Warmer

1. How to use the compass?

2. What are the maximum and minimum height angles? 0,90

3. When are the vernal equinox, summer solstice, autumnal equinox, and winter solstice? \$ 3/3 \$ 11/12

spring	summer	fall	north
winter	compass 指南針	orbit 軌道	rotates 旋轉
east	west	south	axis 軸

1. When the earth rotales, day changes to night and night changes to day.

2. Here comes the SPTIM with the flowers in the ground.

3. Here come the 500 mer with the heat from the sun.

4. When I face south, my right hand is West

#### Content

Watch a video of Seasons Song (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes:	花會摸到	地的如果	亦停了,就	有彩虫工。
大門易	宮直射 つ非常致	2.有小子亦言	一起琮。	
華子を	<b>突顧をうせる</b>	惊落。		
有沙	1大0至	-		

#### Thinking

Solar Observation Record Sheet							
Date:	7	Ol	oserver:				
Place:	1						
Time(clock)	9:25	11:10	13:25	15:00	16:00		
Shadow azimuth	西北	型也	東北	東北	東北		
sun azimuth	東南	東南	郏	西南	西南		
solar altitude(°)	30	16	50	50	43		

#### Warmer

1. How to use the compass? "先找到南方,再把指南到东西。"

2. What are the maximum and minimum height angles?  $0^{\circ}$   $1^{\circ}$   $1^{\circ}$ 3. When are the vernal equinox, summer solstice, autumnal equinox, and winter

22-6/22-9/27-12/27

Language

spring	summer	fall	north
winter	compass 指南針	orbit 軌道	rotates 旋轉
east	west	south	axis 軸

- 1. When the earth totate (, day changes to night and night changes to day.
- 2. Here comes the <u>Spring</u> with the flowers in the ground.
- 3. Here come the <u>summer</u> with the heat from the sun.
- 4. When I face south, my right hand is West

#### Content

Watch a video of Seasons Song (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes: Spring: Flowers in the ground.	
summer: The neat from the sun.	
fall: The fall with the leaved falling donn.	
whiter: 沒有架子白5 大植士	

#### **Thinking**

Solar Observation Record Sheet							
Date: 110.9.10 Observer: Kutar B 宇宙康							
Place:					.,		
Time(clock)	9:25	11:10	13:25	15:00	16:00		
Shadow azimuth	西篇北	西偏北	東偏北	東偏北	東偏北G		
sun azimuth	刺為	東偏南	東偏志	西偏南	西偏北		
solar altitude(°)	30°	650	50°	500	450		

			. /	全甘工
5A Class	13	Number Name:	Victoria	不由名

#### Warmer

1. How to use the compass?

2. What are the maximum and minimum height angles?-

3. When are the vernal equinox, summer solstice, autumnal equinox, and solstice?

#### Language

spring	summer	fall	north
winter	compass 指南針	orbit 軌道	rotates 旋轉
east	west	south	axis 軸

- 1. When the earth Yotak, day changes to night and night changes to day.
- 2. Here comes the APY 1 M4 with the flowers in the ground.
- 3. Here come the <u>Summer</u> with the heat from the syn.
- 4. When I face south, my right hand is West

#### Content

Watch a video of Seasons Song (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes: 春天: 花會掉土也上的	世界雨傷,彩虹高出來。
夏天,太陽直射,非常幸	从9小子东有绝趣。
秋天:葉子愛換顧色,	葉子會掉 落。
冬天會下學排常令	1/

#### **Thinking**

Solar Observation Record Sheet								
Date: 9月10~11	Date: 9810~188710 Observer: 1°							
Place:	7,				vi			
Time(clock)	9:25	11:10	13:25	15:00	16,00			
Shadow azimuth	西偏北	西偏北	東偏北	東偏北	車偏北			
sun azimuth	輔命	東偏南	起南	西傷态	乃偏比			
solar altitude(°)	30	65	45	50	45			

### Ob Edef Ghisk MM OF 975 TLAVWXYZ

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G5 STEAM worksheet

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Tim

5harine

5A Class 14 Number Name: Sharine 1 = 1 = 1

Observing the sun- Changes in the position of the sun

Warmer

把自放在地板的它會告訴你、哪裡是南邊

1. How to use the compass?
2. What are the maximum and minimum height angles? 言度自

a water

3. When are the vernal equinox, summer solstice, autumnal equinox, and winter

solstice? %3秋分、3/2春水约2夏光2冬至

Language

	Language			
ij	spring	summer	fall	north
•	winter	compass 指南針	orbit 軌道	rotates 旋轉
	east	west	south	axis 軸

- 1. When the earth rotates, day changes to night and night changes to day.
- 2. Here comes the spring with the flowers in the ground.
- 3. Here come the <u>summer</u> with the heat from the sun.
- 4. When I face south, my right hand is West

#### Content

Watch a video of <u>Seasons Song</u> (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes: Here come the summer with the heat from the san. Here comes the spring with the flowers in the grand

#### **Thinking**

Solar Observation Record Sheet							
Date: 1	Date: VII Observer: Sharing						
Place: 地名							
Time(clock)	9;25	11:10	13:25	15:00	16:00		
Shadow azimuth	西偏北	東煸北	東偏址	東倫北			
sun azimuth	東倫南	東偏南	西偏南	西偏南	西偏南		
solar altitude(°)	60°	600	450	40°	43°		

五次Class	Z	Number	Name:	<b></b>
				and the same of th

#### Warmer

1. How to use the compass? 半片块地上 冷含法故你 脚刻

2. What are the maximum and minimum height angles?

 What are the maximum and minimum height angles? 10.0
 When are the vernal equinox, summer solstice, autumnal equinox, and winter solstice?

3/22 /22 /22 /22

Language

spring	summer	fall	north
winter	compass 指南針	orbit 軌道	rotates 旋轉
east	west	south	axis 軸

- 1. When the earth hotors day changes to night and night changes to day.
- 2. Here comes the Sping with the flowers in the ground.
- 3. Here come the sun. with the heat from the sun.
- 4. When I face south, my right hand is Wb5t.

#### Content

Watch a video of Seasons Song (2:27) and discuss the following questions in a small

1. Please write down one sentence you remember most about the four seasons.

Notes:	Aer comes the spring big wi	11 264 bain bis
		of the lambit
716	er comes the summer with hec	at frame with the 99teen
Hex	comes thefall with leaves cl	have blaw inc
100	CONTRACT WITH THE TOTAL STATE OF THE STATE O	Id Ut > DIO MINA .
He	er comes the with the day me	ight and Chaing Shartel
	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	July wind the Start A - HOLON

#### **Thinking**

	Solar	Observation	n Record Sheet	/4	911
Date: 9/25			Observer: 740	atthew	
Place:	7				
Time(clock)					1650
Shadow azimuth	東	東	南	<b>1</b> 5	面
sun azimuth	伍	(50°)	(40°	400	30
solar altitude(°)	1400	50	500	300	500

Warmer

1. How to use the compass? Put the compass on the floor, and the compass will point were

2. What are the maximum and minimum height angles? 90% 0%

3. When are the vernal equinox, summer solstice, autumnal equinox, and winter

9/23 TS fall season, 3/22 spring

6/22 summer

Language

S	pring	summer	fall	north
_	vinter	compass 指南針	orbit 軌道	rotates 旋轉
e	ast	west	south	axis 軸

1. When the earth rotates, day changes to night and night changes to day.

2. Here comes the spring with the flowers in the ground.

3.Here come the <u>Summer</u> with the heat from the sun.

4. When I face south, my right hand is west

Content

Watch a video of Seasons Song (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes: Spring	-Flower	<u>in</u>	the c	ground	
summer: Th	ne heat	trom t	he_sur	l):	
fall: the	fall w	ith the	leaves	falling	down
winter?	with _	the	ice	and	the snow.

**Thinking** 

Solar Observation Record Sheet							
Date: 9/16		Ob	server: <u>'priçci</u>	lla Andrew V	ictr Claire		
Place: out side o	Ur classing on						
Time(clock)	9:25	1170	13:552	3,00	4:00		
Shadow azimuth	mest to north	west to north	east to month	west to couth	east to north		
sun azimuth	east to south	pact to south	east to south	west to north	westt=nom		
solar altitude(°)	30°c	65°C	45°c	50°c	43°c		

5 A Class 21 Number Name: V WA	5 A c	lass 2	Number Name:	Vita
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Warmer

1. How to use the compass? Put the compass on the floor it well tell you where 75 2. What are the maximum and minimum height angles? 9° and 0° . Courth.

3. When are the vernal equinox, summer solstice, autumnal equinox, and winter solstice?

4					
La	n	g	ua	g	e

spring	summer	fall	north
winter	compass 指南針	orbit 軌道	rotates 旋轉
east	west	south	axis 軸

- 1. When the earth <u>rotates</u>, day changes to night and night changes to day.
- 2. Here comes the <u>spring</u> with the flowers in the ground.
- 3. Here come the <u>summer</u> with the heat from the sun.
- 4. When I face south, my right hand is west.

#### **Content**

Watch a video of Seasons Song (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes: spring: Here comes the spring with the rainbow in the	5 K
summer: Here comes the summer with the kids have fum.	
fall: Here comes the fall with the wind flow in load	
winter. Here comes the winter with the Tie and the snow	

#### **Thinking**

Solar Observation Record Sheet							
Date: 9/13		Ok	oserver: VX	0	-		
Place: Nav graph d							
Time(clock)	9:25	11:10	13:15	15:00	16:00		
Shadow azimuth	西岛北	西编址	東倫士	東偏北	東為此		
sun azimuth	東偏南	東海南	西偏南	西烏南	西偏南		
solar altitude(°)	60	65	55	50	43		



5A Class 3 Number Name: Tim 城市

Freeze

### Observing the sun-Changes in the position of the sun

Warmer
--------

1. How to use the compass? 羊放 2. What are the maximum and minimum height angles? 90 and 50

3/22 6/22 9/23 1/22

3. When are the vernal equinox, summer solstice, autumnal equinox, and winter solstice?

Language /	/		
spring	summer	fall	north
winter	compass 指南針	orbit 軌道	rotates 旋轉
east	west	south	axis 軸

1. When the earth you day changes to night and night changes to day.

2. Here comes the spring with the flowers in the ground.

3. Here come the Summer with the heat from the sun.

4. When I face south, my right hand is weg

#### Content

Watch a video of Seasons Song (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes:	Here come	they	spring 1	with th	e flower	s in the
ground	· 2 Here com					eat from
the su	n3 Herecon				the	leaves
age color l	Here com	es the	winter	ther	toda CE	old.
			5 V - 18			

	Solar	Observation	<b>Record Sheet</b>		
Date: 9/11		C	Observer: Tin	ı	
Place: 採坊					
Time(clock)	9:25	11:10	13.25	13:00	16:00
Shadow azimuth	西偏北	西偏北	東偏北	東偏北	東編北
sun azimuth	東偏南	東偏南	西偏南	西偏南	雪偏南
solar altitude(°)	600	600	430	1400	2130

5A Class 5/01 Number Name: Wei-Wei

## Observing the sun- Changes in the position of the su南野

Warmer 1. How to use the compass? When you need the compass, you sould put

2. What are the maximum and minimum height angles? It's 90° and 0°,

3. When are the vernal equinox, summer solstice, autumnal equinox, and winter solstice? Vernal equinox is on 1/22 autumnal equinox summer solstice? Summer solstice is on 1/2 winter solstice autumnal equinow 9/22

winter solstice

the

floor

it well

tell y04

Where

is

South

Language			
spring	summer	fall	north
winter	compass 指南針	orbit 軌道	rotates 旋轉
east	west 🖽	south	axis 軸

1. When the earth rotate, day changes to night and night changes to day.

2. Here comes the Spying with the flowers in the ground.

3. Here come the <u>fummer</u> with the heat from the sun.

4. When I face south, my right hand is West

#### Content

Watch a video of Seasons Song (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes: Spring;	
winter: The night longer than sumer-	AU.
summer: The living things have new life and food too.	to
fall: The leaves change color and go down on 7	he fl

#### **Thinking**

	Solar	Observation	<b>Record Sheet</b>		
Date: 1/3	lam	NIII C	bserver: Te am	6	
Place: playa You	Ind May	add O			
Time(clock)	9:25	11:10	13125	15:00	16:00
Shadow azimuth	西偏北	西偏北	東偏北	糖北	東偏北
sun azimuth	東偏南	束偏南	西偏南	西偏南	西偏南
solar altitude(°)	60	65	45	50	43

5A Class	21 Number Name:	Jeanne	陳宥	HA APT
				111

#### Warmer

1. How to use the compass? Put the compass on the floor, and it will tell you where is the 2. What are the maximum and minimum height angles? It is a compass on the floor, and it will tell you where is the 3. When are the vernal equinox, summer solstice, autumnal equinox, and winter

solstice? 3月2月 6月2月9月2日 12月 22日

4					
La	n	OIL	12	σ	
La	8 8 8	ĸL	ŧα	ĸ	c

	9			
spr	ring	summer	fall	north
wir	nter	compass 指南針	orbit 軌道	rotates 旋轉
eas	st	west	south	axis 軸

1. When the earth rotates day changes to night and night changes to day.

2. Here comes the **SPTIM** with the flowers in the ground.

3.Here come the summer with the heat from the sun.

4. When I face south, my right hand is West.

#### Content

Watch a video of Seasons Song (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes:	Here co	mes	the spr	ina W	ith to	he ra	inhow 7	n the sky
Here	comes.	the	summer	with	the	Kids	having	fun,
Here	comes	the	full lea	ve fo	Ming	down	1.	
								g longer.

#### **Thinking**

	Solar	Observation F	Record Sheet							
Date: 9/16		O	oserver! Joan	e.						
Place: 投 块										
Time(clock)	9:25	11:10	13:25	15:00	16:00					
Shadow azimuth	西偏北	西偏北	東偏北	東偏北	東偏北					
sun azimuth	東偏南	東偏南	西偏南	西偏南	西偏南					
solar altitude(°)	30°	65°	55°	50°	430					

SA.	Class	22	Number Name:	Eunice
211	CIGOS		- Mannoci Manne	

# AHA.

### Observing the sun-Changes in the position of the sun

#### Warmer

1. How to use the compass? 平放指南針 \

2. What are the maximum and minimum height angles?  $40^{\circ}$  and  $0^{\circ}$ 

3. When are the vernal equinox, summer solstice, autumnal equinox, and winter solstice?  $\frac{1}{2}$   $\frac{2}{2}$   $\frac{2}{2}$   $\frac{3}{2}$   $\frac{4}{2}$   $\frac{4}{2}$ 

Language

spring	summer	fall	north		
winter	compass 指南針	orbit 軌道	rotates 旋轉		
east	west	south	axis 軸		

- 1. When the earth ntales, day changes to night and night changes to day.
- 2. Here comes the spring with the flowers in the ground.
- 3. Here come the summer with the heat from the sun.
- 4. When I face south, my right hand is \_\_west\_\_\_

#### Content

Watch a video of <u>Seasons Song</u> (2:27) and discuss the following questions in a small group.

1. Please write down one sentence you remember most about the four seasons.

Notes: 9	pring	: Here	com	es the	spri	ng ·w	ith th	e ·	flower	's in th	e q	round	<b>L.</b>
sumer: h	Here	come	the	summ	er	with	the he	eat	from	the s	un.		
autumnal:	Here'c	omes th	e fall	with	the	leave	s fa	lling	dov	٧n.			,2.
winter = )	Here	comes	the	winter	with	the	night	ge	tting	longer.			

#### Thinking

Solar Observation Record Sheet							
Date: 110.9.11		OI	bserver: Eunice				
Place: 操場					10		
Time(clock)	9:75	11:10	13:25	15:00	16:00		
Shadow azimuth	西偏北	西偏北	東偏北	東偏北	東偏北		
sun azimuth	東偏南	東偏南	西偏南	西偏南	西偏南		
solar altitude(°)	60°	60°	45	40°	430		