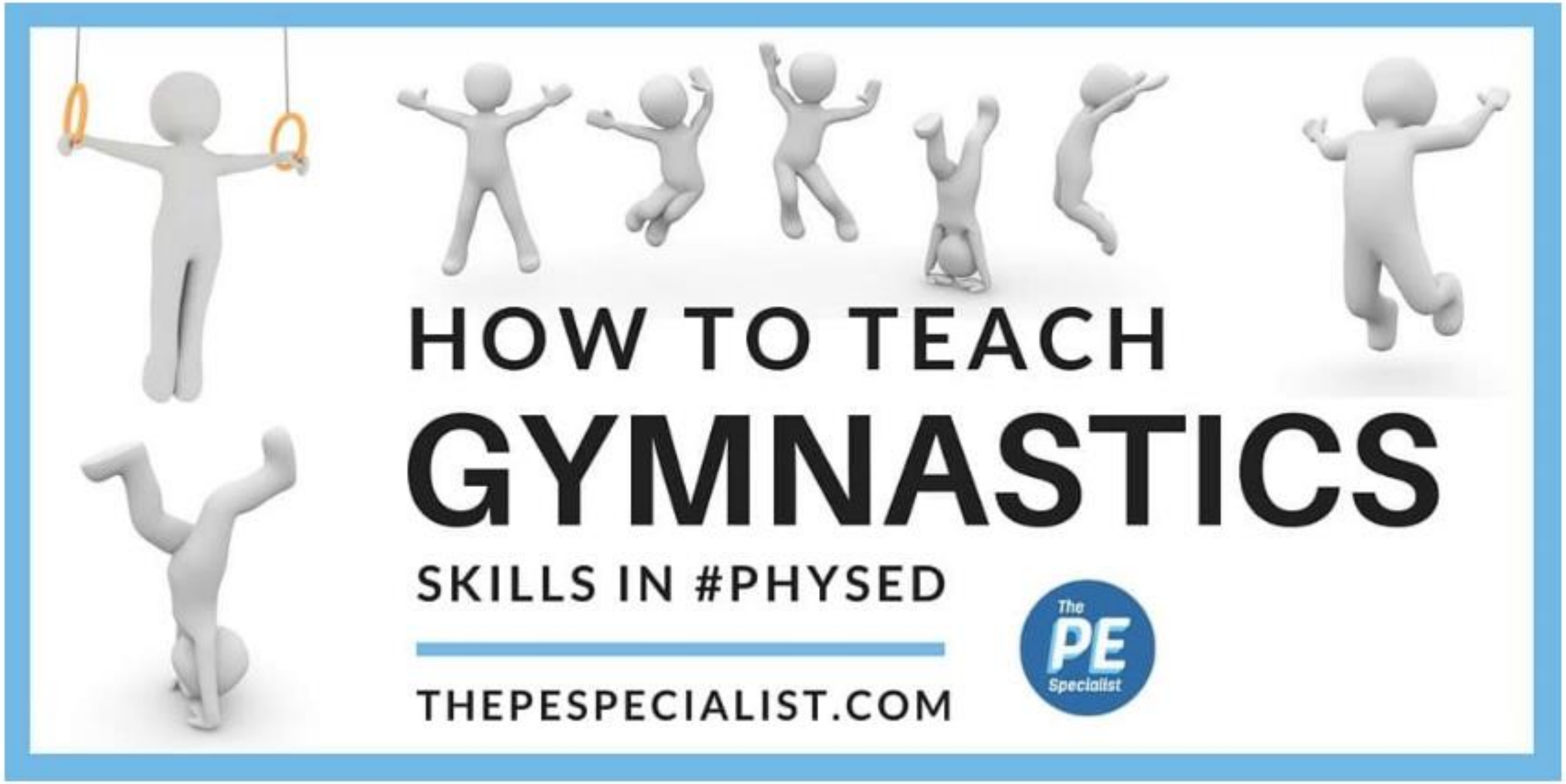
GYMNASTIC
AND
COMPUTATION THINKING


HOW TO TEACH
GYMNASTICS
SKILLS IN #PHYSED
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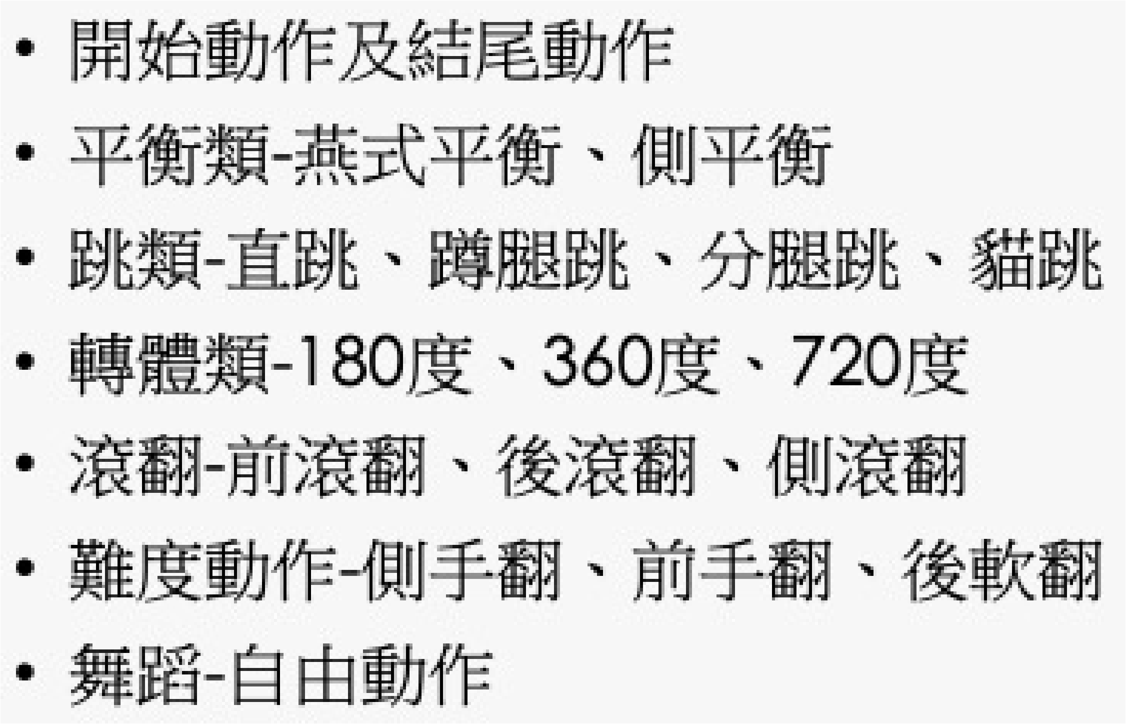
CREATE A ROUTINE

- Review Travels, Balances & Jumping and Landing
- Have students come up with a Sequence or Routine combining all the elements they have learned
- Perform the Sequence after giving students time to practice

競技體操-自由體操



- 開始動作及結尾動作
- 平衡類-燕式平衡、側平衡
- 跳類-直跳、蹲腿跳、分腿跳、貓跳
- 轉體類-180度、360度、720度
- 滾翻-前滾翻、後滾翻、側滾翻
- 難度動作-側手翻、前手翻、後軟翻
- 舞蹈-自由動作

Create Your Own Gymnastics Routine

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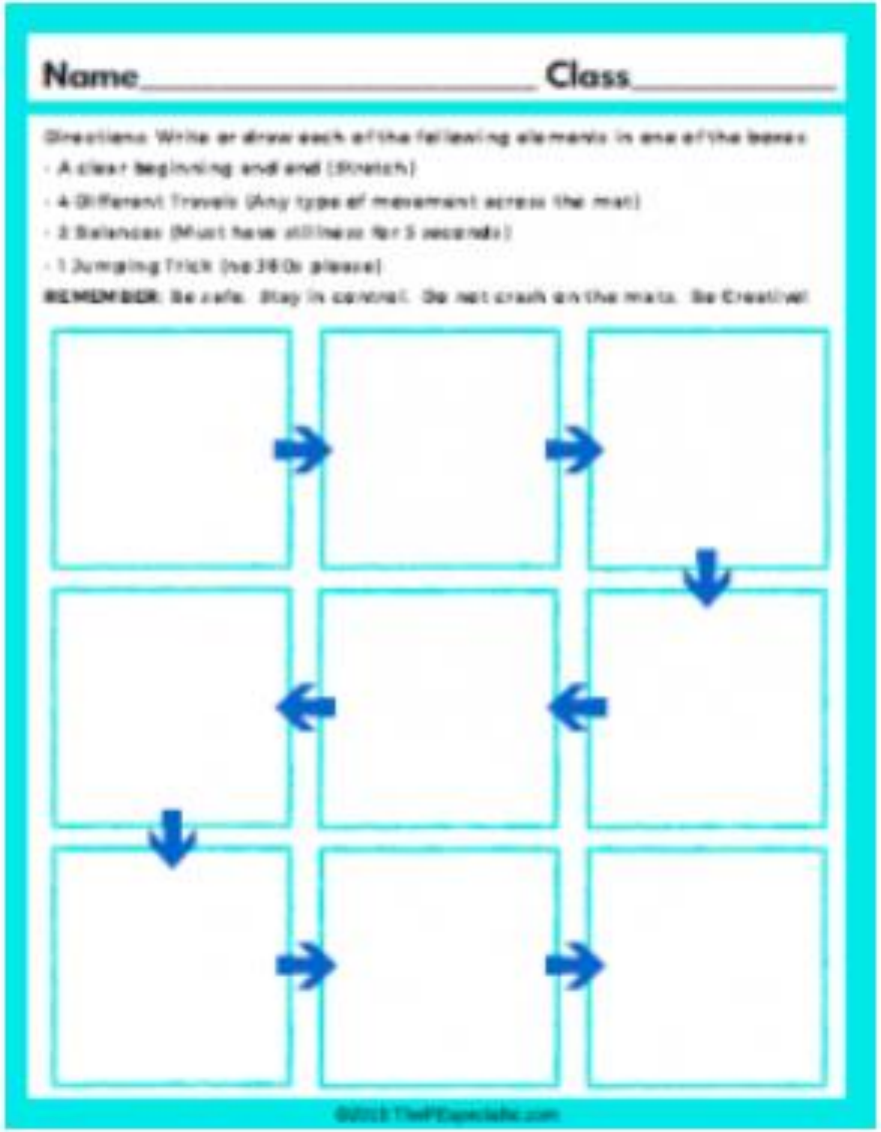

Name________________________ Class__________

Directions: Write or draw each of the following elements in one of the boxes

- A clear beginning and end (Stretch)
- 4 Different Travels (Any type of movement across the mat)
- 3 Balances (Must have stillness for 5 seconds)
- 1 Jumping Trick (no 360s please)

REMEMBER: Be safe. Stay in control. Do not crash on the mats. Be Creative!

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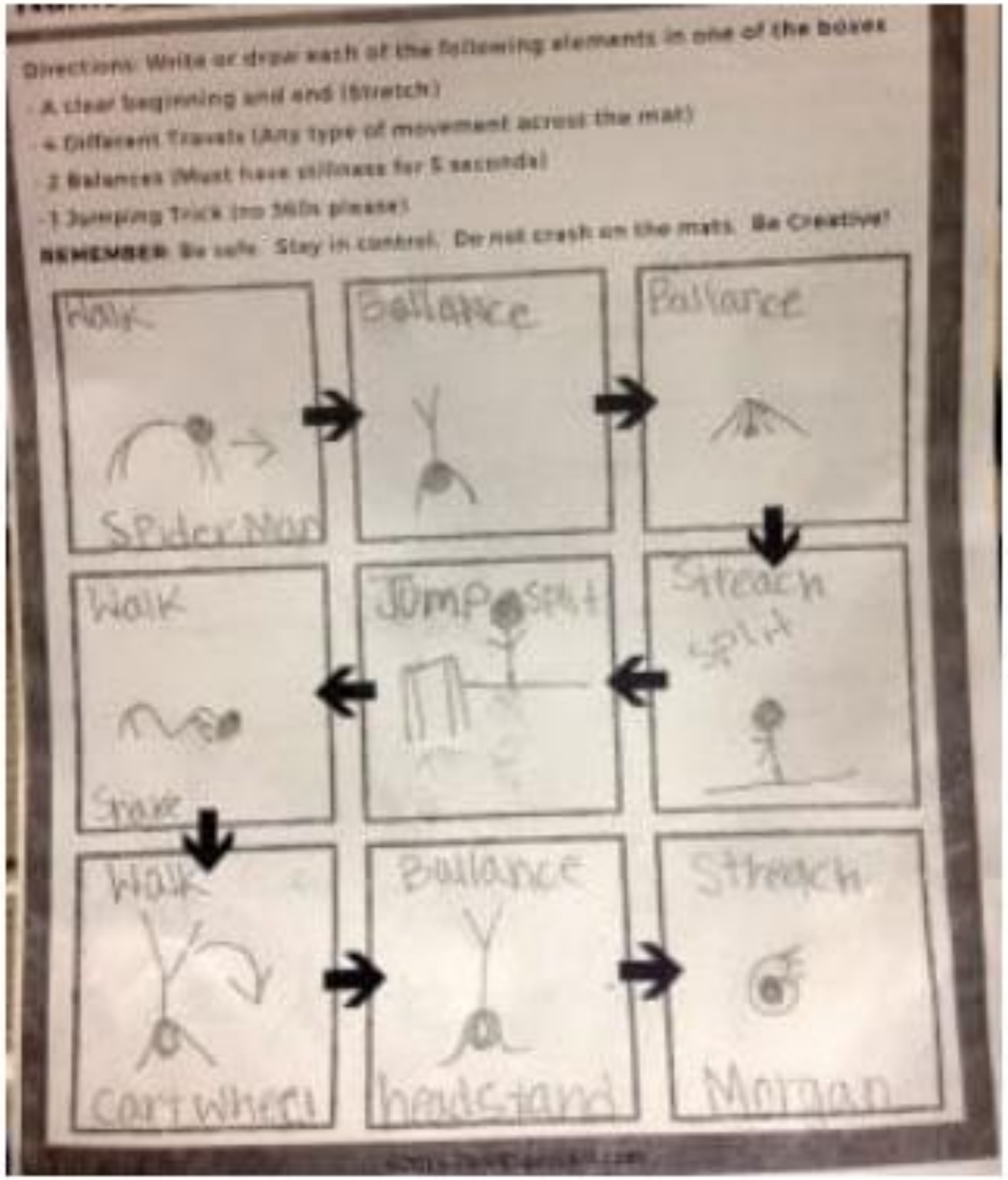
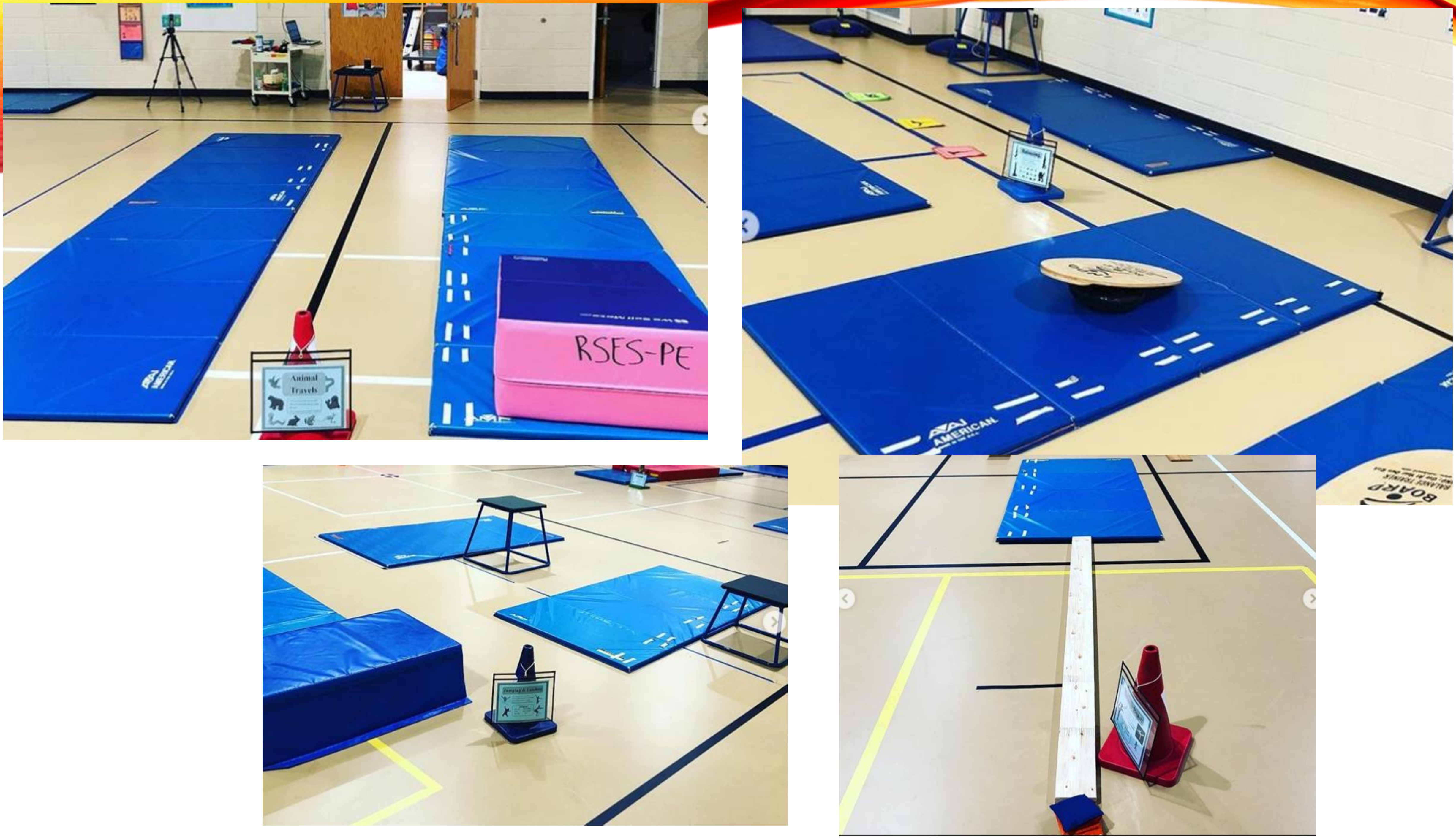


GYMNASTICS STATIONS

- **Station Ideas (setup examples)**
  - Rolling
  - Animal Travels
  - Jumping and Landing
  - Balancing Challenges
  - Partner Balances
  - Balance Beams
  - Cartwheels/Roundoffs
  - Rope Climb
  - Rope Swing
  - Rock Wall
  - Exercise Station
  - Rings or Bars if you have them
  - Create a sequence


Animal Travels
RSES-PE
AMERICAN
Jumping & Landing
BOARD

WHAT IS A PRE PERFORMANCE ROUTINE?

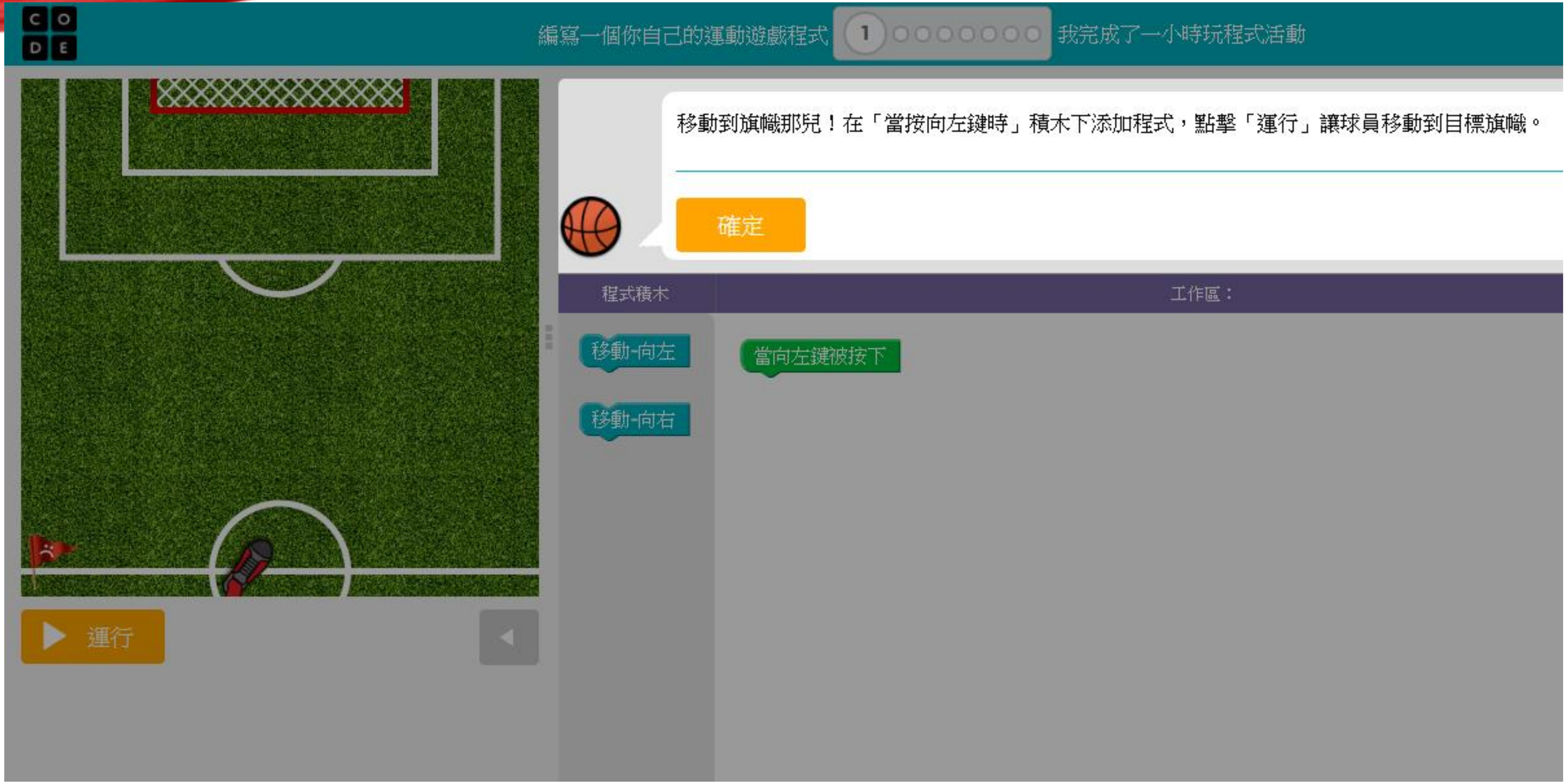
- A pre performance routine is defined as 'sequence of task relevant thoughts and actions which an athletes engages in systematically prior to his or her performance of a specific sport skill' (Moran 1996, p177). As this definition highlights there are three components to a pre performance routine: cognitions (thoughts), behaviours (actions) and task specific / systematic.
- This is employed prior to a skill, often used in closed self-paced skills (Singer, 2000; Cohn, 1990; Cotterill, 2010) i.e. gymnastic performance, basketball free throw shooting or golf putting. A closed skill is one performed in a stable and predicable environment with a clear defined beginning and end (Schmidt, 1991).

WHAT IS THE PURPOSE OF A PRE PERFORMANCE ROUTINE?

- The purpose of a pre performance routine is to provide you with:
- · The optimal mind-set to achieve the desire outcome
- · Assist the neuromuscular pathways
- · Assist in schema development or maintenance

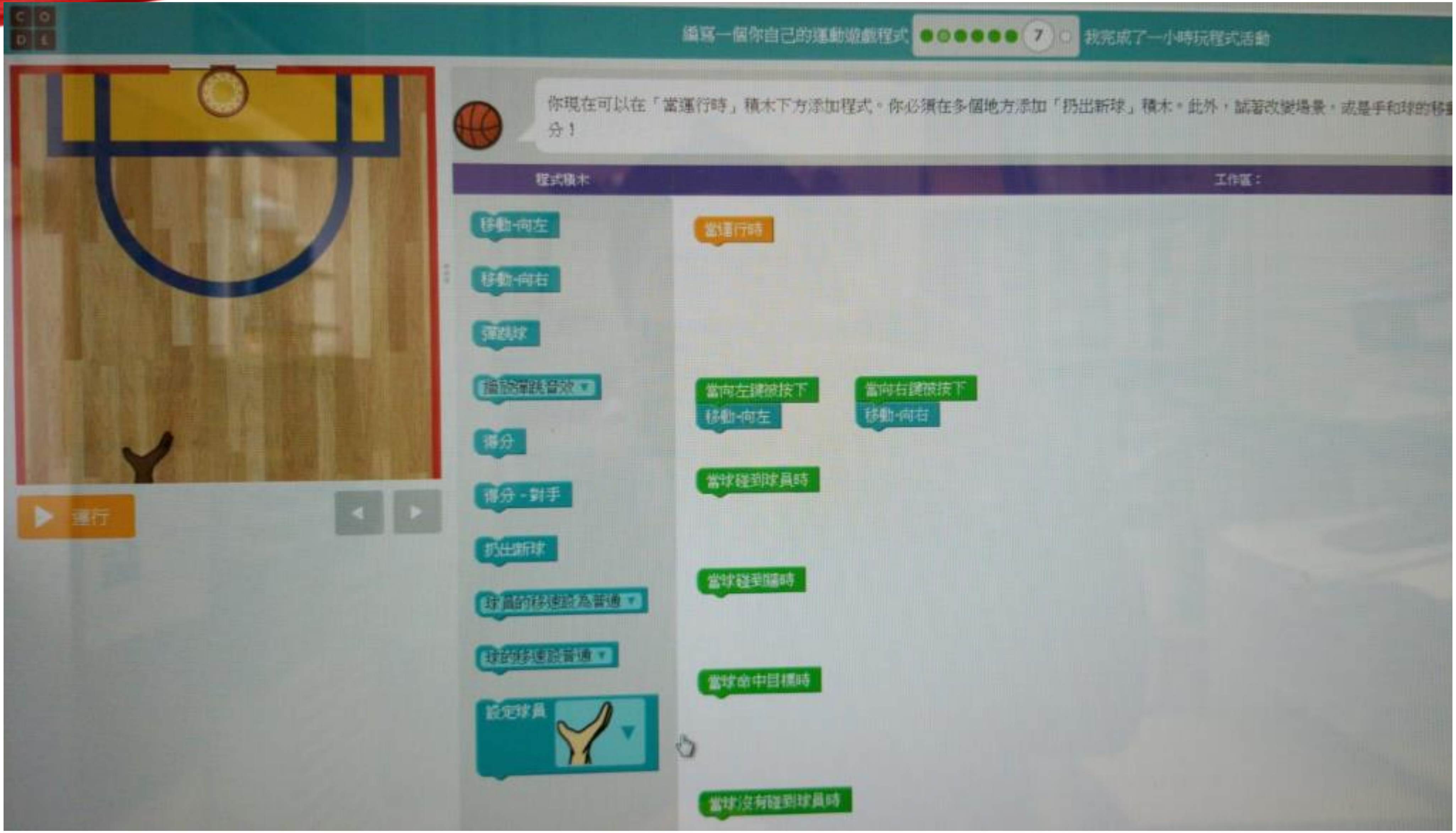
Optimally a pre performance routine is a tool to **enable you to achieve your best on a consistent basis**.

WARM UPS – CODING GAMES


CODE
編寫一個你自己的運動遊戲程式
1
我完成了一小時玩程式活動
確定
程式積木
工作區：
移動-向左
移動-向右
當向左鍵被按下
運行

移動到旗幟那兒！在「當按向左鍵時」積木下添加程式，點擊「運行」讓球員移動到目標旗幟。

https://studio.code.org/s/sports/stage/1/puzzle/1

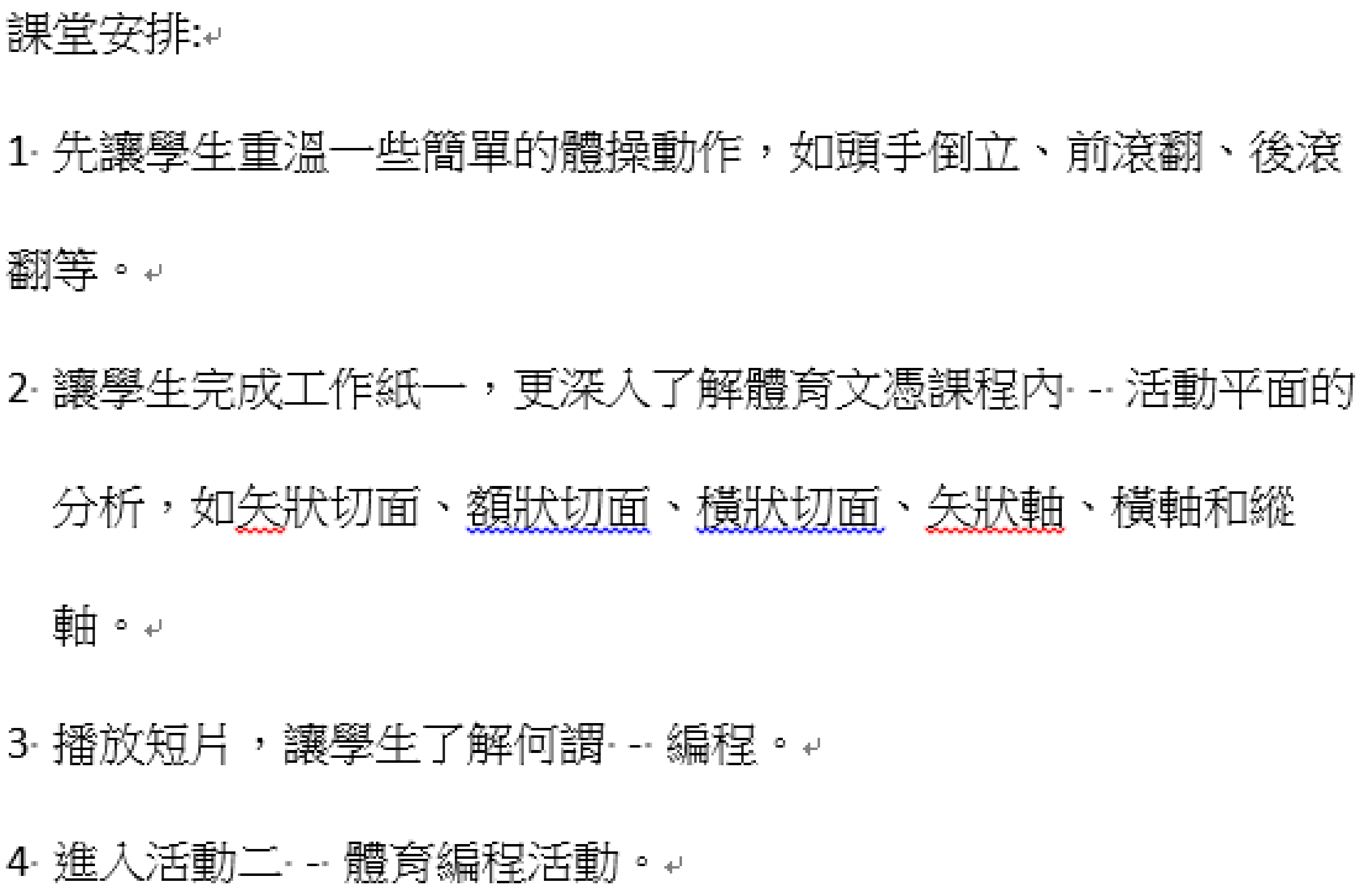


你現在可以在「當運行時」積木下方添加程式。你必須在多個地方添加「扔出新球」積木。此外，試著改變場景，或是手和球的移

分！

編寫一個你自己的運動遊戲程式
7
我完成了一小時玩程式活動
程式積木
工作區：
移動-向左
移動-向右
彈跳球
播放彈跳音效
得分
得分 - 對手
扔出新球
球員的移速設為普通
球的移速設普通
設定球員
當運行時
當向左鍵被按下
移動-向左
當向右鍵被按下
移動-向右
當球碰到球員時
當球碰到牆時
當球命中目標時
當球沒有碰到球員時
運行

WARM UPS – GYMNASTICS SKILLS



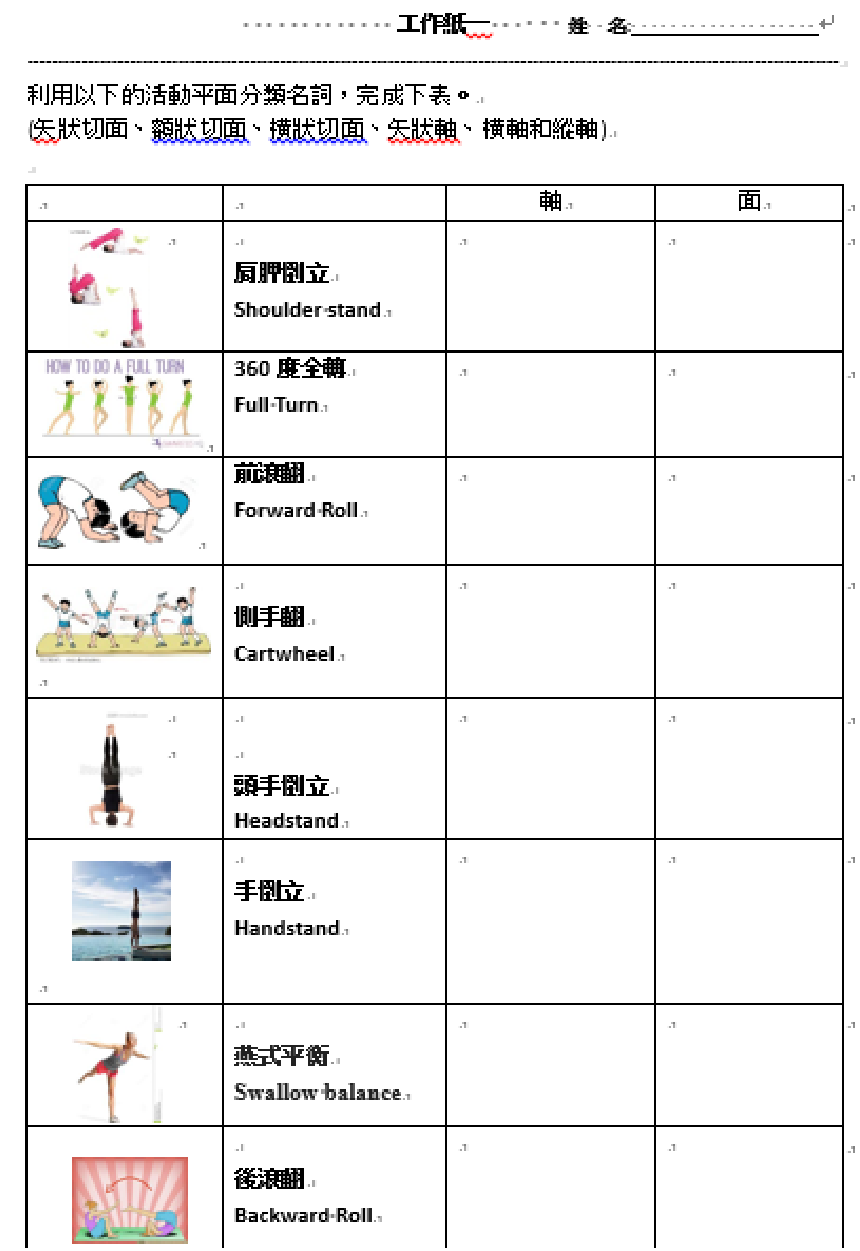
課堂安排:

1 先讓學生重溫一些簡單的體操動作，如頭手倒立、前滾翻、後滾翻等。

2 讓學生完成工作紙一，更深入了解體育文憑課程內 -- 活動平面的分析，如矢狀切面、額狀切面、橫狀切面、矢狀軸、橫軸和縱軸。

3 播放短片，讓學生了解何謂 -- 編程。

4 進入活動二 -- 體育編程活動。


HOW TO DO A FULL TURN

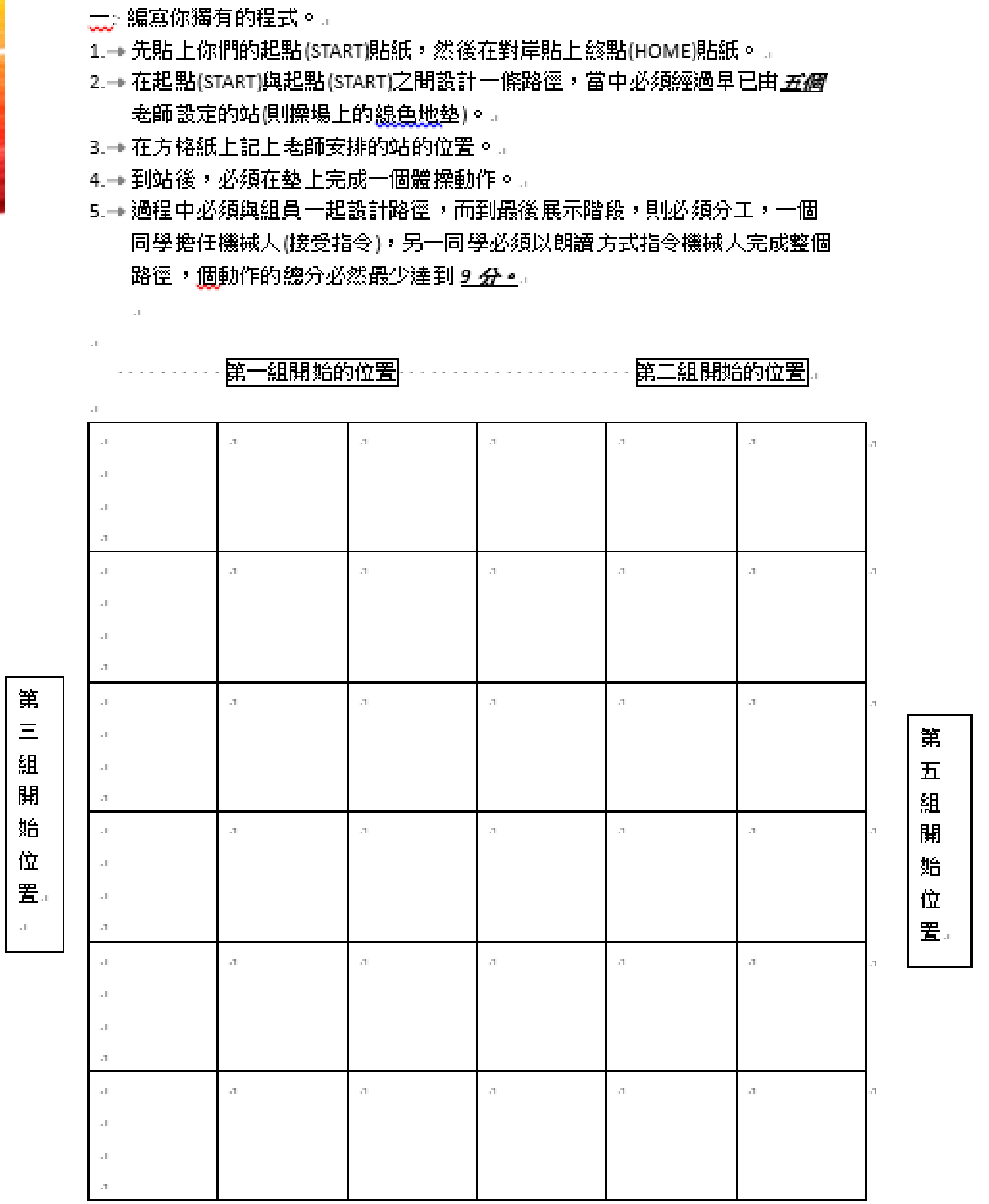
題目: 動作分析與體育編程(Unplugged Coding)結合

工作紙一 姓 名________________

利用以下的活動平面分類名詞，完成下表。
(矢狀切面、額狀切面、橫狀切面、矢狀軸、橫軸和縱軸)

		軸	面
	肩胛倒立 Shoulder stand		
	360 度全轉 Full Turn		
	前滾翻 Forward Roll		
	側手翻 Cartwheel		
	頭手倒立 Headstand		
	手倒立 Handstand		
	燕式平衡 Swallow balance		
	後滾翻 Backward Roll		

PLAN YOUR OWN ROUTINES



二、編寫你獨有的程式。

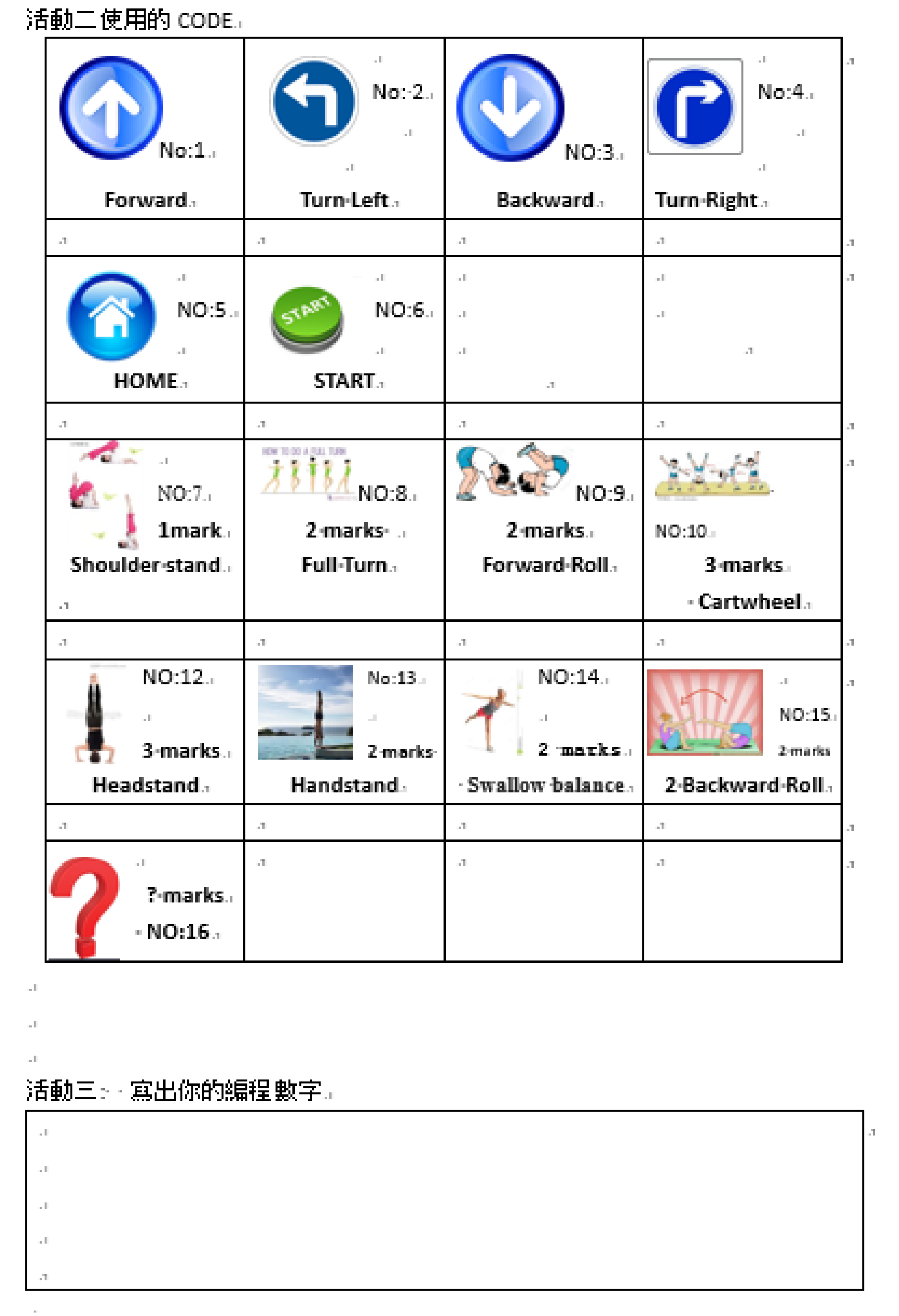
1. 先貼上你們的起點(START)貼紙，然後在對岸貼上終點(HOME)貼紙。
2. 在起點(START)與起點(START)之間設計一條路徑，當中必須經過早已由***五個***老師設定的站(則操場上的綠色地墊)。
3. 在方格紙上記上老師安排的站的位置。
4. 到站後，必須在墊上完成一個體操動作。
5. 過程中必須與組員一起設計路徑，而到最後展示階段，則必須分工，一個同學擔任機械人(接受指令)，另一同學必須以朗讀方式指令機械人完成整個路徑，個動作的總分必然最少達到***9 分。***

第一組開始的位置　　第二組開始的位置

第三組開始位置

第五組開始位置

PLAN YOUR OWN ROUTINES

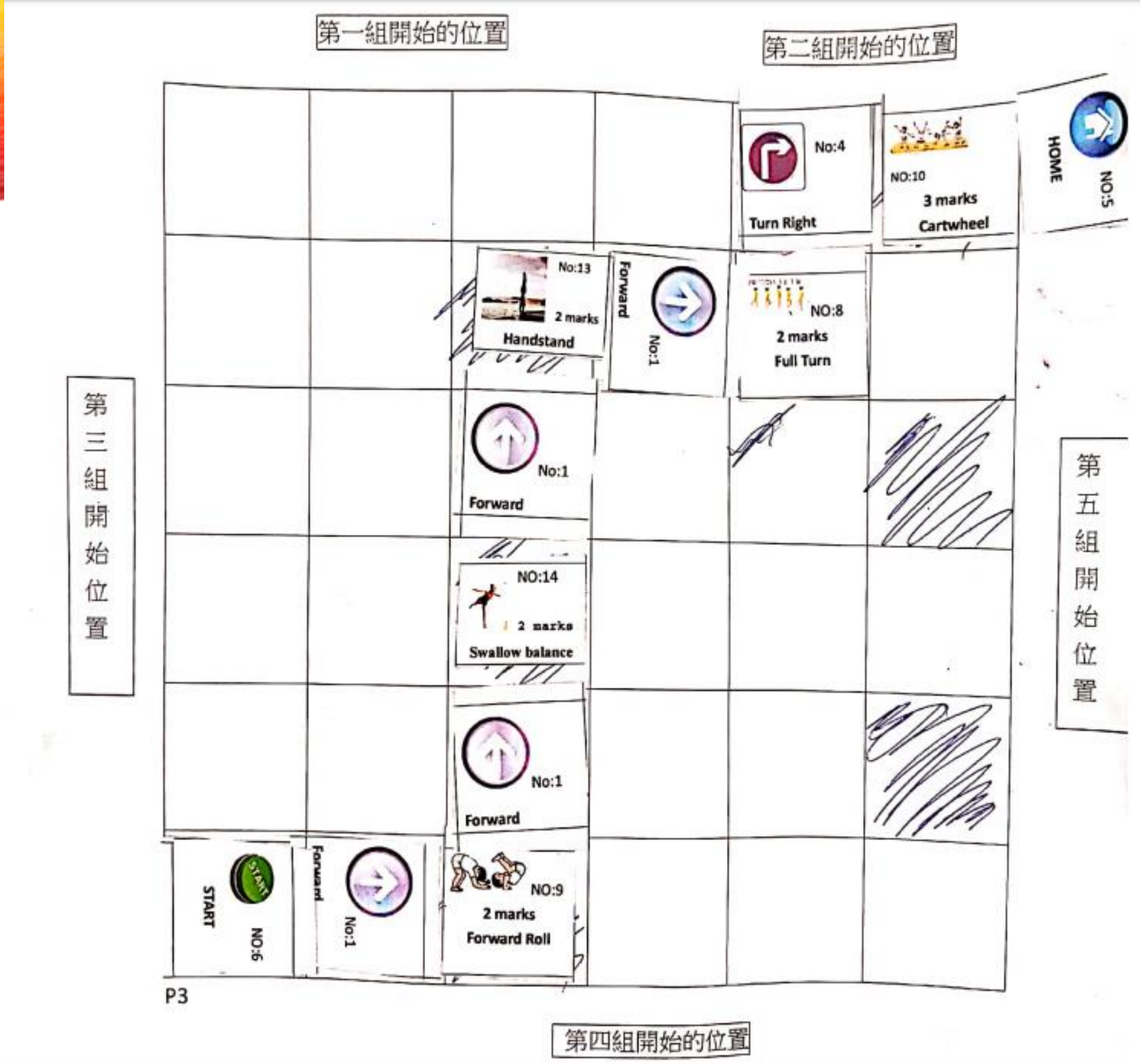


活動二使用的 CODE

No:1 Forward	No: 2 Turn Left	NO:3 Backward	No:4 Turn Right
NO:5 HOME	NO:6 START		
NO:7 1mark Shoulder stand	NO:8 2 marks Full Turn	NO:9 2 marks Forward Roll	NO:10 3 marks Cartwheel
NO:12 3 marks Headstand	No:13 2 marks Handstand	NO:14 2 marks Swallow balance	NO:15 2 marks 2 Backward Roll
? marks NO:16			

活動三： 寫出你的編程數字

PLAN YOUR OWN ROUTINES



第一組開始的位置

第二組開始的位置

第三組開始位置

第五組開始位置

				No:4 Turn Right	NO:10 3 marks Cartwheel	HOME NO:5
		No:13 2 marks Handstand	Forward No:1	NO:8 2 marks Full Turn		
		No:1 Forward				
		NO:14 2 marks Swallow balance				
		No:1 Forward				
START NO:6	Forward No:1	NO:9 2 marks Forward Roll				

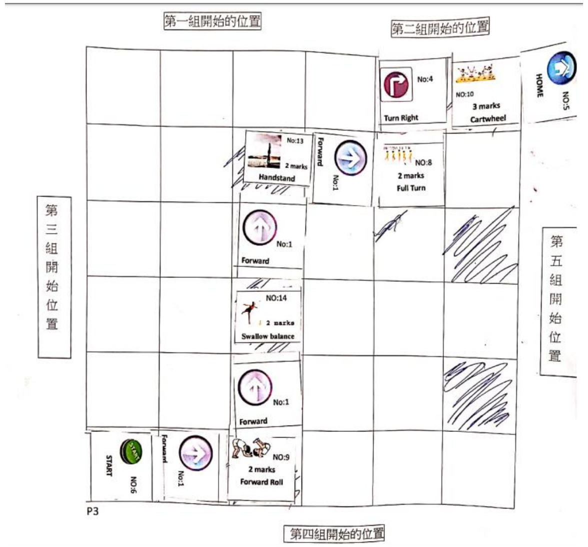
P3

第四組開始的位置

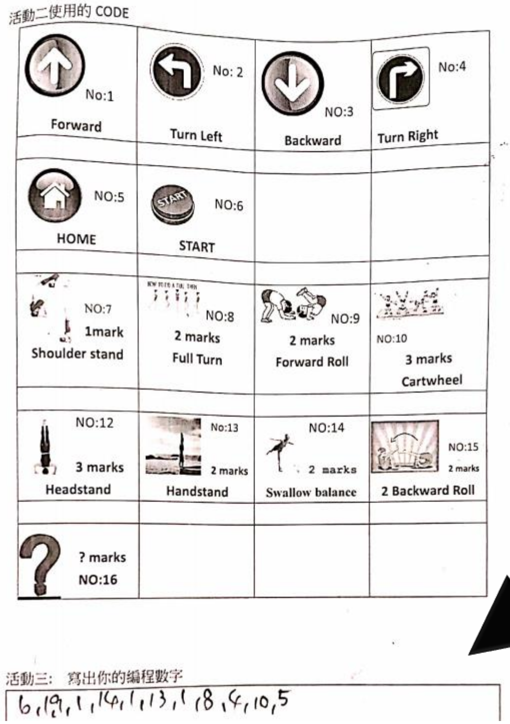
(STUDENTS ARE THE PHYSICAL ROBOT !)

按一下以新增標題
FORM A GROUP AND DESIGN THE CODING ROUTE

- Active engagement


第一組開始的位置
第二組開始的位置
第三組開始的位置
第五組開始的位置
第四組開始的位置
No:4
Turn Right
NO:10
3 marks
Cartwheel
HOME
NO:5
No:13
2 marks
Handstand
Forward
No:1
NO:8
2 marks
Full Turn
No:1
Forward
NO:14
2 marks
Swallow balance
No:1
Forward
START
NO:6
Forward
No:1
NO:9
2 marks
Forward Roll
P3

- Computation thinking - sequence



活動二使用的 CODE

No:1 Forward	No: 2 Turn Left	NO:3 Backward	No:4 Turn Right
NO:5 HOME	NO:6 START		
NO:7 1mark Shoulder stand	NO:8 2 marks Full Turn	NO:9 2 marks Forward Roll	NO:10 3 marks Cartwheel
NO:12 3 marks Headstand	No:13 2 marks Handstand	NO:14 2 marks Swallow balance	NO:15 2 marks 2 Backward Roll
? marks NO:16			

活動三: 寫出你的編程數字

6,19,1,14,1,13,1,8,4,10,5

- Schema construction

REFLECTIONS: THE ADOPTION OF CODING ELEMENTS TO PE

- Increase the opportunity of students practising gymnastics
- Motivation
- Creativity
- Fun
- …….