduced iPhone and smart phones became incredibly popular.



GPS

GPS stands for global positioning system which is a positioning system run by the Army of the United States. It is possible to find the exact position and time wherever on the Earth. Originally this system was planned to be used only for the Army. The system

was started in 1994 when all 24 satellites were placed on the orbit. Normal people started using GPS in 2000. Nowadays GPS has 32 satellites which are 20 km above the Earth.

https://en.islcollective.com/english-esl-worksheets/vocabulary/technology/gadgets-changed-our-lives/129751

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง My Favorite Gadgets ใบงานอ่านบทวิจารณ์

These Are Called "Gadgets"

Direction: Write the correct answer in each sentence correctly.

1.	3-D television
	1.1) What can I use it to?
	1.2) When was it started?
	1.3) What is it?
2.	Digital camera
	2.1) What can I use it to?
	2.2) When was it started?
	2.3) What is it?
3.	Game Boy Nintendo
	3.1) What can I use it to?
	3.2) When was it started?
	3.3) What is it?

4.	webcam
	4.1) What can I use it to?
	4.2) When was it started?
	4.3) What is it?
5.	Smartphone
	5.1) What can I use it to?
	5.2) When was it started?
	5.3) What is it?
6.	GPS
	6.1) What can I use it to?
	6.2) When was it started?
	6.3) What is it?

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Ideal Invention ใบงานอ่านเกี่ยวกับสิ่งประดิษฐ์



All You Need to Know About Solar-Powered Cars

With the increased interest in renewable and sustainable energy systems, solar-powered cars have come to the fore. Many automobile companies are working towards making solar cars, and the technology could well change the future of the automotive industry.

Solar cars are electric cars that use photovoltaic cells to convert energy from sunlight into electricity. These cars can store some solar energy in batteries to allow them to run smoothly at night or in the absence of direct sunlight. If used on a large scale, solar-powered cars not only help with environmental pollution but also noise pollution.

Many prototypes of solar-powered cars are currently in development. Both large and small automakers are involved in developing hybrid solar cars. According to some estimates, the solar vehicle market could reach \$689 billion by 2027. Automobile companies are already working on ways to capitalize on the idea with interim technology, such as solar roof panels for charging batteries and internal systems.

However, solar cars have a number of serious design and technological limitations. Some of these are partly tied to aesthetics. Such a car needs to be able to accommodate several solar panels, and there is limited space for that. That's why, most solar vehicles developed so far are meant to run in solar car races, and not meant for regular use.

Sunswift IV is the fastest solar car that exists currently. This car was built by the students of the University of New South Wales for Solar Racing. The car uses technology that is similar to and a combination of the ones used in bicycles and aerospace, and the automotive industries.

However, so far, none of the vehicles have been designed in a way that they can 100% rely on solar energy alone. In addition, they use designs that would not be practical in real life. For example, the roofs are often flat and massive, to accommodate more solar panels; to save on energy use, they're built with ultralight materials that would not survive even a minor crash, and they can only seat one person and no luggage.

How do solar-powered cars work?

A solar panel allows photons, or particles of light, to excite electrons, generating a flow of electricity. Solar panels are made up of many, smaller units called photovoltaic cells that are linked together.

Each photovoltaic cell is essentially a sandwich of two slices of semi-conducting material, such as silicon. The silicon is mixed with other materials, usually, phosphorus and boron, to give each "slice" a positive or negative electrical charge. This creates an electric field at the junction between the two layers.

When a photon of sunlight knocks an electron free, the electric field will push that electron out of the silicon junction. Metal conductive plates on the sides of the cell collect the electrons and transfer them to wires. At that point, the electrons can flow like any other source of electricity.

There are some of the advantages of using solar cars:

- Saves money on fuel
- Is sustainable and environment-friendly
- No additional costs except battery replacement
- Does not cause noise pollution or air pollution

What are some of the current developments in solar-powered cars?

One of the first solar-powered cars was made by General Motors and was showcased at a convention in Chicago in the year 1955. Called the "Sunmobile," this solar-powered 15-inch (38 cm) long prototype "car," was made of a small Pooley electric motor and 12 selenium photovoltaic cells.

The Pooley electric motor was responsible for turning a pulley that rotated the rear wheel shaft. It was the first-ever solar car, but it was too small to drive.

Another interesting solar-powered car is the Sion, built by Sono Motors. The company claims this is the first commercially-available hybrid solar-electric vehicle. It has a range of up to 160 miles (255 kilometers) and can charge itself using solar power. It is equipped with 248 solar cells that are integrated into its body.

On average, it takes about **30 minutes** to charge up to **80%** at a charging station. This car sells for around **\$28,500**. However, it is important to note that the solar panels are only intended to help with charging the vehicle — it is not designed to run on solar power alone, and in fact, is not able to.

Companies like Toyota, Hyundai, and others are also working on building a fully functioning solar car or a hybrid version of it. There are also other solar car projects, making automobile technology more sustainable in the future.

The Stanford Solar project has also built some solar cars and is developing others in the hopes of, one day, bringing them to the market. Founded in 1989, the project is still entirely student-run and run as a non-profit for the benefit of making the technology a reality one day.

In 2019, Toyota developed a prototype solar-powered Prius that produced 180 watts of electrical power per hour, and had a range of 3.8 mi (6.1 km) after a day of charging. However, later models claimed to reach 860W of power and a range of 27.6 mi (44.5 km) on a full charge. However, the solar cells were only able to top up the battery 3 the vehicle still needed to be charged at a charging point.

A Dutch startup called Lightyear has unveiled a prototype of its first solar-powered electric car called 'Lightyear One' that boasts a range of **450 miles (724 km)** on a single charge. Although the car will cost around **Euro 150,000**, it will be very interesting if it lives up to the efficiency it claims. The company is taking pre-orders and is planning to start production by 2021.

Why aren't we driving around in solar-powered cars already?

There are a few reasons why even the most advanced automobile companies haven't been able to develop fully solar-powered cars.

The first and foremost reason is the solar panel itself. The current commercially operated solar panels that we use have only around **20 to 35%** efficiency. Hence, to power a solar car, we would need a lot of extra space for solar cells. But doing so invokes two other problems — weight and cost.

Solar panels are not cheap, and they are not weightless either. Packing the car's body with solar panels means that you are adding a lot of weight and cost to the car. Solar films has been developed, and they are much lighter than panels, although they are also less efficient at the same time. And when you factor in the weight of the battery, the idea of solar-powered cars seems less and less feasible for the real world.

On a clear day, the earth's surface receives approximately 1 kW of solar energy per 10 sq ft (1 sq mt). Given that a highly-efficient 32 sq ft (4 sq mt) PV panels can generate roughly 8 kWh of energy per day, you would only get around 25 miles (40 km) of range out of a normal complement of panels.

Poor weather conditions, driving conditions, improper positioning of the panels, and accumulation of dirt would likely make your solar car struggle to reach this figure.

Additionally, solar-powered cars aren't "100%" eco-friendly. If you look at the way batteries and solar cells are made, especially how the minerals used are mined from the Earth, it becomes clear that each vehicle comes with its share of carbon footprint.

But that doesn't mean that they will not become widespread in the coming years. Current research into low weight batteries and high-efficiency photovoltaic cells may one day make solar-powered cars viable.

หน่วยการเรียนรู้ที่ 8 Inventions เรื่อง Ideal Invention ใบงานบรรยายเกี่ยวกับเรื่องสิ่งประดิษฐ์

Directions: Design your ideal invention and describe how system works.

My ideal invention is			











